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INDIAN FARMERS & AGRICULTURE : ISSUES & CHALLENGES



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Executive Editor

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Editor Note

India is basically an agricultural state. Our 70% population belongs to agriculture or agriculture based labour. The Indian economy has a major share of the agriculture sector but this sector is reducing day by day. Presently, it has around 16% GDP share and the largest sector for employment. Since 1992, the Indian government has adopted three major policies as Liberalisation, Privatisation and Globalisation known as LPG Policy. Agriculture sector is becoming a secondary sector of the economy and it has converted into a troublesome sector in the nation. It was assumed in the prior days of LPG policy that this sector would rapidly develop and farmer or agricultural labour would get a better future. On the contrary, the Indian economy couldn't touch expected heights and Indian farmers and the agriculture sector were facing deadly situations. Farmers suicide is big problem since long and has been rising in number. Around 28 people commit suicide everyday in the nation. As per the government report 10,281 farmers and farm labour have committed suicide in 2019. No doubt these days some agriculture based sectors have definitely grown up but the lower community and agricultural workers could not get the happy life till today as expected by the policy makers. Many laws have been passed by the government for a better future for farmers and agriculture but most of the farmers still remain in abject poverty and debt..

The second largest Policy passed by the parliament in 2020 projecting that now farmers will get economic freedom and would be lifted by private players for their good economy. Small farmers will get freedom from mediators (*dalal*) from Market (*mandies*) to sell their product without any restrictions. This policy would bring positive change in terms of needful products as per global market and quality of farming technology. But according to some farmer leaders, there are a number of issues in this act and it would kill Indian agriculture and also become an instrument in the hands of industrialists. So, agitation has been carried out since last one year by the farmers to repeal the laws without compromise. It is the biggest and longest agitation of farmers in Indian history. This agitation brought several issues of the farmer and agriculture sector into notice and once again an important debate has been opened at national level.

Since the last 20 years the ratio of farmer suicides is growing and the economy of farmers class is decreasing comparatively. People are fed-up with the agriculture sector and turning to white color jobs instead of agriculture. Average farmers are at a loss, they can recover investment of products from farming. We are entering into 21 century but even now our scientific methods of agriculture are not adopted by average rural farmers. Introducing several policies the government has failed to develop the agriculture sector in India. In fact, the agriculture sector is the biggest sector of employment even now. It has the potential to give stability to our national economy but incorrect government policy is taking the agriculture sector into darkness.

There are several issues of agriculture and farmers in India which need to be addressed today. Every state has some different policies and different issues according to their climate. We are trying to focus on some of these issues through this special issue for a better future. Some research in this sector would definitely be important to the nation to understand the basic problem of agriculture and farming. Our main purpose is to focus also on the issue of agitation going on due to an act related to Agriculture in 2020. We have received quality research papers from different states and we have published the same.

I thank all collaborators, editors, reviewers and authors for contributing to this special issue on "Indian Agriculture & Farmers: Issues and challenges". I thank the Director, Gondia education society and the Principal for supporting the publication. I thank the publisher for publishing this journal. I also thank Dr. Rakesh Sarade, Deepali Bhowate & Shashi Bhowate for special help for editing and organizing the literature.

Dr. Shrikant M. B. Bhowate
Editor



“In the opinion of the party, the principal means of helping the agriculturists and making agriculture more productive consists in the industrialization of the province.” “The better method is to introduce cooperative agriculture and to compel owners of small strips to join in cultivation.”

Dr. Bhimrao Ambedkar

*Issue Dedicated to Farmers,
Who Died During Agitation
for
Agricultural Reforms in India.*

Editor & Organiser

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INDIAN AGRICULTURE – ISSUES AND CHALLENGES

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While agriculture's share in India's economy has progressively declined to less than 15% due to the high growth rates of the industrial and services sectors, the sector's importance in India's economic and social fabric goes well beyond this indicator. First, nearly three-quarters of India's families depend on rural incomes. Second, the majority of India's poor (some 770 million people or about 70 percent) are found in rural areas. And third, India's food security depends on producing cereal crops, as well as increasing its production of fruits, vegetables and milk to meet the demands of a growing population with rising incomes. To do so, a productive, competitive, diversified and sustainable agricultural sector will need to emerge at an accelerated pace.

India is a global agricultural powerhouse. It is the world's largest producer of milk, pulses, and spices, and has the world's largest cattle herd (buffaloes), as well as the largest area under wheat, rice and cotton. It is the second largest producer of rice, wheat, cotton, sugarcane, farmed fish, sheep & goat meat, fruit, vegetables and tea. The country has some 195 m ha under cultivation of which some 63 percent are rain fed (roughly 125m ha) while 37 percent are irrigated (70m ha). In addition, forests cover some 65m ha of India's land.

Agriculture is the primary source of livelihood for about 58% of India's population. Gross Value Added by agriculture, forestry, and fishing was estimated at Rs. 19.48 lakh crore (US\$ 276.37 billion) in FY20. Share of agriculture and allied sectors in gross value added (GVA) of India at current prices stood at 17.8 % in FY20. Consumer spending in India will return to growth in 2021 post the pandemic-led contraction, expanding by as much as 6.6%.

The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year due to its immense potential for value addition, particularly within the food processing industry. Indian food and grocery market is the world's sixth largest, with retail contributing 70% of the sales. The Indian food processing industry accounts for 32% of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth.

India is among the 15 leading exporters of agricultural products in the world. Agricultural export from India reached US\$ 38.54 billion in FY19 and US\$ 35.09 billion in FY20. The organic food segment in India is expected to grow at a CAGR of 10% during 2015-25 and is estimated to reach Rs. 75,000 crore (US\$ 10.73 billion) by 2025 from Rs. 2,700 crore (US\$ 386.32 million) in 2015.

Agriculture in India is largely depends on monsoon. As a result, production of food-grains fluctuates year after year. A year of abundant output of cereals is often followed by a year of acute shortage. This, in its turn, leads to price income and employment fluctuations.

Agriculture in India is mostly mechanical / manual we don't have enough technology and machines, Seeds used for cropping are not progressive, Fertilisers / pesticides used in farming are very costly, non-productive and harmful, water resources from dams are not effective or efficient for fields for irrigation. Due to climate changes there are many diseases which affects crop, in summer seasons most of the non-irrigated lands are dry without any crop. Sometimes rains are so heavy which affects the overall crop of a month / year.

The crop which is produced by farmers does not get the MSP as required by the farmers, the investment made by the farmers in sowing, growing and harvesting does not gets enough returns or



gains, which affects the farmers on their repayment of loans to banks. Due to this farmers are poor they don't have good things to eat, no proper education to kids etc.

Agrarian distress has led farmers to commit suicide in recent years. The major causes of the agrarian crisis are: unfinished agenda in land reform, quantity and quality of water, technology fatigue, access, adequacy and timeliness of institutional credit, and opportunities for assured and remunerative marketing. Adverse meteorological factors add to these problems.

Farmers need to have assured access and control over basic resources, which include land, water, bio resources, credit and insurance, technology and knowledge management, and markets.

Three agriculture sector challenges will be important to India's overall development and the improved welfare of its rural poor:

1. Raising agricultural productivity per unit of land: Raising productivity per unit of land will need to be the main engine of agricultural growth as virtually all cultivable land is farmed. Water resources are also limited and water for irrigation must contend with increasing industrial and urban needs. All measures to increase productivity will need exploiting, amongst them: increasing yields, diversification to higher value crops, and developing value chains to reduce marketing costs.
2. Reducing rural poverty through a socially inclusive strategy that comprises both agriculture as well as non-farm employment: Rural development must also benefit the poor, landless, women, scheduled castes and tribes. Moreover, there are strong regional disparities: the majority of India's poor are in rain-fed areas or in the Eastern Indo-Gangetic plains. Reaching such groups has not been easy. While progress has been made - the rural population classified as poor fell from nearly 40% in the early 1990s to below 30% by the mid-2000s (about a 1% fall per year) – there is a clear need for a faster reduction. Hence, poverty alleviation is a central pillar of the rural development efforts of the Government and the World Bank.
3. Ensuring that agricultural growth responds to food security needs: The sharp rise in food-grain production during India's Green Revolution of the 1970s enabled the country to achieve self-sufficiency in food-grains and stave off the threat of famine. Agricultural intensification in the 1970s to 1980s saw an increased demand for rural labour that raised rural wages and, together with declining food prices, reduced rural poverty. However agricultural growth in the 1990s and 2000s slowed down, averaging about 3.5% per annum, and cereal yields have increased by only 1.4% per annum in the 2000s. The slow-down in agricultural growth has become a major cause for concern. India's rice yields are one-third of China's and about half of those in Vietnam and Indonesia. The same is true for most other agricultural commodities.

Policy makers will thus need to initiate and/or conclude policy actions and public programs to shift the sector away from the existing policy and institutional regime that appears to be no longer viable and build a solid foundation for a much more productive, internationally competitive, and diversified agricultural sector. The government should look into the following points:-

- a medium-term strategy for food and nutrition security in the country in order to move towards the goal of universal food security over time;
- enhancing productivity, profitability, and sustainability of the major farming systems of the country;
- policy reforms to substantially increase flow of rural credit to all farmers;
- special programmes for dry land farming for farmers in the arid and semi-arid regions, as well as for farmers in hilly and coastal areas;
- enhancing the quality and cost competitiveness of farm commodities so as to make them globally competitive;
- protecting farmers from imports when international prices fall sharply;
- empowering elected local bodies to effectively conserve and improve the ecological foundations for sustainable agriculture;



- Distribute ceiling-surplus and waste lands;
- Prevent diversion of prime agricultural land and forest to corporate sector for non-agricultural purposes.
- Ensure grazing rights and seasonal access to forests to tribals and pastoralists, and access to common property resources.
- Establish a National Land Use Advisory Service, which would have the capacity to link land use decisions with ecological meteorological and marketing factors on a location and season specific basis.
- Set up a mechanism to regulate the sale of agricultural land, based on quantum of land, nature of proposed use and category of buyer.
- Substantial increase in public investment in agriculture related infrastructure particularly in irrigation, drainage, land development, water conservation, research development and road connectivity etc.
- A national network of advanced soil testing laboratories with facilities for detection of micronutrient deficiencies.
- Promotion of conservation farming, which will help farm families to conserve and improve soil health, water quantity and quality and biodiversity.
- Expand the outreach of the formal credit system to reach the really poor and needy.
- Reduce rate of interest for crop loans to 4 per cent simple, with government support.
- Moratorium on debt recovery, including loans from non-institutional sources, and waiver of interest on loans in distress hotspots and during calamities, till capability is restored.
- Establish an Agriculture Risk Fund to provide relief to farmers in the aftermath of successive natural calamities.
- Issue Kisan Credit Cards to women farmers, with joint *pattas* as collateral.
- Develop an integrated credit-cum-crop-livestock-human health insurance package.
- Expand crop insurance cover to cover the entire country and all crops, with reduced premiums and create a Rural Insurance Development Fund to take up development work for spreading rural insurance.
- Promote sustainable livelihoods for the poor by improving (i) Financial services (ii) Infrastructure (iii) Investments in human development, agriculture and business development services (including productivity enhancement, local value addition, and alternate market linkages) and (iv) Institutional development services (forming and strengthening producers' organisations such as self-help groups and water user associations).
- Provide affordable health insurance and revitalize primary healthcare centres. The National Rural Health Mission should be extended to suicide hotspot locations on priority basis.
- Set up State level Farmers' Commission with representation of farmers for ensuring dynamic government response to farmers' problems.
- Restructure microfinance policies to serve as Livelihood Finance, i.e. credit coupled with support services in the areas of technology, management and markets.
- Cover all crops by crop insurance with the village and not block as the unit for assessment.
- Provide for a Social Security net with provision for old age support and health insurance.
- Promote aquifer recharge and rain water conservation. Decentralise water use planning and every village should aim at Jal Swaraj with Gram Sabhas serving as Pani Panchayats.
- Ensure availability of quality seed and other inputs at affordable costs and at the right time and place.
- Recommend low risk and low cost technologies which can help to provide maximum income to farmers because they cannot cope with the shock of crop failure, particularly those associated with high cost technologies like Bt cotton.



- Need for focused Market Intervention Schemes (MIS) in the case of life-saving crops such as cumin in arid areas. Have a Price Stabilisation Fund in place to protect the farmers from price fluctuations.
- Need swift action on import duties to protect farmers from international price.
- Set up Village Knowledge Centres (VKCs) or Gyan Chaupals in the farmers' distress hotspots. These can provide dynamic and demand driven information on all aspects of agricultural and non-farm livelihoods and also serve as guidance centres.
- Public awareness campaigns to make people identify early signs of suicidal behaviour.
- Preserving traditional rights of access to biodiversity, which include access to non-timber forest products including medicinal plants, gums and resins, oil yielding plants and beneficial micro-organisms;
- Conserving, enhancing and improving crops and farm animals as well as fish stocks through breeding;
- Encouraging community-based breed conservation (i.e. conservation through use);
- Allowing export of indigenous breeds and import of suitable breeds to increase productivity of nondescript animals.

Priority Areas for Support

1. Enhancing agricultural productivity, competitiveness, and rural growth

Promoting new technologies and reforming agricultural research and extension: Major reform and strengthening of India's agricultural research and extension systems is one of the most important needs for agricultural growth. There is too little connection between research and extension, or between these services and the private sector.

Improving Water Resources and Irrigation/Drainage Management: Agriculture is India's largest user of water. However, increasing competition for water between industry, domestic use and agriculture has highlighted the need to plan and manage water on a river basin and multi-sectoral basis. As urban and other demands multiply, less water is likely to be available for irrigation. Ways to radically enhance the productivity of irrigation ("more crop per drop") need to be found. Piped conveyance, better on-farm management of water, and use of more efficient delivery mechanisms such as drip irrigation are among the actions that could be taken. There is also a need to manage as opposed to exploit the use of groundwater. Incentives to pump less water such as levying electricity charges or community monitoring of use have not yet succeeded beyond sporadic initiatives. Other key priorities include: (i) modernizing Irrigation and Drainage Departments to integrate the participation of farmers and other agencies in managing irrigation water; (ii) improving cost recovery; (iii) rationalizing public expenditures, with priority to completing schemes with the highest returns; and (iv) allocating sufficient resources for operations and maintenance for the sustainability of investments.

Facilitating agricultural diversification to higher-value commodities: Encouraging farmers to diversify to higher value commodities will be a significant factor for higher agricultural growth, particularly in rain-fed areas where poverty is high. Moreover, considerable potential exists for expanding agro-processing and building competitive value chains from producers to urban centres and export markets. Promoting high growth commodities: Some agricultural sub-sectors have particularly high potential for expansion, notably dairy. The livestock sector, primarily due to dairy, contributes over a quarter of agricultural GDP and is a source of income for 70% of India's rural families, mostly those who are poor and headed by women. A targeted program to tackle these constraints could boost production and have good impact on poverty.

Developing markets, agricultural credit and public expenditures: India's legacy of extensive government involvement in agricultural marketing has created restrictions in internal and external trade, resulting in cumbersome and high-cost marketing and transport options for agricultural



commodities. Even so, private sector investment in marketing, value chains and agro-processing is growing, but much slower than potential. While some restrictions are being lifted, considerably more needs to be done to enable diversification and minimize consumer prices. Improving access to rural finance for farmers is another need as it remains difficult for farmers to get credit. Moreover, subsidies on power, fertilizers and irrigation have progressively come to dominate Government expenditures on the sector, and are now four times larger than investment expenditures, crowding out top priorities such as agricultural research and extension.

2. Poverty alleviation and community actions

While agricultural growth will, in itself, provide the base for increasing incomes, for rural persons that are below the poverty line, additional measures are required to make this growth inclusive. For instance, a rural livelihoods program that empowers communities to become self-reliant has been found to be particularly effective and well-suited for scaling-up. This program promotes the formation of self-help groups, increases community savings, and promotes local initiatives to increase incomes and employment. By federating to become larger entities, these institutions of the poor gain the strength to negotiate better prices and market access for their products, and also gain the political power over local governments to provide them with better technical and social services. These self-help groups are particularly effective at reaching women and impoverished families.

3. Sustaining the environment and future agricultural productivity

In parts of India, the over-pumping of water for agricultural use is leading to falling groundwater levels. Conversely, water-logging is leading to the build-up of salts in the soils of some irrigated areas. In rain-fed areas on the other hand, where the majority of the rural population live, agricultural practices need adapting to reduce soil erosion and increase the absorption of rainfall. Overexploited and degrading forest land need mitigation measures. There are proven solutions to nearly all of these problems. The most comprehensive is through watershed management programs, where communities engage in land planning and adopt agricultural practices that protect soils, increase water absorption and raise productivity through higher yields and crop diversification. Climate change must also be considered. More extreme events – droughts, floods, erratic rains – are expected and would have greatest impact in rain-fed areas. The watershed program, allied with initiatives from agricultural research and extension, may be the most suited agricultural program for promoting new varieties of crops and improved farm practices. But other thrusts, such as the livelihoods program and development of off-farm employment may also be key.

Some of the solutions for improvement in agricultural practices include watershed and natural resources management, water & irrigated agriculture, rural livelihood development. Over the past five to ten years, the Bank has been supporting R&D in Agricultural Technology through two national level projects with pan-India implementation (the National Agriculture Technology Project and the National Agriculture Innovation Project) coordinated by the Government of India's Indian Council for Agricultural Research (ICAR).

Dissemination of Agricultural Technology: New approaches towards the dissemination of agricultural technology such as the Agriculture Technology Management Agency (ATMA) model have contributed to diversification of agricultural production in Assam and Uttar Pradesh. This extension approach is now being scaled-up across India.

Sustainable agricultural practices through watershed and rain fed agriculture development, improved groundwater management practices (for instance, in the upcoming Rajasthan Agriculture Competitiveness Project).

Improved access to rural credit and greater gender involvement in rural economic activities through rural livelihood initiatives .Agricultural insurance by advising GOI on how to improve the actuarial design and implementation of the insurance program (e.g. rating methodology and product design, index insurance, use of mobile and remote sensing technology to measure yields, etc.).



Improved farmer access to agriculture markets through policy reforms and investments under the Maharashtra Agricultural Competitiveness Project which aims to reform regulated wholesale markets and provide farmers with alternative market opportunities.

The land policy agenda through analytical work as well as non-lending technical assistance in support of GOI's National Land Records Modernization Program.

Better rural connectivity through IDA support to the Prime Minister's National Rural Roads Program (PMGSY), and by connecting rural poor and smallholder farmers through collective action to public services through Self-Help Groups (and SHG federations), Water User Associations and Farmer Producer Organizations. Recently the Bank's Board of Executive Directors approved the National Rural Livelihood Mission, which supports SHG approaches through a pan-India approach. India is expected to achieve the ambitious goal of doubling farmer's income by 2022. The agriculture sector in India is expected to generate better momentum in the next few years due to increased investment in agricultural infrastructure such as irrigation facilities, warehousing and cold storage. Furthermore, the growing use of genetically modified crops will likely improve the yield for Indian farmers but harmful for human intake because it causes cancer. India is expected to be self-sufficient in pulses in the coming few years due to concerted effort of scientists to get early maturing varieties of pulses and the increase in minimum support price.

Going forward, the adoption of food safety and quality assurance mechanisms such as Total Quality Management (TQM) including ISO 9000, ISO 22000, Hazard Analysis and Critical Control Points (HACCP), Good Manufacturing Practices (GMP) and Good Hygienic Practices (GHP) by the food processing industry will offer several benefits.

Genetically Modified Crops – Status in India, the G.M. technology has been adopted for long. The technologies under use in India have been those developed outside and introduced into the country, as also those developed locally.

GMOs approved in India Agriculture • Bt Cotton from Monsanto, USA • Bt Cotton from IIT, Kharagpur • Bt Cotton from Biocentury, China • Bt Cotton from Metahelix, Bengaluru • Bt Cotton from CICR, (Central Institute for Cotton Research), Nagpur

In Agriculture Geotagging has come it is a process of assigning a 'geo-tag' or adding some 'geographical information' in various 'media' forms such as a digital photograph, video or even in a SMS message. In order to facilitate "Farmer-centric" and "Farm-centric" advisory services, it is essential to geo-tag their assets (farm, animal), irrigation resources etc., and characteristics of agricultural resources are then mapped using satellite imageries. Geotagging of agricultural resources results in better management and application of good agricultural practices. The geo-tagging of agricultural assets include ponds, crop area, warehouses, laboratories etc., for their real-time monitoring and effective utilisation. At present, officials provide information on the assets manually, and hence there is no transparency.

Farmers are AAN-DATTA of any country they should be treated like gods as they are the Annapurna of the society, today we see KISAN Aandolan in India farmers sitting on roads and doing aandolan is a big shame for India and its RSS led BJP government. The KISAN andolan which is happening in India is showing very pitiful condition of farmers so the government should accept their demands without farmers asking for it. The Indian government should look for Swami Nathan Aayog and Krishi Kanoon must be banned.

The crop grown by the farmers if gets good rate by farmers then the condition of farmers can be improved without any involvement of middlemen in it.

That is why it is the request of farmers if government imbibes Swami Nathan Aayog, the farmers of India will be happier.



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**INDIAN FARMER ISSUES AND CHALLENGES****Mr. Meghraj Ramhari Shinde**

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Agriculture in India is largely depends on monsoon. As a result, production of food-grains fluctuates year after year. A year of abundant output of cereals is often followed by a year of acute shortage. This, in its turn, leads to price income and employment fluctuations. However, for the thirteen year, in successive (1987-88 to 1999-00) a normal monsoon has been observed.

While agriculture's share in India's economy has progressively declined to less than 15% due to the high growth rates of the industrial and services sectors, the sector's importance in India's economic and social fabric goes well beyond this indicator. First, nearly three-quarters of India's families depend on rural incomes. Second, the majority of India's poor (some 770 million people or about 70 percent) are found in rural areas. And third, India's food security depends on producing cereal crops, as well as increasing its production of fruits, vegetables and milk to meet the demands of a growing population with rising incomes. To do so, a productive, competitive, diversified and sustainable agricultural sector will need to emerge at an accelerated pace.

India is a global agricultural powerhouse. It is the world's largest producer of milk, pulses, and spices, and has the world's largest cattle herd (buffaloes), as well as the largest area under wheat, rice and cotton. It is the second largest producer of rice, wheat, cotton, sugarcane, farmed fish, sheep & goat meat, fruit, vegetables and tea. The country has some 195 m ha under cultivation of which some 63 percent are rainfed (roughly 125m ha) while 37 percent are irrigated (70m ha). In addition, forests cover some 65m ha of India's land.

Challenges

Three agriculture sector challenges will be important to India's overall development and the improved welfare of its rural poor:

1. Raising agricultural productivity per unit of land: Raising productivity per unit of land will need to be the main engine of agricultural growth as virtually all cultivable land is farmed. Water resources are also limited and water for irrigation must contend with increasing industrial and urban needs. All measures to increase productivity will need exploiting, amongst them: increasing yields, diversification to higher value crops, and developing value chains to reduce marketing costs.
2. Reducing rural poverty through a socially inclusive strategy that comprises both agriculture as well as non-farm employment: Rural development must also benefit the poor, landless, women, scheduled castes and tribes. Moreover, there are strong regional disparities: the majority of India's poor are in rain-fed areas or in the Eastern Indo-Gangetic plains. Reaching such groups has not been easy. While progress has been made - the rural population classified as poor fell from nearly 40% in the early 1990s to below 30% by the mid-2000s (about a 1% fall per year) – there is a clear need for a faster reduction. Hence, poverty alleviation is a central pillar of the rural development efforts of the Government and the World Bank.
3. Ensuring that agricultural growth responds to food security needs: The sharp rise in food-grain production during India's Green Revolution of the 1970s enabled the country to achieve self-sufficiency in food-grains and stave off the threat of famine. Agricultural intensification in the 1970s to 1980s saw an increased demand for rural labor that raised rural wages and, together with declining food prices, reduced rural poverty. However agricultural growth in the 1990s and 2000s slowed down, averaging about 3.5% per annum, and cereal yields have increased by only 1.4% per annum in the



2000s. The slow-down in agricultural growth has become a major cause for concern. India's rice yields are one-third of China's and about half of those in Vietnam and Indonesia. The same is true for most other agricultural commodities.

Policy makers will thus need to initiate and/or conclude policy actions and public programs to shift the sector away from the existing policy and institutional regime that appears to be no longer viable and build a solid foundation for a much more productive, internationally competitive, and diversified agricultural sector.

Priority Areas for Support

1. Enhancing agricultural productivity, competitiveness, and rural growth

Promoting new technologies and reforming agricultural research and extension: Major reform and strengthening of India's agricultural research and extension systems is one of the most important needs for agricultural growth. These services have declined over time due to chronic underfunding of infrastructure and operations, no replacement of aging researchers or broad access to state-of-the-art technologies. Research now has little to provide beyond the time-worn packages of the past. Public extension services are struggling and offer little new knowledge to farmers. There is too little connection between research and extension, or between these services and the private sector.

Improving Water Resources and Irrigation/Drainage Management: Agriculture is India's largest user of water. However, increasing competition for water between industry, domestic use and agriculture has highlighted the need to plan and manage water on a river basin and multi-sectoral basis. As urban and other demands multiply, less water is likely to be available for irrigation. Ways to radically enhance the productivity of irrigation ("more crop per drop") need to be found. Piped conveyance, better on-farm management of water, and use of more efficient delivery mechanisms such as drip irrigation are among the actions that could be taken. There is also a need to manage as opposed to exploit the use of groundwater. Incentives to pump less water such as levying electricity charges or community monitoring of use have not yet succeeded beyond sporadic initiatives. Other key priorities include: (i) modernizing Irrigation and Drainage Departments to integrate the participation of farmers and other agencies in managing irrigation water; (ii) improving cost recovery; (iii) rationalizing public expenditures, with priority to completing schemes with the highest returns; and (iv) allocating sufficient resources for operations and maintenance for the sustainability of investments.

Facilitating agricultural diversification to higher-value commodities: Encouraging farmers to diversify to higher value commodities will be a significant factor for higher agricultural growth, particularly in rain-fed areas where poverty is high. Moreover, considerable potential exists for expanding agro-processing and building competitive value chains from producers to urban centers and export markets. While diversification initiatives should be left to farmers and entrepreneurs, the Government can, first and foremost, liberalize constraints to marketing, transport, export and processing. It can also play a small regulatory role, taking due care that this does not become an impediment.

Promoting high growth commodities: Some agricultural sub-sectors have particularly high potential for expansion, notably dairy. The livestock sector, primarily due to dairy, contributes over a quarter of agricultural GDP and is a source of income for 70% of India's rural families, mostly those who are poor and headed by women. Growth in milk production, at about 4% per annum, has been brisk, but future domestic demand is expected to grow by at least 5% per annum. Milk production is constrained, however, by the poor genetic quality of cows, inadequate nutrients, inaccessible veterinary care, and other factors. A targeted program to tackle these constraints could boost production and have good impact on poverty.

Developing markets, agricultural credit and public expenditures: India's legacy of extensive government involvement in agricultural marketing has created restrictions in internal and external



trade, resulting in cumbersome and high-cost marketing and transport options for agricultural commodities. Even so, private sector investment in marketing, value chains and agro-processing is growing, but much slower than potential. While some restrictions are being lifted, considerably more needs to be done to enable diversification and minimize consumer prices. Improving access to rural finance for farmers is another need as it remains difficult for farmers to get credit. Moreover, subsidies on power, fertilizers and irrigation have progressively come to dominate Government expenditures on the sector, and are now four times larger than investment expenditures, crowding out top priorities such as agricultural research and extension.

2. Poverty alleviation and community actions

While agricultural growth will, in itself, provide the base for increasing incomes, for the 170 million or so rural persons that are below the poverty line, additional measures are required to make this growth inclusive. For instance, a rural livelihoods program that empowers communities to become self-reliant has been found to be particularly effective and well-suited for scaling-up. This program promotes the formation of self-help groups, increases community savings, and promotes local initiatives to increase incomes and employment. By federating to become larger entities, these institutions of the poor gain the strength to negotiate better prices and market access for their products, and also gain the political power over local governments to provide them with better technical and social services. These self-help groups are particularly effective at reaching women and impoverished families.

3. Sustaining the environment and future agricultural productivity

In parts of India, the over-pumping of water for agricultural use is leading to falling groundwater levels. Conversely, water-logging is leading to the build-up of salts in the soils of some irrigated areas. In rain-fed areas on the other hand, where the majority of the rural population live, agricultural practices need adapting to reduce soil erosion and increase the absorption of rainfall. Overexploited and degrading forest land need mitigation measures. There are proven solutions to nearly all of these problems. The most comprehensive is through watershed management programs, where communities engage in land planning and adopt agricultural practices that protect soils, increase water absorption and raise productivity through higher yields and crop diversification. At issue, however, is how to scale up such initiatives to cover larger areas of the country. Climate change must also be considered. More extreme events – droughts, floods, erratic rains – are expected and would have greatest impact in rain-fed areas. The watershed program, allied with initiatives from agricultural research and extension, may be the most suited agricultural program for promoting new varieties of crops and improved farm practices. But other thrusts, such as the livelihoods program and development of off-farm employment may also be key.

World Bank Support

With some \$5.5 billion in net commitments from both IDA and IBRD, and 24 ongoing projects, the World Bank's agriculture and rural development program in India is by far the Bank's largest such program worldwide in absolute dollar terms. This figure is even higher when investments in rural development such as rural roads, rural finance and human development are included. Nonetheless, this amount is relatively small when compared with the Government's - both central and state - funding of public programs in support of agriculture. Most of the Bank's agriculture and rural development assistance is geared towards state-level support, but some also takes place at the national level.

The Bank's Agricultural and Rural Development portfolio is clustered across three broad themes with each project, generally, showing a significant integration of these themes.

Agriculture, watershed and natural resources management

Water & irrigated agriculture

Rural livelihood development



Over the past five to ten years, the Bank has been supporting:

R&D in Agricultural Technology through two national level projects with pan-India implementation (the National Agriculture Technology Project and the National Agriculture Innovation Project) coordinated by the Government of India's Indian Council for Agricultural Research (ICAR).

Dissemination of Agricultural Technology: New approaches towards the dissemination of agricultural technology such as the Agriculture Technology Management Agency (ATMA) model have contributed to diversification of agricultural production in Assam and Uttar Pradesh. This extension approach is now being scaled-up across India.

Better delivery of irrigation water: World Bank support for the better delivery of irrigation water ranges from projects covering large irrigation infrastructure to local tanks and ponds. Projects also support the strengthening of water institutions in several states (Andhra Pradesh, Karnataka, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh) improved groundwater management practices (for instance, in the upcoming Rajasthan Agriculture Competitiveness Project).

Sustainable agricultural practices through watershed and rainfed agriculture development (Karnataka, Himachal Pradesh, Uttarakhand), soil reclamation efforts (Uttar Pradesh) and, more recently, improved groundwater management practices (for instance, in the upcoming Rajasthan Agriculture Competitiveness Project).

Improved access to rural credit and greater gender involvement in rural economic activities through rural livelihood initiatives undertaken by a number of states (Andhra Pradesh, Bihar, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu) and soon to be scaled up by GOI with Bank support through a National Rural Livelihood Mission.

Agricultural insurance by advising GOI on how to improve the actuarial design and implementation of the insurance program (e.g. rating methodology and product design, index insurance, use of mobile and remote sensing technology to measure yields, etc.).

Improved farmer access to agriculture markets through policy reforms and investments under the Maharashtra Agricultural Competitiveness Project which aims to reform regulated wholesale markets and provide farmers with alternative market opportunities.

The land policy agenda through analytical work as well as non-lending technical assistance in support of GOI's National Land Records Modernization Program.

Better rural connectivity through IDA support to the Prime Minister's National Rural Roads Program (PMGSY), and by connecting rural poor and smallholder farmers through collective action to public services through Self-Help Groups (and SHG federations), Water User Associations and Farmer Producer Organizations. Recently the Bank's Board of Executive Directors approved the National Rural Livelihood Mission, which supports SHG approaches through a pan-India approach.

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**INDIAN FARMERS & AGRICULTURE: ISSUE & CHALLENGES****Dr. Arvind Mahadeorao Punwatkar**

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Abstract:

The aim of this study was to evaluate the impact of the COVID-19 lockdown on agricultural production, livelihoods, food security, and dietary diversity in India. Farming is the foundation of any economy. It is the essential area which creates work so the whole hover of financial course goes on. At the point when we talk about the Indian economy, most of the populace is confined to this area. With the progressing pandemic, occupations of the apparent multitude of ranchers and the individuals who are enjoying this area are at high danger. In certain countries, COVID-19 has vanished while in some it is returning. Simply a limited capacity to focus the pandemic will leave a never-ending impact on the agrarian area. The pandemic will disappear definitely, yet we don't have the foggiest idea when and we don't have a clue about the quantum of the negative effect it will leave on the economy. The beginning of the Covid pandemic has corresponded with the pinnacle gathering season. As the business sectors are secured, there is a danger to the yield in more than 100 lakh hectares in the nation. Indeed, even among the various fragments, the effect changes broadly among various areas and among makers and horticultural compensation workers. This effect will resound over the bigger economy and will wait longer than a couple of months. During these difficult occasions, how does Indian Agriculture react to the emergency and how do government estimates influence 140 million homestead families the nation over and from that point sway the economy of a significant nation in the creating scene? Survey the quick difficulties that COVID19 has presented to the ranch area and recommend moderation measures to guarantee a practical food framework in the post-emergency period. So that reason there is have to contemplate the effect of Corona Virus on India Agriculture.

Introduction:

In response to the corona virus disease 2019 (COVID-19) pandemic, the Government of India imposed the largest lockdown in history 1.3 billion people were required to shelter in place from 25 March to 8 June 2020 [1]. There is no doubt that this lockdown disproportionately affected the poor and daily wage earners, including rural farmers. Even before the COVID-19 crisis, the low incomes of farmers were a critical issue in India [2], with the Government of India setting a goal to double farmers' income by 2022. A survey conducted in 2016–17 found that the average income of farming households stands at 8931 INR, of which 35% comes from cultivation, 34% from wage earnings, and 8% from livestock [3]. A shortfall in any of these sources of income could significantly impact farmer households. However, the magnitude of the impact of the COVID-19 lockdown on farmers' agricultural production, experience of food insecurity, income from livestock, and daily wages is still largely unknown. Understanding this impact has important implications for preparing for upcoming agricultural seasons, informing the targeted provision of emergency food rations to those most in need, and re-building a more resilient, sustainable, and equitable agri-food system.

The first visible impact of COVID-19 inside the rural quarter is on the rural supply chain. While the government has issued allows to trucks permitting them to deliver groceries, fruits, and cereals, a huge quantity of transporters are but to get hold of their permits. This has elevated the time taken for the farm produce to attain the market. On the opposite hand, there's a moderate impact on the demand aspect as the restaurants were ordered to close down for the period in-between period.



This is causing a vast sales loss to many farmers across states. As per a posted report, the railway ministry shows that freight loading has dipped from a regular 10,000 cargo rakes in keeping with day to pretty much three thousands to four thousands now. As a result, the farmer has to sell his crop at a less expensive price, settle with a lower profit^[4].

The second impact of COVID-19 is the put off in sowing and harvesting of plants due to the unavailability of merchandise along with seeds, tractors, ancillary assist, drugs for crop protection. ^[5]

The third effect of COVID-19 is the predicted task cuts in the agricultural region. As in keeping with the government, there are almost 118.8 millions farmers along with a similar number (if not more) landless agricultural labour. While the farmer could be receiving comfort from the government at once, the latter is placed in a hard function at this time. ^[6]

The fourth massive impact is the complete shutdown of exports. India has been a first-rate exporter of vegetation and as consistent with APEDA, India's average agriexports in 2018-19 were to the track of Rs 685 billion. Currently, all of the ports were locked and huge stock has piled up with the buyers and farmers. ^[7]

The fifth effect is on the MSME & SME's. These consist of small industry units, companies/buyers, and stores that manipulate a respectable size stock and hire numerous direct and indirect employees. Post lockdown, their groups are shut down and going through a sales hit. They may must permit pass of their personnel for a number of motives including monetary viability, migration, health and other. People stand to lose jobs without a clear idea of whilst the situation is going to stabilize. ^[8]

Recommendations

- There should be an immediate expansion (Tenant farmers should be included) of the Pradhan Mantri Fasal Bima Yojana (PMFBY) to ensure compensation payments to farmers affected by the Covid-19 pandemic.
- MSPs for farmers in the 2020-21 seasons should be substantially raised to 1.5 times the cost of production. Procurement should also be significantly expanded.
- Encourage better functioning food markets through improved regional political and economic integration and better functioning for trade in food.
- Temporarily reduce all taxes.
- Reduce post harvest crop losses and improve food stocks along the value chain.
- Remove artificial constraints to domestic trades throughout the food supply chain in order to link small holder's farmers to markets.
- Ensure that local purchases of food and food components for humanitarian purposes are exempt from restrictions.
- Assess and comprehensively cost all fiscal measures taken in response to the rise in food prices.

Conclusions: The COVID-19 pandemic ought to be viewed as a reminder to mankind to reflect, re-evaluate and redesign food frameworks that are safe, healthy, sustainable, and advantageous to all. A location specific farm-system-for-nutrition approach, based on sustainable use of natural resources and local agri-food value chains can help improve household diet diversity and address nutrition deficiencies. The Report on Global Food Crises 2020 calls for support to ensure the continuous functioning of local food markets, value chains and agri-food systems in food crisis contexts, including support to food processing, transport, marketing and strengthening of local producers' groups. The food-based methodology can improve readiness and flexibility of communities to withstand the test presented by emergencies in general, and COVID19 specifically.

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**INDIAN FARMING – ISSUES, CHALLENGES & AVENUES****Dr. Ramakant P. Gajbhiye**

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Agriculture in India is livelihood for a majority of the population and can never be underestimated. Although its contribution in the gross domestic product (GDP) has reduced to less than 20 per cent and contribution of other sectors increased at a faster rate, agricultural production has grown. This has made us self-sufficient and taken us from being a begging bowl for food after independence to a net exporter of agriculture and allied products. In the 2019-20 crop year, the country's food grain output (comprising wheat, rice, pulses and coarse cereals) stood at a record 297.5 million tonnes (MT). Releasing the second advance estimates for 2020-21 crop year, the agriculture ministry said food grain production is projected at a record 303.34 MT. The agriculture sector has empowered the country to increase the production of food grains by 5.4 times, horticultural crops by 10.1 times, fish by 15.2 times, milk 9.7 times and eggs 48.1 times, since 1951, thus making a visible impact on the national food and nutritional security. However, as per the estimates of Indian Council for Agricultural Research (ICAR), demand for food grain would increase to 345 million tonnes by 2030. Increasing population, increasing average income and globalization effects in India will increase demand for quantity, quality and nutritious food, and variety of food. Therefore, pressure on decreasing available cultivable land to produce more quantity, variety and quality of food will keep on increasing. India is blessed with large arable land with 15 agro-climatic zones as defined by ICAR, having almost all types of weather conditions, soil types and capable of growing a variety of crops. India is the top producer of milk, spices, pulses, tea, cashew and jute, and the second-largest producer of rice, wheat, oilseeds, fruits and vegetables, sugarcane and cotton. In spite of all these facts, the average productivity of many crops in India is quite low. The country's population in the next decade is expected to become the largest in the world and providing food for them will be a very prime issue. Farmers are still not able to earn respectable earnings.

Even after over seven decades of planning since the independence, majority of the farmers are still facing problems of poor production and/or poor returns. Major constraints in Indian agriculture are:

1. According to 2010-11 Agriculture Census, the total number of operational holdings was 138.35 million with average size of 1.15 hectares (ha). Of the total holdings, 85 per cent are in marginal and small farm categories of less than 2 ha (GOI, 2014).
2. Farming for subsistence which makes scale of economy in question with majority of small holdings.
3. Low-access of credit and prominent role of unorganized creditors affecting decisions of farmers in purchasing of inputs and selling of outputs
4. Less use of technology, mechanization and poor productivity for which first two points are of major concern
5. Very less value addition as compared to developed countries and negligible primary-level processing at farmers level.
6. Poor infrastructure for farming making more dependence on weather, marketing and supply chain suitable for high value crops.



Future of agriculture is a very important question for the planners and all other stakeholders. Government and other organizations are trying to address the key challenges of agriculture in India, including small holdings of farmers, primary and secondary processing, supply chain, infrastructure supporting the efficient use of resources and marketing, reducing intermediaries in the market. There is a need for work on cost-effective technologies with environmental protection and on conserving our natural resources. The reforms towards privatization, liberalization and globalization affected inputs market at a faster pace. Agricultural marketing reforms after 2003 made changes in marketing of agricultural outputs by permitting private Investment in developing markets, contract farming and futures trading, etc. These amendments in marketing acts have brought about some changes but the rate is less. Along with this, the information technology revolution in India, new technologies in agriculture, private investments especially on research and development, government efforts to rejuvenate the cooperative movement to address the problems of small holdings and small produce etc. are changing face of agriculture in India. Many startups in agriculture by highly educated young ones show that they are able to understand the high potential of putting money and efforts in this sector. Cumulative effects of technology over the next decade will change the face of agriculture. All the constraints in agriculture make the productivity and returns complex but still a high untapped potential is there in India's agriculture sector. Advantageous weather and soil conditions, high demand for food, untapped opportunities, various fiscal incentives given by the government for inputs, production infrastructure, availability of cheap credit facilities and for marketing and export promotion are attracting many individuals, big companies, startups and entrepreneurial ventures to do a lot of investments on innovations, inventions, research and development and on other aspects of business.

Some of the major problems and their possible solutions have been discussed as follows. Indian agriculture is plagued by several problems; some of them are natural and some others are manmade.

1. Small and fragmented land-holdings:

The seemingly abundance of net sown area of 141.2 million hectares and total cropped area of 189.7 million hectares (1999-2000) pales into insignificance when we see that it is divided into economically unviable small and scattered holdings. The average size of holdings was 2.28 hectares in 1970-71 which was reduced to 1.82 hectares in 1980-81 and 1.50 hectares in 1995-96. The size of the holdings will further decrease with the infinite Sub-division of the land holdings. The problem of small and fragmented holdings is more serious in densely populated and intensively cultivated states like Kerala, West Bengal, Bihar and eastern part of Uttar Pradesh where the average size of land holdings is less than one hectare and in certain parts it is less than even 0.5 hectare. Rajasthan with vast sandy stretches and Nagaland with the prevailing 'Jhoom' (shifting agriculture) have larger average sized holdings of 4 and 7.15 hectares respectively. States having high percentage of net sown area like Punjab, Haryana, Maharashtra, Gujarat, Karnataka and Madhya Pradesh have holding size above the national average. Further it is shocking to note that a large proportion of 59 per cent holdings in 1990- 91 were marginal (below 1 hectare) accounting for 14.9 per cent of the total operated area. Another 19 per cent were small holdings (1-2 hectare) taking up 17.3 per cent of the total operated area. Large holdings (above 10 hectare) accounted for only 1.6 per cent of total holdings but covered 17.4 per cent of the operated area (Table 1). Hence, there is a wide gap between small farmers, medium farmers (peasant group) and big farmers (landlords). The main reason for this sad state of affairs is our inheritance laws. The land belonging to the father is equally distributed among his sons. This distribution of land does not entail a collection or consolidated one, but its nature is fragmented. Different tracts have different levels of fertility and are to be distributed accordingly. If there are four tracts which are to be distributed between two sons, both the sons will get smaller plots of each land tract. In this way the holdings become smaller and more fragmented with each passing generation. Sub-division and fragmentation of the holdings is one of the main



causes of our low agricultural productivity and backward state of our agriculture. A lot of time and labour is wasted in moving seeds, manure, implements and cattle from one piece of land to another. Irrigation becomes difficult on such small and fragmented fields. Further, a lot of fertile agricultural land is wasted in providing boundaries. Under such circumstances, the farmer cannot concentrate on improvement. The only answer to this ticklish problem is the consolidation of holdings which means the reallocation of holdings which are fragmented, the creation of farms which comprise only one or a few parcels in place of multitude of patches formerly in the possession of each peasant. But unfortunately, this plan has not succeeded much. Although legislation for consolidation of holdings has been enacted by almost all the states, it has been implemented only in Punjab, Haryana and in some parts of Uttar Pradesh. Consolidation of about 45 million holdings has been done till 1990-91 in Punjab, Haryana and western Uttar Pradesh. The other solution to this problem is cooperative farming in which the farmers pool their resources and share the profit.

2. Seeds:

Seed is a critical and basic input for attaining higher crop yields and sustained growth in agricultural production. Distribution of assured quality seed is as critical as the production of such seeds. Unfortunately, good quality seeds are out of reach of the majority of farmers, especially small and marginal farmers mainly because of exorbitant prices of better seeds. In order to solve this problem, the Government of India established the National Seeds Corporation (NSC) in 1963 and the State Farmers Corporation of India (SFCI) in 1969. Thirteen State Seed Corporations (SSCs) were also established to augment the supply of improved seeds to the farmers. High Yielding Variety Programme (HYVP) was launched in 1966-67 as a major thrust plan to increase the production of food grains in the country. The Indian seed industry had exhibited impressive growth in the past and is expected to provide further potential for growth in agricultural production: The role of seed industry is not only to produce adequate quantity of quality seeds but also to achieve varietal diversity to suit various agro-climatic zones of the country. The policy statements are designed towards making available to the Indian farmer, adequate quantities of seed of superior quality at the appropriate time and place and at an affordable price so as to meet the country's food and nutritional security goals. Indian seeds programme largely adheres to limited generation system for seed multiplication. The system recognises three kinds of generation, namely breeder, foundation and certified seeds. Breeder seed is the basic seed and first stage in seed production. Foundation seed is the second stage in seed production chain and is the progeny of breeder seed. Certified seed is the ultimate stage in seed production chain and is the progeny of foundation seed. Production of breeder and foundation seeds and certified seeds distribution have gone up at an annual average rate of 3.4 per cent, 7.5 per cent and 9.5 per cent respectively, between 2001-02 and 2005-06).

3. Manures, Fertilizers and Biocides:

Indian soils have been used for growing crops over thousands of years without caring much for replenishing. This has led to depletion and exhaustion of soils resulting in their low productivity. The average yields of almost all the crops are among the lowest in the world. This is a serious problem which can be solved by using more manures and fertilizers. Manures and fertilizers play the same role in relation to soils as good food in relation to body. Just as a well-nourished body is capable of doing any good job, a well-nourished soil is capable of giving good yields. It has been estimated that about 70 per cent of growth in agricultural production can be attributed to increased fertilizer application. Thus increase in the consumption of fertilizers is a barometer of agricultural prosperity. However, there are practical difficulties in providing sufficient manures and fertilizers in all parts of a country of India's dimensions inhabited by poor peasants. Cow dung provides the best manure to the soils. But its use as such is limited because much of cow dung is used as kitchen fuel in the shape of dung cakes. Reduction in the supply of fire wood and increasing demand for fuel in the rural areas due to increase in population has further complicated the problem. Chemical fertilizers are costly and are often



beyond the reach of the poor farmers. The fertilizer problem is, therefore, both acute and complex. It has been felt that organic manures are essential for keeping the soil in good health. The country has a potential of 650 million tonnes of rural and 160 lakh tonnes of urban compost which is not fully utilized at present. The utilization of this potential will solve the twin problem of disposal of waste and providing manure to the soil.

The government has given high incentive especially in the form of heavy subsidy for using chemical fertilizers. There was practically no use of chemical fertilizers at the time of Independence. As a result of initiative by the government and due to change in the attitude of some progressive farmers, the consumption of fertilizers increased tremendously. In order to maintain the quality of the fertilizers, 52 fertilizer quality control laboratories have been set up in different parts of the country. In addition, there is one Central Fertilizer Quality Control and Training Institute at Faridabad with its three regional centers at Mumbai, Kolkata and Chennai. Pests, germs and weeds cause heavy loss to crops which amounted to about one third of the total field produce at the time of Independence. Biocides (pesticides, herbicides and weedicides) are used to save the crops and to avoid losses. The increased use of these inputs has saved a lot of crops, especially the food crops from unnecessary wastage. But indiscriminate use of biocides has resulted in wide spread environmental pollution which takes its own toll.

4. Irrigation:

Although India is the second largest irrigated country of the world after China, only one-third of the cropped area is under irrigation. Irrigation is the most important agricultural input in a tropical monsoon country like India where rainfall is uncertain, unreliable and erratic. India cannot achieve sustained progress in agriculture unless and until more than half of the cropped area is brought under assured irrigation. This is testified by the success story of agricultural progress in Punjab Haryana and western part of Uttar Pradesh where over half of the cropped area is under irrigation! Large tracts still await irrigation to boost the agricultural output. However, care must be taken to safeguard against ill effects of over irrigation especially in areas irrigated by canals. Large tracts in Punjab and Haryana have been rendered useless (areas affected by salinity, alkalinity and water-logging), due to faulty irrigation. In the Indira Gandhi Canal command area also intensive irrigation has led to sharp rise in sub-soil water level, leading to water-logging, soil salinity and alkalinity.

5. Lack of mechanization:

In spite of the large scale mechanisation of agriculture in some parts of the country, most of the agricultural operations in larger parts are carried on by human hand using simple and conventional tools and implements like wooden plough, sickle, etc. Little or no use of machines is made in ploughing, sowing, irrigating, thinning and pruning, weeding, harvesting threshing and transporting the crops. This is specially the case with small and marginal farmers. It results in huge wastage of human labour and in low yields per capita labour force. There is urgent need to mechanise the agricultural operations so that wastage of labour force is avoided and farming is made convenient and efficient. Agricultural implements and machinery are a crucial input for efficient and timely agricultural operations, facilitating multiple cropping and thereby increasing production. Some progress has been made for mechanising agriculture in India after Independence. Need for mechanisation was specially felt with the advent of Green Revolution in 1960s. Strategies and programmes have been directed towards replacement of traditional and inefficient implements by improved ones, enabling the farmer to own tractors, power tillers, harvesters and other machines. A large industrial base for manufacturing of the agricultural machines has also been developed. Power availability for carrying out various agricultural operations has been increased to reach a level of 14 kW per hectare in 2003-04 from only 0.3 kW per hectare in 1971-72. This increase was the result of increasing use of tractor, power tiller and combine harvesters, irrigation pumps and other power operated machines. The share of mechanical and electrical power has increased from 40 per cent in



1971 to 84 per cent in 2003-04. Uttar Pradesh recorded the highest average sales of tractors during the five year period ending 2003-04 and West Bengal recorded the highest average sales of power tillers during the same period. Strenuous efforts are being made to encourage the farmers to adopt technically advanced agricultural equipment's in order to carry farm operations timely and precisely and to economies the agricultural production process.

6. Soil erosion:

Large tracts of fertile land suffer from soil erosion by wind and water. This area must be properly treated and restored to its original fertility.

7. Agricultural Marketing:

Agricultural marketing still continues to be in a bad shape in rural India. In the absence of sound marketing facilities, the farmers have to depend upon local traders and middlemen for the disposal of their farm produce which is sold at throw-away price. In most cases, these farmers are forced, under socio-economic conditions, to carry on distress sale of their produce. In most of small villages, the farmers sell their produce to the money lender from whom they usually borrow money.

According to an estimate 85 per cent of wheat and 75 per cent of oil seeds in Uttar Pradesh, 90 per cent of Jute in West Bengal, 70 per cent of oilseeds and 35 per cent of cotton in Punjab is sold by farmers in the village itself. Such a situation arises due to the inability of the poor farmers to wait for long after harvesting their crops. In order to meet his commitments and pay his debt, the poor farmer is forced to sell the produce at whatever price is offered to him. The Rural Credit Survey Report rightly remarked that the producers in general sell their produce at an unfavorable place and at an unfavorable time and usually they get unfavorable terms. In the absence of an organized marketing structure, private traders and middlemen dominate the marketing and trading of agricultural produce. The remuneration of the services provided by the middlemen increases the load on the consumer, although the producer does not derive similar benefit. Many market surveys have revealed that middlemen take away about 48 per cent of the price of rice, 52 per cent of the price of groundnuts and 60 per cent of the price of potatoes offered by consumers. In order to save the farmer from the clutches of the money lenders and the middle men, the government has come out with regulated markets. These markets generally introduce a system of competitive buying, help in eradicating malpractices, ensure the use of standardized weights and measures and evolve suitable machinery for settlement of disputes thereby ensuring that the producers are not subjected to exploitation and receive remunerative prices.

8. Inadequate storage facilities:

Storage facilities in the rural areas are either totally absent or grossly inadequate. Under such conditions the farmers are compelled to sell their produce immediately after the harvest at the prevailing market prices which are bound to be low. Such distress sale deprives the farmers of their legitimate income. The Parse Committee estimated the post-harvest losses at 9.3 per cent of which nearly 6.6 per cent occurred due to poor storage conditions alone. Scientific storage is, therefore, very essential to avoid losses and to benefit the farmers and the consumers alike. At present there are number of agencies engaged in warehousing and storage activities. The Food Corporation of India (F.C.I.), the Central Warehousing Corporation (C.W.C.) and State Warehousing Corporation are among the principal agencies engaged in this task. These agencies help in building up buffer stock, which can be used in the hour of need. The Central Government is also implementing the scheme for establishment of national Grid of Rural Godowns since 1979-80. This scheme provides storage facilities to the farmers near their fields and in particular to the small and marginal farmers. The Working Group on additional storage facilities in rural areas has recommended a scheme of establishing a network of Rural Storage Centres to serve the economic interests of the farming community.

9. Inadequate transport:



One of the main handicaps with Indian agriculture is the lack of cheap and efficient means of transportation. Even at present there are lakhs of villages which are not well connected with main roads or with market centers. Most roads in the rural areas are Kutcha (bullock- cart roads) and become useless in the rainy season. Under these circumstances the farmers cannot carry their produce to the main market and are forced to sell it in the local market at low price. Linking each village by metalled road is a gigantic task and it needs huge sums of money to complete this task.

10. Scarcity of capital:

Agriculture is an important industry and like all other industries it also requires capital. The role of capital input is becoming more and more important with the advancement of farm technology. Since the agriculturists' capital is locked up in his lands and stocks, he is obliged to borrow money for stimulating the tempo of agricultural production. The main suppliers of money to the farmer are the money-lenders, traders and commission agents who charge high rate of interest and purchase the agricultural produce at very low price. All India Rural Credit Survey Committee showed that in 1950-51 the share of money lenders stood at as high as 68.6 per cent of the total rural credit and in 1975-76 their share declined to 43 per cent of the credit needs of the farmers. This shows that the money lender is losing ground but is still the single largest contributor of agricultural credit. Rural credit scenario has undergone a significant change and institutional agencies such as Central Cooperative Banks, State Cooperative Banks, Commercial Banks, Cooperative Credit Agencies and some Government Agencies are extending loans to farmers on easy terms.

There has been a steady increase in the flow of institutional credit to agriculture over the years (Table 1).

Table 1 Institutional Credit to Agriculture:

Institutions	1999-00	2000-01	2001-02	2002-03	2003-04
Co-operative Banks	18,363	20,801	23,604	24,296	26,959
Share (per cent)	40	39	38	34	31
Regional Rural Banks	3,172	4,219	4,854	5,467	7,581
Share (per cent)	7	8	8	8	9
Commercial Banks	24,733	27,807	33,587	41,047	52,441
Share (per cent)	53	53	54	58	60
Total	46,268	52,827	62,045	70,810	86,981
Per cent increase	26	14	17	14	22

Future Avenues:-

1. Changing demand due to increase in incomes, globalisation and health consciousness is affecting and going to affect more the production in future. Demand for fruits and vegetables, dairy products, fish and meat is going to increase in future.
2. Researches, technology improvements, protected cultivation of high value greens and other vegetables will be more. There will be more demand of processed and affordable quality products.
3. More competition will be there among private companies giving innovative products, better seeds, fertilisers, plant protection chemicals, customised farm machinery and feed for animals etc. in cost effective ways at competitive prices giving more returns on investment by farmers. Use of biotechnology and breeding will be very important in developing eco-friendly and disease resistant, climate resilient, more nutritious and tastier crop varieties.
4. Some technologies will be frequently and widely used in future and some will become common in a short time while some will take time to mature. For producing the same products in other way so as to use resources judiciously and using new resources also like hydroponics, use of plastics



and bio-plastics in production. There will be more of vertical and urban farming and there will also be efforts in long term to find new areas for production like barren deserts and seawater.

5. Precision farming with soil testing-based decisions, automation using artificial intelligence will be focused for precise application inputs in agriculture. Sensors and drones will be used for precision, quality, environment in cost effective manner. Small and marginal farmers will also be using these technologies with the help of private players, government or farmer producer organisations (FPO). Use of GPS technology, drones, robots etc. controlled by smart phones etc. can make life of farmers easy and exciting with good results. These advanced devices will make agriculture be more profitable, easy and environmentally friendly.
6. Use nano-technology for enhancement of food quality and safety, efficient use of inputs will be in near future. Nano-materials in agriculture will reduce the wastage in use of chemicals, minimise nutrient losses in fertilisation and will be used to increase yield through pest and nutrient management. IFFCO has already done successful tests in nano-fertilisers.
7. India has improved remarkably in its digital connectivity and market access has become very easy. The number of internet users is projected to reach 666.4 million in 2025. Farmers will be behaving more smartly with mobiles in hands and would be able to be more aware and connected with different stake holders. Government will be making wide use of digital technology for generating awareness among farmers, information sharing, government schemes using digital technology for direct transfers of money.
8. There will certainly be more work by government, village communities, agri startups and private players in conserving sharply depleting water resource. Use of digital technology can make revolution in this direction. There will be use of satellites, IoT, drones for better collection of data regarding soil health, crop area and yield which will make cost for insurers less with better estimations and system will be more exact and effective.
9. There will be more of niche marketers in operations, area, and crop specific small equipment's which will make operations even at small farms easier and efficient. Food wastage will be less and better use of waste materials in agriculture will be more. Number of warehouses in private sector will be more and linkages between government and private warehouses will be increasing. This will help in balancing supply with demand and stabilisation of prices of agri-outputs in the market.
10. Retailing in agriculture will largely be digitalised. A study estimates that over 90 per cent of kirana stores across the country will be digitalized by 2025 with modern traceable logistics and transparent supply chain. Many players have already taking kirana stores to the door steps of consumers like Amazon and Jio Mart.

Question arises whether farmers will be able to make use of modern technologies in a country where education, holding size, infrastructure, low level of technology adoption and many other constraints are there.

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Despite some stagnation during the later modern era the independent Republic of India was able to develop a comprehensive agricultural programmer. In the years since its independence, India has made immense progress towards food security. Indian population has tripled, and food-grain production more than quadrupled. There has been a substantial increase in available food-grain per capita. Before the mid-1960s, India relied on imports and food aid to meet domestic requirements. However, two years of severe drought in 1965 and 1966 convinced India to reform its agricultural policy and that it could not rely on foreign aid and imports for food security. India adopted significant policy reforms focused on the goal of food grain self-sufficiency. This ushered in India's Green Revolution. It began with the decision to adopt superior yielding, disease resistant wheat varieties in combination with better farming knowledge to improve productivity. The state of Punjab led India's green revolution and earned the distinction of being the country's breadbasket.

The initial increase in production was centered on the irrigated areas of the states of Punjab, Haryana and western Uttar Pradesh. With the farmers and the government officials focusing on farm productivity and knowledge transfer, India's total food grain production soared. A hectare of Indian wheat farm that produced an average of 0.8 tones in 1948, produced 4.7 tons of wheat in 1975 from the same land. Such rapid growth in farm productivity enabled India to become self-sufficient by the 1970s. It also empowered the smallholder farmers to seek further means to increase food staples produced per hectare. By 2000, Indian farms were adopting wheat varieties capable of yielding 6 tonnes of wheat per hectare. With agricultural policy success in wheat, India's Green Revolution technology spread to rice. However, since irrigation infrastructure was very poor, Indian farmers innovated with tube-wells, to harvest ground water. When gains from the new technology reached their limits in the states of initial adoption, the technology spread in the 1970s and 1980s to the states of eastern India — Bihar, Odessa and West Bengal. The lasting benefits of the improved seeds and new technology extended principally to the irrigated areas which account for about one-third of the harvested crop area. In the 1980s, Indian agriculture policy shifted to "evolution of a production pattern in line with the demand pattern" leading to a shift in emphasis to other agricultural commodities like oilseed, fruit and vegetables. Farmers began adopting improved methods and technologies in dairying, fisheries and livestock, and meeting the diversified food needs of a growing population.

As with rice, the lasting benefits of improved seeds and improved farming technologies now largely depends on whether India develops infrastructure such as irrigation network, flood control systems, reliable electricity production capacity, all-season rural and urban highways, cold storage to prevent spoilage, modern retail, and competitive buyers of produce from Indian farmers. This is increasingly the focus of Indian agriculture policy. India ranks 74 out of 113 major countries in terms of food security index. India's agricultural economy is undergoing structural changes. Between 1970 and 2011, the GDP share of agriculture has fallen from 43% to 16%. This isn't because of reduced importance of agriculture or a consequence of agricultural policy; rather, it is largely due to the rapid economic growth in services, industrial output, and non-agricultural sectors in India between 2000 and 2010. Agricultural scientist MS Swaminathan has played a vital role in the green revolution. In



2013, NDTV named him one of 25 living legends of India for outstanding contributions to agriculture and making India a food-sovereign country.

The Indian government does not have a fixed definition for a 'farmer'. Various government estimates (Census, Agricultural Census, Survey assessments, Periodic Labour Force Surveys) give a different number of farmers in the country ranging from 37 million to 118 million as per the different definitions. Some definitions take in to account the number of holdings as compared to the number of farmers. Other definitions take into account possession of land, while others try to delink land ownership from the definition of a farmer. Other terms also used include 'cultivator'.

For the purpose of this Policy, the term "Farmer" will refer to a person actively engaged in the economic and/or livelihood activity of growing crops and producing other primary agricultural commodities and will include all agricultural operational holders, cultivators, agricultural labourers, sharecroppers, tenants, poultry and livestock rearers, fishers, beekeepers, gardeners, pastoralists, non-corporate planters and planting labourers, as well as persons engaged in various farming related occupations such as sericulture, vermiculture, and agro-forestry. The term will also include tribal families / persons engaged in shifting cultivation and in the collection, use and sale of timber and non-timber forest produce.

However this definition has not been adopted. As per the 2014 FAO world agriculture statistics India is the world's largest producer of many fresh fruits like banana, mango, guava, papaya, lemon and vegetables like chickpea, okra and milk, major spices like chili pepper, ginger, fibrous crops such as jute, staples such as millets and castor oil seed. India is the second largest producer of wheat and rice, the world's major food staples.

India is ranked under the world's five largest producers of over 80% of agricultural produce items, including many cash crops such as coffee and cotton, in 2010. India is one of the world's five largest producers of livestock and poultry meat, with one of the fastest growth rates, as of 2011. One report from 2008 claimed that India's population is growing faster than its ability to produce rice and wheat. While other recent studies claim that India can easily feed its growing population, plus produce wheat and rice for global exports, if it can reduce food staple spoilage/wastage, improve its infrastructure and raise its farm productivity like those achieved by other developing countries such as Brazil and China.

In fiscal year ending June 2011, with a normal monsoon season, Indian agriculture accomplished an all-time record production of 85.9 million tons of wheat, a 6.4% increase from a year earlier. Rice output in India hit a new record at 95.3 million tones, a 7% increase from the year earlier. Lentils and many other food staples production also increased year over year. Indian farmers thus produced about 71 kilograms of wheat and 80 kilograms of rice for every member of Indian population in 2011. The per capita supply of rice every year in India is now higher than the per capita consumption of rice every year in Japan. India exported \$39 billion worth of agricultural products in 2013, making it the seventh largest agricultural exporter worldwide, and the sixth largest net exporter. This represents explosive growth, as in 2004 net exports were about \$5 billion. India is the fastest growing exporter of agricultural products over a 10-year period, its \$39 billion of net export is more than double the combined exports of the European Union (EU-28). It has become one of the world's largest suppliers of rice, cotton, sugar and wheat. India exported around 2 million metric tones of wheat and 2.1 million metric tonnes of rice in 2011 to Africa, Nepal, Bangladesh and other regions around the world.

Aquaculture and catch fishery is amongst the fastest growing industries in India. Between 1990 and 2010, the Indian fish capture harvest doubled, while aquaculture harvest tripled. In 2008, India was the world's sixth largest producer of marine and freshwater capture fisheries and the second largest aquaculture farmed fish producer. India exported 600,000 metric tonnes of fish products to



nearly half of the world's countries. Though the available nutritional standard is 100% of the requirement, India lags far behind in terms of quality protein intake at 20% which is to be tackled by making available protein rich food products such as eggs, meat, fish, chicken etc. at affordable prices

India has shown a steady average nationwide annual increase in the kilograms produced per hectare for some agricultural items, over the last 60 years. These gains have come mainly from India's green revolution improving road and power generation infrastructure, knowledge of gains and reforms. Despite these recent accomplishments, agriculture has the potential for major productivity and total output gains, because crop yields in India are still just 30% to 60% of the best sustainable crop yields achievable in the farms of developed and other developing countries. Additionally, post harvest losses due to poor infrastructure and unorganized retail, caused India to experience some of the highest food losses in the world.

According to some scientists agriculture was widespread in the Indian peninsula, 10000–3000 years ago, well beyond the fertile plains of the north. For example, one study reports 12 sites in the southern Indian states of Tamil Nadu, Andhra Pradesh and Karnataka providing clear evidence of agriculture of pulses *Vigna radiata* and *Macrotyloma uniflorum*, millet-grasses (*Brachiaria ramosa* and *Setaria verticillata*), wheats (*Triticum dicoccum*, *Triticum durum/aestivum*), barley (*Hordeum vulgare*), hyacinth bean (*Lablab purpureus*), pearl millet (*Pennisetum glaucum*), finger millet (*Eleusine coracana*), cotton (*Gossypium* sp.), linseed (*Linum* sp.), as well as gathered fruits of *Ziziphus* and two *Cucurbitaceae*. Some claim Indian agriculture began by 9000 BC as a result of early cultivation of plants, and domestication of crops and animals. Settled life soon followed with implements and techniques being developed for agriculture. Double monsoons led to two harvests being reaped in one year. Indian products soon reached trading networks and foreign crops were introduced. Plants and animals—considered essences "reeds that produce honey without bees" being grown. These were locally called (*Sākhara*). On their return journey, the Macedonian soldiers carried the "honey bearing reeds," thus spreading sugar and sugarcane agriculture. People in India had invented, by about 500 BC, the process to produce sugar crystals. In the local language, these crystals were called *khanda*, which is the source of the word *candy*.

Before the 18th century, cultivation of sugarcane was largely confined to India. A few merchants began to trade in sugar – a luxury and an expensive spice in Europe until the 18th century. Sugar became widely popular in 18th-century Europe, and then graduated to become a human necessity in the 19th century all over the world. Sugarcane plantations, just like cotton farms, became a major driver of large and forced human migrations in the 19th century and early 20th century – of people from Africa and from India, both in millions – influencing the ethnic mix, political conflicts and cultural evolution of Caribbean, South American, Indian Ocean and Pacific Island nations. The history and past accomplishments of Indian agriculture thus influenced, in part, colonialism, slavery and slavery-like indentured labour practices in the new world, Caribbean wars and world history in 18th and 19th centuries.

Indian agriculture after independence :

Despite some stagnation during the later modern era the independent Republic of India was able to develop a comprehensive agricultural programme. In the years since its independence, India has made immense progress towards food security. Indian population has tripled, and food-grain production more than quadrupled. There has been a substantial increase in available food-grain per capita.

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**IMPACT OF NEW FARM ACT, 2020 ON FARMERS: AN OVERVIEW****Dr. Ambadas B. Pande**

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Abstract:

Central Government has passed the new bills in the year 2020 which are - The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020, The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill, 2020, and The Essential Commodities (Amendment) Bill, 2020, these three bills were collectively passed as a part of 2020 Farm Laws. After the announcement of these bills mixed reactions came out from all over the nation. Agitators and protestors came on road to oppose these bills. The government is much more optimistic and confident about the bills that, these bills would transform the agriculture sector. It would also raise the farmers' income. Through these laws government promised to double farmers' income by 2022 and the bills will make the farmer independent. Government is in an opinion that it will provide benefits to the small and marginal farmers with less than five hectares of land. This Bill is also concerned to contract farming, providing a framework on trade agreements for the sale and purchase of farm produce. Further the Bill is formulated on the framework that it will enable farmers to engage with agri-business companies, retailers, exporters for service and sale of products while giving access to modern technology. Considering the positive provisions of the bills in the interest of farmers this paper intends to focus on the facts of the bills to find out the realities.

Keywords: Agricultural Produce Market Committee (APMC), Minimum Support Price mechanism(MSP)Agriculture Reforms,Recent Agricultural Laws and Policy

Introduction:

Since independence, development of Agriculture sector has been an agenda of every government, but unfortunately, no government has found any concrete solution to solve the problems for development of this sector. More than 60% of Indian population is directly or indirectly depend upon this sector. Majority of our industries are depend upon the agriculture produce and they are developed but still our agriculture sector is lagging behind. Many committee are constituted time to time to overcome the issues. In every Five Years Plan various provisions and policies are made for the development of this sector but still expected results are yet to be awaited. To study the situation of Indian farming sector NDA government had constituted a committee to review the prevailing laws and policies. Accordingly on the recommendations of the committee and after holding detailed discussion in parliament three bills were passed. But many states are not in favor of these bills.

The government, through the new agricultural policy, permitted farmers to sell their produce in open market. It is ensured that the new legislation will ultimately reduce the reliance of farmers on selective mandis. This new act also ensures that there will be no harm to the Minimum Support Price mechanism(MSP) and land tenure security that will remain in place to protect the interests of farmers. The government made it clear that the intention of these reforms is to support small farmers who do not have the resources to bargain for their produce to get a better price as well as to invest in technologies to increase farm productivity. The reforms aim to accelerate growth in the industry, through private sector investors in building infrastructure and supply chains for farm products in domestic and global markets. Government is confident that, these three bills will prove to reduce uncertainties and inefficiencies through productive investments and allow free trade between farmers and buyers at their ease. The contract farming act would also allow farmers to enter a pre-agreed



price deal with or large retailers agribusiness companies. But still the farmers from few states like Punjab and Haryana are not in a mood to accept the bills because they fear that their rights and liberty will be lost and they will be deprived from benefits.

- **Objectives of the study:**

A study of the new agricultural laws and policies is necessary to understand the provisions and to identify the pros and cons with a view to get solutions for the implementation of these bills. The broad objectives of this study are:

1. To study the Concept of new agricultural laws and policies.
2. To study the objectives of new laws and policies.
3. To understand the provisions of the bills.
4. To focus on the pros and cons of the bills.

- **Research Methodology:**

This research paper aims to give a better understanding about the new agricultural laws and policies in current scenario. The study is descriptive in nature. The literature and data are mainly based on secondary a source, which has been collected from various publications, books related topics, magazines, journals, various committee reports and internet sources.

- **Meaning and Concept of agricultural laws and policies :**

Agricultural policy which describes as a set of laws and provisions relating to domestic agriculture and import of foreign agricultural products. Every government usually implement any policy with the aim to achieve a specific outcome in the domestic agricultural product markets. It is a purposeful method of principles to guide decisions and achieve rational outcomes. It is a statement of intent, and is implemented as a procedure or protocol to obtain desired goal. Policies are normally adopted and implemented by a governance body within an organization.

Whereas the law states that the agricultural policies which are aiming at improving welfare level in the agricultural sector by ensuring agricultural development, increasing productivity, strengthening food safety and security, protecting and improving natural and biological resources as well as developing producer organizations. The government, through this new agricultural policy intended to allow farmers to sell their produce to whomever and wherever they want. As per the broad opinions of expert committees these three bills would work to reduce inefficiencies through productive investments and allow free trade between farmers and buyers.

- **Objectives of the recent agricultural Laws and Policy:**

The main objectives of this agricultural policy and Law are:

- To get rid from the major problems of agricultural sector related to improper and inefficient uses of natural resources.
- To minimize predominance of low-value agriculture, poor cost-benefit ratio of the sectorial activities and insignificant progress of cooperative farming.
- To improve welfare level in the agricultural sector by ensuring agricultural development.
- To increase the productivity, strengthening food safety and security, protecting and improving natural and biological resources, developing producer organizations.

- **Three Agriculture Reforms under new policy:**

Government introduced three agriculture reform bills in September 2020 to raise farmers' income in coming years. These are:

- (i) The Farmers' Produce Trade and Commerce Bill 2020 (Promotion and Facilitation),
- (ii) The Farmers' (Empowerment and Protection) Price Assurance and Farm Services Agreement (iii) The Essential Commodities (Amendment) Act. 2020

- **The Farmers' Produce Trade and Commerce Bill 2020 (Promotion and Facilitation)**



At present, the Indian farmers are facing so many problems and difficulties because of various limitations and restrictions in the prevailing agriculture laws, like limitations to selling their produce only to the state government's registered licensees and prohibition on selling commodities outside the notified and registered APMC market yards. Along with this, due to prevalence of various APMC laws, by the state governments, there are restrictions on free flow of agricultural trade between states. The intention of this new bill is to build an environment through which farmers and traders can enjoy the freedom of choice regarding selling and purchasing of produce. This will also facilitate the farmers to get remunerative prices through competitive, alternative trading channels to promote efficient, open and barrier-free interstate and intrastate trade.

According to government this bill is a historic step towards unlocking the country's heavily regulated agricultural markets. It will open more options to the farmers' to reduce marketing costs, and allow them to get better prices. It will also permit the farmers from regions with surplus outputs to receive better prices and lower prices for customers from regions with shortages.

- **The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill, 2020.**

This bill is passed with an aim to transform the agriculture sector by providing a national agricultural agreement system which will protect and empower farmers to interact equally and transparently with all stakeholders like agribusiness companies, processors, wholesalers, exporters and major retailers in the field of agricultural services and they could sell future agricultural produce at mutually agreed remunerative price structures.

The key factor of this law is that this would shift the risk of market unpredictability from the farmer to the sponsor and would allow the farmer to access new technologies and better inputs. It will prove beneficial to reduce the marketing costs and increase farmers' earnings. Another important factor is that farmers can participate in direct marketing so that the intermediaries are eliminated which may result to make maximum price realization. This bill also ensured the farmers in giving adequate protection as well as clear timelines for redresser similarly an efficient dispute resolution process has also been established in this law.

- **The Essential Commodities (Amendment) Bill, 2020.**

India has become a surplus in most agriculture commodities but still the entrepreneurial spirit has dampened due to the lack of investments in cold storage, warehouses, refining and export services. Hence farmers have been unable to get better prices. This bill will protect the interest of the farmers. With this cold storage facility will especially save the perishable commodities when there are bumper harvests and farmers suffer huge losses due to non-availability of such type of storage facilities.

In this new bill many items are excluded from the list of essential commodities such as cereals, pulses, oilseeds, edible oils, onions, and potatoes. The aim of exclusion of these items is to alleviate concerns of undue regulatory intervention by private investors in their business operations. This will help to develop the ability of farmers to grow, keep, transport and distribute as and when they needed. It is also aimed that this law would help to accelerate investments in cold storage and food supply chain modernization so that farmer will get liberty to store the produce and wait till getting expected returns out of their commodities. It will benefit both farmers and customers. It will also help to keep stability. It would result to create a favourable business climate and avoid wastage of agriculture products due to the lack of storage facilities.

- **Expected benefits of new laws:**

1. Farmers will get new option in so far as they will have the freedom to sell their produce outside the APMC (agricultural produce market committee) market.
2. There will be no other taxes on the trade which are executed outside the APMC, where farmer will get higher price to their produce.



2. This law has given freedom to farmers of selling their produce within the state or anywhere else in the country. This will provide direct benefit the farmers to sell their produce wherever they get a higher price.

3. For any kind of traders to purchase agricultural produce of farmers in the trade area outside the APMC mandi there is no requirement of license. All those who are having PAN card or any other identity proof notified by the Central government can join this trade. This will widen the boundaries of the trade and farmers will get more benefit out of that.

4. As far as dispute redresser matter is concerned in case of arisen of any kind of dispute in business, the Sub-Divisional Magistrate has conferred the powers to settle the matter within 30 days.

5. In case of violation of rules and regulations of this laws there are provisions of heavy penalty for punishment.

- **Drawbacks as per the protestors:**

1. Farmers are doubtful about the assurances given in bills they think that with this law, mandis operated under the APMC law of the states will be abolished. Eventually after the end of the APMC mandis, the farmers will be forced to sell the crop to corporate companies at lower price.

2. Secondly due to the abolition of the mandi system, it is said that there will be no purchase of crops on Minimum Support Price from the farmers which may cause loss to the farmers.

3. In this law the state bans and restrictions are removed hence farmers thinks that this provisions of the new law are only for the benefit of the corporate and not for the benefit of the farmers.

4. Condition of license mandate for trade is removed from new law hence it is said that the farmers will be exposed to the risk of fraud due to the entry of people without license or registration.

5. As far as any dispute in the business with the corporate buyer will concern it is feared that the farmer's interest will be ignored.

6 As far as The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act, 2020 and The Essential Commodities (Amendment) Act, 2020 are concerned farmers think that these both are also in favor of big buyers.

7. Farmers are apprehensive that the agreement with corporate sector will be losing their land and becoming slaves to the corporate.

- **Conclusion:**

Indian Agriculture sector is the mainstay of our economy which is contributing about 15 per cent of national Gross Domestic Product (GDP) and most important thing is that more than half of India's population is wholly or partially dependent on agriculture and allied activities for their livelihood. The enactment of new laws and policies are aimed at strengthening agriculture sector in sustainable economic and human development. According to the Govt.'s agenda these new laws will help in upliftment of the farmers as well as all sections of the society who are directly engaged in agriculture or indirectly linked with agriculture as consumers. The laws also aim that with the efficient way of production, stabilized prices, higher income from agriculture more conjugative environment may be created for the development of Indian economy. Many positive aspects of the new laws are found in this study such as all stakeholders would be equally benefitted with these three laws particularly farmers will get an opportunity to sell their produce in open market where they will get more price. Assurance of Price to the farmers even before sowing of crops is also one of the key factor of this law. Farmers will be protected from the rise and fall of market prices due to prior price determination. Similarly it will also enable the farmer to access modern technology, better seed, and other inputs. It will control and curtail the cost of marketing and improve the income of farmers. The law also provides an effective dispute resolution mechanism with clear timelines for redresser. The induction and implementation of research and new technology in the agriculture sector is a positive aspect of these laws. Now farmers could themselves fix the price of their produce with mutual understanding of corporate. But farmers fears that large retailers and corporate will dominate agriculture sector with



money power. They are also doubtful that APMCs may become unavailable and have to shutdown in future if trade moves substantially to other alternate platforms. The important question in the mind of farmers is that the Price Assurance Bill doesn't prescribe any mechanism for price fixation. Hence there is an apprehension in farmers that free hand has been given to private corporate houses. With this they could lead to farmer's exploitation. The Essential Commodities (Amendment) Ordinance removes pulses, oil seeds, edible oils, onion and potatoes from the essential commodities list. In this way this amendment will deregulate the production, movement, storage and distribution of these food commodities. Farmers will get more liberty than before. Hence prima facie it seems that though there are some Pons and cons in these bills but still in coming time farmers have wide scope to develop their business because through these bills farmers are going to connect with global market. But before implementing the bill farmers orientation regarding the doubtful clauses is necessary so that they could trust in Govt.'s fair intention.

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**FARM BILL 2020 – PROS AND CONS****Dr. Akruti Anup Bose**

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Abstract:

Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill 2020, Farmers' Agreement on Price Assurance and Farm Services (Empowerment and Protection) Bill 2020, and Essential Commodities (Amendment) Bill 2020 were all approved after the President of India by the end of September, 2020 issued a notification. The main provision is that through corporate involvement, the country's farmers will be able to double their income. Farmers will no longer be reliant on commission agents, but instead on corporations and other trading firms. In India, agriculture is the responsibility of the states, but the central government enacted these laws in the name of trade and commerce, which simply means that they are for traders, and farmers are traders. On the other hand, the Indian farmer had never traded before. As a result, this trader's electricity subsidies will be terminated. These laws will cause a significant increase in the price of agricultural products, but corporations will reap the majority of the profit. Farmers will remain at the same level, with the risk of losing income and land, if the government does not purchase their farm produce after a certain period of time, or if corporate companies do not miss any opportunity to lose money to the government.

Key Words: Farm Bill, farmer, agriculture, corporates, government.**1. INTRODUCTION:**

The Farmers Bills 2020 or The Agriculture Bill 2020 is a combination of 3 bills which are:

Bill No: 1 – Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill.

Bill No: 2 – The Farmer (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill.

Bill No: 3 – The Essential Commodities (Amendment) Bill.

This agriculture bill creates a framework that allows farmers to sell and buy agricultural products as they see fit while also promoting barrier-free inter- and intra-state trade. It will benefit small and marginal farmers with less than 5 hectares of land. Farmers and opposition parties have spoken out against the bill, claiming it will hurt their earnings. The government, on the other hand, claims that it will make it simple for farmers to sell their crops to large buyers directly. It will also allow farmers to sell directly to consumers rather than through middlemen, but only if climate-controlled storage facilities are available, electricity is reliable and available, and food processing companies compete for their produce.

2. OBJECTIVES:

- To study the Pros and Cons of three Farm Bills 2020, which was passed by the Parliament on 20th September, 2020.
- To bring out the pros and cons along with the explanation of each bills in details.
- To emphasize the loopholes in the Bills.

3. RESEARCH METHODOLOGY:

The paper primarily relied on secondary data sources for analysis. Ministry of Law and Justice printed gazette was previewed along with press release details. The details provided are authentic.

**4. REVIEW OF LITERATURE:**

Chhibber. A., (2021). The study opines to devise a system of incentives aimed at these crops rather than wheat and rice, whose production could be reduced. Instead of increasing MSPs under duress, the government of India could boost payments under PM KISAN and a larger MGNREGA. It should also improve farm price information systems and vital infrastructure for the food supply chain through mobile telephony.

Chavan. S., (2021). The annual research journal of the Department of Economics at St. Xavier's College (Autonomous), Mumbai. {The goal of this paper is to get a neutral perspective on the speculative effects of Farm Laws on the Indian Onion market. The study concludes that the successful agricultural reformation will result from dialogue, negotiations, and clarity of ideas, as well as consultation with farmer unions and appeasement of apprehensions.

Sahoo. J., et al. (2020) studies the three bills passed in the parliament in detail and concludes saying that the farmers need more freedom to sell, move out of farming and cash support than high prices in the meantime and the new farm act will assist Indian farmers.

5. BILL-1 Farmer's Produce Trade and Commerce (Promotion and Facilitation) Bill.

PROS: The Provision of the bill is predominantly

(1) "To create an ecosystem where farmers and traders enjoy the freedom to sell and purchase farm produce outside of registered Mandis' under the states' APMCs (Agricultural Produce Market Committees)." As a result, each state has an APMC, a semi-political body governed by a political party. Farmers can now sell their products outside of the APMCs. They hope to sell their goods wherever they can get a better price and profit margin.

(2) "To promote barrier-free inter-state and intra-state trade of farmers' produce." For example, a Maharashtra farmer can sell his produce not only in Maharashtra, but also in nearby Karnataka: Karnataka forms the western border of Maharashtra. He can sell his produce in Andhra Pradesh, Gujarat, or anywhere else for that matter, as long as he can sell it. The central concept is that he can sell his produce wherever he wants because he is in charge of it and the market is open.

(3) "To reduce Marketing / Transportation costs and help farmers in getting better prices." that means, the farmer in the open market can get better prices.

(4) "To provide a facilitative framework for e-commerce."

Electronic trading allows the farmers to choose where they want to sell, keep their markets open in their e trading account from anywhere in the world, and anyone can buy the farmers product if the price is right for the buyer. As a result, the market becomes more competitive. Because transportation costs could be shared, by this way money is saved on transportation. The bill added this as an additional feature.

The CONS to the Bill are

(1) "States will lose revenue as they won't be able to collect 'mandi fees' if farmers sells their produce outside registered APMC markets." - In terms of the state government's perspective, they are currently unsure about the GST because they are not receiving GST that has been deferred and is not being paid. As a result, the state government is concerned that sales tax will be lost, that the state government will not benefit from GST, and that the farmers' fee collected from the mandi will be lost as well. As a result, the state is terrified with the concern to revenue position which deteriorates.

(2) "What happens to 'commission agents' in states if entire farm trade moves out of mandis?" – The commission agent industry is completely controlled by politicians in some states. This is a group of politicians who are acting as shills. They're political activists, to put it that way. They make sure that none of the profits go to the farmers. So getting rid of such agents is a good thing, but it's not so good in terms of implementation. These agents, especially for small traders, ensure the movement of the farmer's produce, which is harvested, packed, and delivered to the mandi. . As a result, the farmer is relieved of the burden of storing it, which can be a major headache for small farmers. Farmers need



quick cash, and these agents help them get it because their farm produce is exposed to the unprotected environment on a daily basis. Produce spoilage is more likely, which is why these agents are useful because they ensure that the corporates will take care of those issues. Is it possible to avoid using an agent? Will they be more secure to the farmers if a substitute exists, as opposed to the agents mentioned earlier, who eat up all of the farmers' profits?

(3) "It may eventually end the MSP-based procurement system." - MSP stands for Minimum Support Price, and it ensures that a farmer will be able to sell his product for the lowest price possible. If he gets a higher price, he can sell for more, but this is the lowest price. The lack of mention of MSP in the bill is concerning, given that India's Prime Minister has stated that MSP will be maintained, and it is expected to be maintained. Because if this isn't kept up, the market will eventually collapse. As a result, the MSP is expected to remain unchanged.

6. BILL 2- Farmers' Agreement on Price Assurance and Farm Services (Empowerment and Protection) Bill 2020

PROS:

(1) "farmers can enter into a contract with agribusiness firm, processors, wholesalers, exporters or large retailers for sales of future farming produce at a pre agreed price."

The process of turning agriculture into a business is referred to as "corporatize agriculture." If this happens, it will be extremely beneficial; however, if corporatization is concentrated in the hands of a few large corporations, there will be a problem, as the agricultural trade will be controlled by one or two large wicks in the markets. Corporatization, on the other hand, is beneficial if it is spread thinly. It's a good idea if Birla, Tata, Godrej, Kirloskar, and the rest of the world work together to enter agriculture, invest in agriculture, buy agricultural products, and sell agricultural products to farmers, but if it's limited to a few players, it's a problem.

Because we are such a large country that produces so much, we have a lack of infrastructure and investment in agriculture, but a tractor is still too much of a luxury for our farmers today. The entire agricultural process in Brazil is controlled by satellite; the agricultural land is marked by satellite, and the tractor is guided to till the land by satellite. That is the type of technology used in Brazil, and despite the fact that Brazil is not a large country and is nearly identical to us, it is the type of technology used in Brazil, and as a result, the farmers profit by 130 percent to 140 percent. The concept is sound, but how will our government ensure that these businesses are forced to invest in this way? Land, equipment, and infrastructure are examples of these types of investments, with the goal of increasing production by 30% to 40% and reaping the profits. The most important and necessary thing we can do is use technology to make our land more fertile. The bill makes no mention of companies providing assurance to farmers in the event of natural disasters.

(2) "To transfer the risk of market unpredictability from farmers to sponsors." - which are of two levels. This includes both the risk of inputs and the risk of outputs. Is it stated in the bill that the sponsors will provide all funds necessary for the farmer to purchase raw materials, fertilizer, seeds, insecticides, germicides, agricultural tools, and so on? This money will be invested in the farm, and the farmer will then be able to grow his own produce. What if there's a famine, a flood, or a drought? If the produce is washed out or burnt out, there are two issues that arise. One problem is that the farmer owes money to the people who deliver the raw materials, and he has nothing to sell or eat (bulk of the suicides happens because of these two problems). Will the sponsors take responsibility for the issues? For example, if a farmer is sponsored to buy input products and a natural disaster strikes, will the sponsor say, "I forget and forgive your debt?" You are not obligated to pay me back. Is there anything that can be said or done about this? Alternatively, does the sponsor say it's fine? I won't give you the entire three lakh rupees I was supposed to give you; instead, I'll give you half. Despite the fact that neither you nor I made a profit, I still give you a profit. This is something that Bill No. 2 needs to clarify.



(3) “To enable the farmers to access modern technology and get better inputs.”- Will corporations invest in good infrastructure, better inputs, and an equal amount in agriculture, or will corporations be free to invest in technology as they see fit, with some investing more, others investing less, and others investing none at all?

This is a point that should be clarified. So it's great if the investment is there, if the inputs are there, and if infrastructure is being built, but the extent to which this will occur must be determined.

(4) “To reduce cost of marketing and boost farmer’s income.”

Is transportation a part of the government's definition of marketing costs for farmers? Is it better to go to the mandis and stay for four days for marketing purposes, or to keep the produce in stockage? Yes, but the farmers are taken care of in terms of storage, transportation, and actually going and selling, and their profitability rises as long as they are paid a fair price. A farmer makes a profit of 100 to 125 percent on their produce on average. If this point states that our farmer will make a 125 percent + 75% profit in two years, this is fantastic because our farmer will be able to survive for five years even if natural disasters strike. As a result, our farmers will no longer attempt suicide.

(5) “Farmers can engage in direct marketing by eliminating intermediaries for full price realization.”

In the entire industry, agents play a critical role. It is preferable to eliminate agents; however, agents should be replaced with a strong alternative, such as an agent who can go up to the smallest farmer in a village and ensure that his produce is picked up and paid. That infrastructure should be made available. When dealing with 5 farmers who each have 5 acres of land to manage out of a total of 10 acres, the concern with corporates is always intra-state. As a result, they're happy with 5000 acres of land. This bill will be problematic if these corporations only deal with large farmers and leave small farmers with one or two acres of land out. This is a major issue that will arise during the process, and it must be addressed by the agriculture ministry.

CONS: “Effective dispute resolution mechanism with redressal timelines.”

“Farmers in contract farming arrangements will be the weaker players in terms of their ability to negotiate what they need,” according to the opposition. This means that when farmers negotiate with large corporations, will they get the same deal?

SOLUTION: This can be resolved if farmers are given extensive training in how to negotiate on their own behalf. The situation will improve if social activists, farm activists, and agricultural activists get involved and train and teach farmers, as well as work with them to conduct effective negotiations. If this happens, it can be fixed.

7. BILL 3 -Essential Commodities (Amendment) Bill, 2020.

(1) PROS: “To remove commodities such as cereals, pulses, oil seed, onions, and potatoes from the list of essential commodities,” the bill states. Except in "extraordinary circumstances," such as war, it will not impose stockholding limits on such items.

CONS: This means that the commodities mentioned cannot be stored, so whatever price you set, you must distribute into the market, regardless of what happens if it is distributed. If it is distributed in the market, the market may become flooded with potatoes, and you, as a potato farmer, are forced to distribute it in the market because you cannot hold it, you will have no choice but to sell your produce at the price you receive. There are other factors to consider as well, such as product hoarding.

This provision will attract private sector/FDI into the agricultural sector by alleviating private investors' concerns about excessive regulatory interference in business operations,” which is a good idea. The more restrictions imposed on a business, the better.

(2) PROS: “To attract investment for farm infrastructure such as cold storage and food supply chain modernization.” By purchasing price stability, both farmers and consumers will benefit. The concept is fantastic. It will contribute to stability.

CONS: However, the question now is how well it can be carried out. If this is done correctly, there should be no issues. What if it can't be done properly? Because these farmers will be unable to store



their produce if corporations do not provide adequate storage. In the Indian farming industry, storage is a major issue, particularly in states where there are no progressive farmers or co-operative societies. We anticipate that a large portion of this bill will be devoted to the corporate sector. "Big Companies will have the freedom to stock commodities," says the opposition, "which means they will dictate terms to farmers, potentially resulting in lower prices for cultivators." We hope that large corporations and infrastructure do not begin to hoard as a result of this. What safeguards are in place to prevent large corporations from hoarding oilseeds, onions, and cereals? That is a source of concern, and it necessitates enactment of strict legislation to prevent such hoardings.

(8) CONCLUSION:

The farm bill's concept is sound. Farmers who have taken the initiative are being supported in some way. The fear is that these are just words on paper, and we'll have to wait for more evidence, such as how the corporation treats small and large farmers equally. In reality, the corporate world, as well as vendors, purchasers, and consumers, do not operate in this manner. The corporation does, in fact, deal with a large purchasing network in a unique way. How can this be avoided in farming, or else poor farmers will become even poorer?

Second, how can we be certain that a corporation isn't simply trying to profit from the industry? It's difficult to believe that these businesses will invest in this sector. Finally, what happens when the sponsors take on the risk? When does the risk transfer to the sponsors, and how does this occur? Is the cost of farming to be shifted, or is the profit expected from the farm, which provides one-two times the amount of food, to be taken into account? Finally, how are these people ensured that farmers' profits rise from 30 to 40% to 70 to 80%, as they should? What is the most practical way to accomplish this? These are the concerns raised by the bill.

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Understanding Farms Laws and Farmers Protest

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Abstract

This article examines the new farms law 2020 which has been enacted as a law for the farmers and traders to enjoy the freedom choice of purchase and sale of farmer's products. Although, it has been projected the beneficiary aspects to farmers' fraternity but the farmers especially from the Punjab and Haryana registered their disagreement on the implementation of new farms laws. Highlighting the distress and expectation of farmers, it then examines the discourse to explain the unseen impact of the farms law and mapping the possibility of multiple effects on the farmer's market economy.

Social scientist studied the society with different approaches and provided the various interpretations to explore the validity of social facts. It has been observed that social science scholarship perceived two types of perceptions, firstly, society has been the organic unity and for others, it is indulged with social inequalities having roots in various societal institutions. Caste as a basic element often associated with each of materials and non-material facts of society but it is found that except sociological imagination could able to explore the caste scholarship in many dimensions. In this regard, some of the social issues carry the caste consciousness as well as the class consciousness but it depends on the context of issues. As it is a known fact that contemporary issues which may be appear to be positive and negative are effects of the past events.

Farmer Protest- A struggle

By taking this cue into the consideration, the farmers protest since more than year become a matter of debate and discourse among the print and electronic media. Although, the main stream media might be playing its democratic role but social media unprofessionally or professionally is sharpening the ethos of democratic principles in the context of unheard voices of Indian society. Socially, the protest as another aspect of perpetuating the democracy only when the laws are unable to satisfy the enigma related to justice in every aspect. The ongoing farmers protest could be portrait under this paradigm which is mobilizing the other parts of India against the three farms acts passed by the parliament of India in September 2020. The farmers and farmers unions' representative reflected their disagreement over the laws and stated to disqualified or invalid it without expecting any comprising from the side of farmers itself¹. It also proposed by government to suspend law for 18 months but oppose by the farmers and also stay order brought by esteem supreme court on 21st January, 2021². As per the media report, eleven rounds took placed between the central government and representative of farms unions but it went fruitless. Understanding the grave situation, the respected Supreme Court embedded the committee to look after it and submit the report related to it.³ It has been said that three farm laws are anti- farmers in nature and six non-BJP state governments passed the resolution against the farms acts which the ruling government call the opposition as 'double standard' because some of the opposition parties like Congress, NCP and AAP .^{4 5} The farmers demanded for the minimum support price (MSP) so that the corporates could not able to control the prices and rather the farmer would have complete rights for selling their products directly

¹ <https://thewire.in/agriculture/farmers-protests-repeal-farm-laws-govt-india>, access on 28/06/2021, 10.32pm

² <https://theprint.in/india/eleventh-round-of-talks-between-modi-govt-and-farmers-fails-no-date-for-next-meeting/590520/>, access on 02/06/2021, 1.17pm

³ <https://www.indialegallive.com/constitutional-law-news/supreme-court-news/supreme-court-appointed-farm-laws-committee-invites-views-suggestions-before-february-20/>, access on 02/06/2021, 10.39 am.

⁴ <https://www.hindustantimes.com/india-news/west-bengal-passes-resolution-against-three-farm-laws-sixth-state-to-do-so-101611832758966.html>, access on, 24/06/2021, 3.06pm

⁵ <https://www.hindustantimes.com/india-news/ravi-shankar-prasad-slams-opposition-for-double-standards-on-reforms-in-farm-sector/story-l8lfpUjJNzvbPYt1KKrASL.html>, access on 30/05/2021, 23.03pm



to the byers which might have not been reached to level of apprehension. As a result of it, the farmer of Punjab and Haryana initiated their protest against the ruling government. Although many strategies applied on the farmer protest to cease them to reach Delhi and it has been reported that two to three lakhs people were involved in the support of farmers.⁶ It has been said that the farmer protest is product of misunderstanding and misconception about the farms law and it has been claimed by the government that some of farmer unions are in favor of implementation of law.⁷

Lower Castes, Mistrust, Expectation of Farmers,

Now the question is why and for what the farmers are protesting against the farm laws. It is very interesting that ruling government often took decision like demonetization and lockdown, etc. which surprised the educated and elites' class but it has created huge impact on those people who are earning hand to mouth. Although, the government displaying their sincerity and committing for the development and progress of farmers but the farmers are not in position to accept the ruling government promises. The reasons behind are the struggle between the theory and praxis. Though, the farmers seem to agree on MSP but with little doubt on it. Why it is so? The reason can be fetched from the previous experience of farmer market economy, in which MSP fixed by the government but the farmers has been selling it below the MSP⁸. Hence, the farmer is in hope that government would bring MSP under the legal rights of farmer so that corruption and undue prices should not be acquired from the farmer's products. Hence, it has been suggested that if the ruling government wished to provide the higher prices of their product than it should be bring under the preview of law so that corporate world would not cross the prices determined by the government. It is well known fact that the prices of vegetables, rice, wheat, bajra, etc increased by the retailers to exporter on the name of processing and marketing and gain the profit from it but the looser is always farmer and consumers only. Un-doubtedly farmer are at side of losing line but the reflection towards the scheduled caste farmer or landless farmers completely ignored by the main stream media merely projecting them as supporter of farmers protest. In this regard, it is very interesting to catch the ideas proceeded by the Dr. Ambedkar. For Ambedkar, the emancipation of farmers, landless labours, tenants etc. from their old aged misery, rooted into the collective farming. It was an innovative concept not only for famers but also for colonial British rule. This collective farming according to Ambedkar must be nationalized and state should be held the responsible for distrusting the land for farming without taking religion and caste as a landmark for the discrimination. This approach would beneficial to those landless groups would were denied to cultivate the land on the basis of religious purity and pollutions. This would create casteless space in collective manner to precede the agricultural production. Such nationalization of farming would reorganized the agriculture on equal footing and also eradicate the notion of untouchability and caste within the society. For Ambedkar, the idea of nationalization of land would annihilate the three evils capitalism, landlordism and Brahmanism⁹ which is sourced of exploitation and impediment to the economic growth of oppressed masses. It was not nothing but an economic deprivation of lower castes people having no lands and livelihood to sustain their basis amenities. Although, farmers protest was to claim their basic rights to purchase and sell the farms product but hardly have any reflection on the scheduled caste bondage farmers which hardly has any capacity to purchase the land. There may few example to claims that scheduled acquired their land in some of part of Punjab and Haryana or other parts of country but could not be nullified the oppression faced by them. Such situation already expressed by some of the social activist and academic communities from the scheduled castes. Due to the principles of equality enshrined in constitutions, the relationship between the dominant farming communities and scheduled castes might have become flexible but without disturbing the traditional caste structure. Therefore, it is imperative to understand why the collective farming and nationalization of agriculture. Despite, the liberal policies of the state, the capable scheduled castes unable to relay on agriculture as source of livelihood due to lack

⁶ <https://www.indiatoday.in/india-today-insight/story/what-agitating-farmers-want-and-why-the-centre-may-not-oblige-1745475-2020-11-30> access on 20/06/2021, 23.05pm

⁷ <https://www.hindustantimes.com/india-news/tomar-writes-open-letter-to-farmers-says-misunderstanding-created-regarding-reforms/story-rMono1UvhISTvdVNmM1HSM.html> access on 30/06/2021, 23.14pm

⁸ <https://www.nationalheraldindia.com/india/why-are-farmers-protesting> access on 04/07/2021, 10.38am

⁹ Wankhede, Deepak Mahadeo Rao. Geographical Thought of Dr. B.R. Ambedkar. India: Gautam Book Centre, 2009. pp.60.



purchasing power in the form of earning to imply the modern technologies in his/her own land. In other words, the purchasing land sometime beyond their edge and even if it is, the so called lower caste status become stumbling block for them that has been expressed in Land Alienation Act¹⁰. Hence, to resolve it, Ambedkar proposed that groups of cultivator cultivate standard size of land would lead to form organic solidarity within them. In this manner, the collective forming would reciprocate the spirit of collectivity between the different caste groups that would increase the productivity as well as agricultural economy. Such approach did not restrict to collective spirit but also increase unity and truthfulness among the different caste communities. The state would be responsible for providing all the essential commodities for the collective farming and activities would be proceed as per the rules and state would be sole representative of the farmers.

Trying to Understand the Three Farms Law 2020

If any one study the three farms law passed by the government would be definitely impressed by its theoretical framework but the way our Indian society have structure based on different societal inequalities like caste, class and gender, would doubt on positive effect of these farms law on the farmers. Let's take the Farmers Produced Trade and Commerce (Promotion and Facilitation) Bill, 2020¹¹ mentioned that farmers could deal their product directly with Big company, warehouses, cold storage or free to setup their own shop to sell their products to consumers without consulting the Agricultural Produce Market Committee (APMC). According to this act, the traders can buy or sell the farmers products either from farmers or traders from the other state or even within the intra-state also. The chapter I of this act in 1(c & d clause) defining the farmer but also included the farmer producer organization which implies as an association or groups of farmers. Here if we list out the agricultural organization in India, most of the organization associated with farmer but not belong to big corporate houses. It is not clear in act, if the corporate sector would promote under the scheme or programme sponsored by the central or state government, would it be considering the farmer or farmer association? This left un-answer in this bill. Similarly, (n) clause of Chapter-I of this bill, explaining the meaning of 'trader' who could buys farmers produced either for self or on the behalf of one or more person for the purpose of wholesale trade, retail, end-use, value additions, processing, manufacturing, export, consumption or for such other purpose. This clause may provide the scope for the private corporate sector to replace the small farmer association and may be possibility that state and money power used to control or monopolize the farming sector in gradual manner. Similarly, in the Chapter -II, 9 (1) proposed the Agriculture Marketing Adviser, in which farming products could be purchased and sell through the platform of electronic trading and transaction established under section 5 of 7. Such provision would be more beneficial to those who are computer literate. As per the concerned of literacy, the India literacy rate is 77.7 %¹², out this statistics, it is hard to find out the statistical date having computer literacy of farmers. In India most of the farmer are less literate and hardly reached to the higher education position. This explains that electronic marketing actually going to benefit only those who are much aware about internet facilities and fully computer literate which shows the higher possibility in this regard. The riddle may arise that this could have happened years decades but why now? The answer to this question goes to covid 19 lockdown periods and only the agricultural sector was/is continued despite of add situations and circumstances. Second, the farmer (Empowerment and Protection) Agreement on Price Assurance and farms Service Bill, 2020 ensure the contract farming with the buyer for cultivating the products in demand in a specific price. It has been ensured that farmer must aware about the prices they are going to get before they cultivate. Third, the Essential Commodities (Amendment) Bill 2020, in which it stated that government power would be restricted in relation to production, supply and distribution certain commodities except cereals to onion and potatoes.¹³ According to this act, government could impose stock holding limits and decide the prices only when unavoidable circumstance occurs like war to famine, etc. that would

¹⁰ Paswan, Sanjay. Encyclopaedia of Dalits in India. India: Kalpaz Publications, 2002. Pp. 224.

¹¹ See The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020, The Gazette of India, CG-DL-E-05062020-219745

¹² <https://www.theglobalstatistics.com/literacy-rate-in-india/#:~:text=According%20to%20the%20report%20published,to%20the%20last%20census%20data,03/07/2021,10.11pm>

¹³ <https://idronline.org/the-farm-bills-all-you-need-to-know/> access on 03/07/2021, 23.40pm



become base of prices rise in the market. In this regard, out of these three laws, the essential discontent seems to be with Farmers Produced Trade and Commerce (Promotion and Facilitation) Bill, 2020 only and rest two would become imperative only if the first would be rectified according to perception of farmers. It has been said that these laws basically benefit to big corporation house only who are interested in agriculture sector and would gradually handover to private corporates without paying any attention towards the agriculture business or losing control on them¹⁴. It shows that corporate house would more concentrate on the maximizing their profits only if the farmers products are beneficiary to their growth and maybe they would rely on the mercy of corporate houses only. This may be assumption and speculation based on the consumers everyday life experiences which has to examine and analyses through difference lenes to explore the truth.

Some Critical Observations

It has been often said that development and progress of country must be analyzed only through the eyes of under-privilege or most marginalized community or individual in society because it provides to examine the nature of policies in relation to whether it has been reached to grassroot level. It implies that farmer protest must be address as it is well known fact that farmer hardly acquiring the benefits from the products they produced and always face the issues related to their socio-economic conditions. In other words, one should examine the agriculture growth in relation to what farmer is producing rather must examine that how much it has increased or contributed in growth of farmer earning. Secondly, it is agony that policy makers and educated class in general perceive any Indian issues in monolith manner without paying any attention towards social cleavages exist in society. What it indicates that such issues in fact coverup the larger issues related to Women farmers, dalits farmers, Adivasi farmer, issues to landless labour which seems to be tiny but it is not. Therefore, it is essential that those who are at lower rung due to their socio-economic condition must allowed to speak for themselves so that feeling of 'we' must emerges in the form of citizen not as a slave of the India. Even if the farmer protest movement get successful, the major issues related to caste, class and gender would be continue below the castle of development and progress that may fall down at anytime and anywhere.

¹⁴ <https://www.nationalheraldindia.com/india/why-are-farmers-protesting> access on 03/07/2021, 23.44pm

**Thoughts Related To The Agriculture Of Dr. Babasaheb Ambedkar****Dr. Vinayak R. Sakharkar**

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*Email: Vinayak_sakharkar@yahoo.com**Mo. No. 9730020280***Abstract:**

Today the truth is that today our Annadata has reached a dire situation and is expecting a change. In such a situation, the advent of these controversial agricultural laws has created a different debate and even if the present government is taking all decisions keeping in mind the capitalists and the privatization of institutions is going on continuously, no debate, no discussion. Even today agriculture is in trouble. The farmers are committing suicide. The productivity of agriculture remains pathetic as compared to other countries. The neoliberalism introduced in the nineties of the last century did not yield any promising results. There was neither significant progress in the economy, whose vegetable gardens were shown nor employment opportunities increased, the results were on the contrary. As Ambedkar had warned that the dictatorship of the private sector would increase after the government was pulled from the industries, the same thing is happening.

Farming remains under pressure due to the stagnation of the economy. In fact, even today, problems like poverty, unemployment, wide disparity in income and wealth, illiteracy, and unskilled labor, etc. are prevalent in the Indian economy. Years ago, Babasaheb Bhimrao Ambedkar had presented a similar vision to help farmers get out of debt crisis. Our government is constantly working on how to reduce the gap between rich and poor in this country. Babasaheb's ideas were constantly neglected by the earlier governments. Today we need to reconsider his views so that our economic policies can make India's economic development possible. If we want to build a new India on the basis of Babasaheb's dreams, then today it has become necessary for us to know the important thoughts of Dr. Ambedkar about the economy.

This research paper has been written to find the answer to the question that what is the Contribution of Dr. Babasaheb Bhimrao Ambedkar in agriculture development, what is the importance of Ambedkar's thoughts for development of agriculture, and how Dr. Ambedkar's thoughts related to development of agriculture are relevant even today.

Keywords: Dr. Ambedkar's Thoughts, Agriculture Development, Constitution, Land Holding**Data Collection Method Used for Research:**

This research depends on secondary data like newspapers, books, magazines, reports, and websites.

The Objective of Research:

- 1) To study the Contribution of Dr. Babasaheb Bhimrao Ambedkar in Agriculture Development,
- 2) Knowing the importance of Ambedkar's thoughts for the development of Indian Agriculture,
- 3) To study Dr. Ambedkar's thoughts related to the development of agriculture in India.

Introduction:

Agriculture is the lifeline of India. This is the livelihood of more than two-thirds of the people of the country, even though its contribution to the country's GDP is only 14 percent. When the farmer is happy, then the country will be happy. Earlier, whenever the king was happy with any person or vizier, he used to give rewards in the village jagir in the village, he became the jagirdar, feudal, or zamindar. When the monarchy began to decline, private ownership of the land was acquired. The Dalits/Backward also succeeded in capturing some small farms. In the British government, there was a ryotwari system in which the landowner was responsible for paying the rent to the government, if the rent was not paid, he was evicted from the land. When the amendment bill was introduced by the



government to give Ryotwari land to big landowners, it was "Baba Saheb Ambedkar" who opposed it. He had said that if the land ownership continues like this, then one day it will destroy the country, but the government did not agree with him.

The entire agricultural system of India was destroyed during British rule. On top of that, Indian agriculture broke the back of Indian agriculture several times in the late nineteenth and early twentieth centuries, with frequent famines across the country. During this, two Feringhi Commissions each were set up in the name of the Strachey Commission and McDonald Commission. The McDonnell Commission submitted its report in 1901 and on the basis of its recommendations, the Cooperative Act was passed in 1904. Arrangements were made to provide institutional credit capital to agriculture through cooperatives.

India can never deny the importance of agriculture in the national economy. Because agriculture is not just a part of India's economy but a whole structure of organs. If the truth is asked, the development of the country is dependent on agriculture. For this reason, the great freedom fighter, former Prime Minister of India, Pandit Jawaharlal Nehru had said about agriculture that agriculture needs to be given the highest priority.

Ambedkar gave a clear overview of the Indian agricultural system in his article Small Holdings in India and their Remedies published in 1918. He made some important results by critically examining the Indian agricultural system, the relevance of which remains to date. After independence, a different political current was also flowing on agricultural concerns apart from the debt-capital approach and its leader was Dr. Bhimrao Ambedkar. Dr. Bhimrao Ambedkar is the name of such a personality who has discussed in detail all aspects of India's social, economic, religion. His political views were also imbued with economic ideas. The focal point of his thoughts was the neglected and untouchable sections of Indian society. These classes have always been a part of the production process, but the economy has left them on their own or the society has exploited them, due to which the production and productivity of the country, whether it is agriculture or small, rural, and cottage industries, in every sector, remains pathetic.

Even in 1927, the British government introduced a bill in the Bombay Legislative Assembly to enlarge the fields of small farmers and hand them over to the landowners, even then it was none other than Babasaheb Ambedkar who opposed it, he argued that the farm Being productive and unproductive does not depend on its size but on the labor and capital required of the farmer. He had said that the problem can be solved not by increasing the size of the farm but by intensive farming. That is why he had advised that cooperative agriculture should be adopted in the common areas. Babasaheb gave an example behind this that the adoption of cooperative agriculture has been beneficial in Italy, France, and some parts of England. Whether it was the Ryotwari system or any other, in which small farmers had land, they were not its owners. Dr. Ambedkar was instrumental in the establishment of economic planning and contemporary economic issues in India and the establishment of institutions that were established after independence to strengthen the Indian economy in the long run.

Thoughts related to the agriculture of Dr. Babasaheb Ambedkar:

Agriculture is the economic key of the country's economy. If the development of agriculture is not done properly, then it is as if the development of the country is not being done properly. Ambedkar had also supported the implementation of land reforms after independence, but according to him, the land left after the implementation of land reforms should be cultivated by the landless castes, and the products produced in it were needed by those working in it. Divide accordingly. These views of Ambedkar are found in his book States and Minority. He believed that if people had alternative employment means available then they would never run after small pieces of land. Quoting Sir James Caird, he has said that unemployment is a disaster because the unemployed do not add anything to the national wealth, but continue to consume something. Thus, there is pressure on agricultural land and national income. And for this reason, any attempt at consolidation and enlargement of the fields fails.

Ambedkar has been against the Ryotwari system. In fact, peasant movements have been taking place since the time of British rule. During the time of British rule, the Ryotwari system was prevalent in which there was a process of paying rent to the government by the landowner, who was evicted from the land if the rent was not paid. This system was first implemented in the Baramahal district of



Madras Presidency in 1792. The country's agricultural sector also has international importance because India ranks first in world production in terms of tea and groundnut. And second place in rice, cotton, sugarcane, and jute. The Indian agricultural sector enjoys a right in the production of lac.

Capitalist ideology and utilitarian ideology were mainly responsible for the Ryotwari system. In this, the land revenue was directly determined on the land and not on the productivity of the land, which was not beneficial to the farmers because the rate was so high that the farmer was left with no surplus. As a result, the farmers could not get out of the clutches of the moneylenders and thus the moneylenders themselves started emerging as an artificial zamindar. Babasaheb Ambedkar thought that agricultural land should be divided on the basis of caste religion without discrimination in such a way that there should be no zamindar, no lessee, nor landless farmer. For such collective farming, it should be the responsibility of the government to arrange finance, irrigation-water, holding-animals, farming tools, fertilizer-seeds, etc.

If we look at the contribution of agriculture in revenue, then its contribution is considered very important. Crores of rupees per year in the country are earned from agricultural income tax. Apart from this, the government also gets income from export trade. Agriculture should also be considered as the main source of storage of milk, curd, and ghee in the country. Because the agriculture sector also arranges for cows, bulls, buffaloes, goats, etc. When an amendment bill was introduced by the government to give Ryotwari land to big landowners, Babasaheb Ambedkar was the first to oppose it. On this, he had said that if the land ownership is continued like this, then one day it will destroy the country.

There was also a Khoti system in Maharashtra, in Ryotwadi, farmers used to pay taxes directly to the government, but according to the Khoti tradition, middlemen were kept in it, who were also called Khot. They had the freedom to do anything to collect taxes from the farmers, they used to oppress the farmers a lot, and sometimes they were evicted from the land. For this too, it was Babasaheb Ambedkar who presented a bill in the Bombay Legislative Assembly in 1937 for the abolition of the Khoti system, and with the efforts of Ambedkar, the Khoti system was abolished and the farmers got their due. Even in 1946, it was Babasaheb Ambedkar who gave a memorandum to the Constituent Assembly demanding nationalization of land, this memorandum is still available in the name of "States and Minorities". He wanted the nationalization of land, education, the insurance industry, banking, etc. He wanted that there should be no zamindar, no lessee, and no landless person. Babasaheb was as serious on the question of land as he was on the other problems in India. Babasaheb had also written a research paper named "Small Holdings in India" to solve the problems of farmers, that too people must-read.

He believed that if agriculture is treated at par with other economic enterprises, then the distinction between big and smallholdings will end, which will bring prosperity to the agricultural sector. Ambedkar had also offered a suggestion in his book that if the government includes the options suggested by him in its schemes, then the condition of the farmers can improve a lot. The government keeps on trying to waive loans of farmers from time to time, but according to Babasaheb, this is a very small component, other aspects are far more important. Ambedkar suggested that the government should play its due role and make such a scheme for the farmers so that they can sell their crops at reasonable prices.

At the heart of Dr. Ambedkar's ideas of rural economy are the increasingly small and scattered holdings in the hands of the farmers. Scattered smallholdings have been considered the biggest evil of Indian agriculture, then and even today. According to popular belief, scattered small farms are not economically viable due to which improvement in farming is not possible, and the treatment of enlargement and consolidation of holdings is suggested and practiced. To solve the problem of smallholdings and unsuccessful consolidation, Dr. Ambedkar has suggested two ways. The first remedy he suggested was industrialization. In the changed circumstances this author would like to use alternative employment terminology instead of industrialization. The problem of unemployment in the country remains formidable. There is no proper provision of alternative employment in case of failure of agriculture in calamities or during the period when cash flow is not obtained from agriculture. To reduce the pressure on agriculture, there should be a concerted program to promote small, rural, and cottage industries in the villages.

Unemployment is considered to be the most important issue in this country with a huge population of crores. But about 50% of the population of the country with this huge population has a



distance of unemployment from the agricultural sector. In a vast country like India, the largest employing sector, if any, is agriculture. Babasaheb's agricultural ideas were published in the year 1918 in the article Small Holdings in India and their Remedies. Based on this, the Small Farmers Relief Bill was introduced in the Bombay Legislature on 10 October 1928 during the debate and he argued that the productivity and unproductivity of a farm did not depend on its size but on the labor and capital required of the farmer.

Ambedkar believed that our ultimate aim should be to increase the capacity of the farmer. He understood that the farmer could never be a capitalist. He waits for the second crop after each crop and then the third, he continues this process because he does not have enough capital, so sells one crop and prepares to grow another. Ambedkar does not even blame the succession law for the failure of the division of land and consolidation. For this, he blames the flawed social economy. Due to the non-availability of alternative opportunities to earn a livelihood, people are engaged in agriculture. In this way, there is a division of land and people remain burdened on agriculture, in excess of the requirement, due to which there is tremendous pressure on agricultural land.

The smallholdings of the farmers are scattered in many pieces throughout the village, among which the holdings of other farmers are also scattered. For the purpose of rent, the holding of the farmer remains one, but for the purpose of farming, it is divided into pieces. Due to the scattered plots of land, the management of the field and farming becomes difficult. The cost of cultivation also increases. It also creates problems in the way of improving agriculture. The concept of consolidation was introduced to bring the scattered fields together. In his original article, Dr. Ambedkar has presented an in-depth analysis of consolidation. Ambedkar had said that the problem of agriculture would not be solved by increasing the size of the farm, but by intensive farming. Then he had advised adopting cooperative agriculture in common areas.

Ambedkar wanted the nationalization of land, education, the insurance industry, banks, etc. so that there would be no landlord, no lessee, and no landless person. Even in 1954, Babasaheb raised his voice in the Parliament for the nationalization of land. Babasaheb in his views advocates an economically viable farm size but has been dissenting that small farm are not profitable. "Being productive or unproductive of a farm does not necessarily depend on size, it depends on, or indeed changes with, what we call other factors of production in economics," he said.

The agricultural sector is also the basis of the industrial development of the country. Most of the industries in the country get their raw materials from the agriculture sector. Eg:- Cotton textile industry, sugar industry, coffee, rubber, vegetable ghee, etc. All these industrial goods can be originated from the agriculture sector. According to Babasaheb, smallholdings can be considered unproductive only when farmers have sufficient capital and capital goods and are not being used for agriculture. According to the statistics, he has told that the farmer lacks both. Therefore, there is no benefit in increasing the size of the fields. To increase the profitability of the holdings, he advised intensive farming using capital and capital goods. Even today, farming does not leave enough surplus in the hands of the farmers that capital formation is possible and intensive farming can be done.

Khoti system was also prevalent in Maharashtra in which middlemen were kept, also known as Khot. Usually, the small farmers who owned the land were not their owners. The Khots had all kinds of exemptions to collect taxes from the farmers, which increased the oppression of the peasants and they were sometimes evicted from their own land. For its abolition, Babasaheb Ambedkar introduced a bill in the Bombay Legislative Assembly in 1937, and through his efforts, the Khoti system was ended and the farmers got their due. Ambedkar's views on agriculture, farmers, and the agricultural economy are mainly focused on land reforms and are recorded in the Debate on the Small Farmers Relief Bill, Small Holdings in India and Their Remedies and States and Minorities in Documents. Babasaheb had also talked about saving the farmers from middlemen, but the country's misfortune is that even after the blueprint of the future was drawn a hundred years ago, we have not been able to be active in this direction and today the exploitation of farmers, Dalits, backward is also continuing.

Conclusion:

The condition of the country's Annadata is deteriorating day by day and for its solution, without keeping the farmer at the center, the government implements new agricultural laws saying that it is in his interest. Babasaheb Ambedkar's idea was that the government should give and acquire proper compensation in the form of debentures of basic and essential industries, insurance business, and agricultural land. Dr. Ambedkar has already given us the solution to all the problems related to



farmers today through his book *Small Holdings in India and their Remedies*, but more or fewer people do not pay much attention to this book. Because the ruler of the country wants to see the country divided into pieces and therefore wants to find the solution to every problem in his own way through capitalism. Ambedkar had advocated for sharing with the farmers all the changes taking place over time, but it is our misfortune that our attention does not go towards implementing the measures suggested by him. Governments have neither a vision nor a plan to get agriculture out of the crisis. Banks, which were nationalized to increase the availability of credit capital, are refraining from lending to agriculture and to small, rural, and cottage industries. At such a time, returning to the ideas of Dr. Bhimrao Ambedkar, a new agricultural policy can be prepared by reforming it. For this, the governments will have to show courage.

Suggestions:

- Agriculture-related industries should be under the government.
- Basic and essential industries should be under the control of the government.
- The government should have a monopoly on the insurance business.
- The land acquired by the government should be divided in standard size and distributed in the form of leases to the villagers for cultivation.
- In the leasehold village, the government should pay the rent of the farm and the produce should be distributed among the families in the prescribed manner.
- Our ultimate aim should be to increase the capacity of the farmer.
- Before passing the anti-agriculture bill, the government should look at the contribution of farmers given in the interest of the country in the earlier days.

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Maoist Front Politics of Farmer Agitation Against Farm Bill 2020

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Abstract

In early June 2020, the union government of India passed three legislations on agriculture. The new laws were intended to open up the farming sector to an increased commercial engagement by the big corporates, who could purchase, store and even decide through contract farming what crops to produce.¹ The farmers, particularly those from the north-western regions see these laws as an attack on farming cultures and their livelihoods. They demanding withdrawal of the new laws and an extension of price security for all agricultural commodities.² there is a long protest going on to eliminate the new farming law in the interest of agriculture and farmers. When this agitation is going on Maoist organisations declare their support to the agitation and their front organisations get involved. In fact, the agriculture sector is in concert with common people and this is the soft target for them to be inspired and involved in the Maoist movement indirectly. The Maoist movement has been known as agrarian movement since beginning because they raised agrarian issues always for their politics and their support on ground. This movement gives them a chance to interact with many people and different organisations to show them as leaders of the poor and farmers. Indian Maoist always coping with agitation tactics as Mao of China and saw the dream that an agrarian revolution would take place in India. Hence they never fail to take the chance to be involved in agrarian agitation anywhere but their personal objective is different from other agrarian organisations. The objective shown in public by them is not true, it's a politics to get people involved with them to strengthen their movement against Nation. This involvement in agitation gives them a lot of benefits. This paper will define only how and why Maoist movement is involved in the historic farmer agitation for their personal goal and understanding urban Maoist politics. The second objective of the paper is also to show how agitation is in favour of farmers, the government action and three bills are anti farmers, it is against common interest and only in the industrialist favour. But the Maoist objective are not only to repeal the law, it is for getting public support to them and expansion of their movement secretly,

The Indian Agriculture Acts of 2020 or the Farm bills were passed by the parliament on September 27, 2020. It decided the new agriculture policy for farmers in India. Especially this policy was under discussion of ruling political party since long.

Thousands of farmers are protesting against the Act at Singhu, Tikri and Ghazipur for one year. It is the first agitation in India which is carried constantly for more than one year without fail and in difficult climate situations. Thousands of farmers from various states declare their support and farmers of Punjab, Hiriya, UP and nearby states are in the key role of agitation. All the opposition parties are also in the support of ongoing agitation. Union minister Harsimrat Kaur Badal of the Shiromani Akali Dal (SAD) has resigned from government, to oppose the two farm bills that seek to liberalise the agriculture sector, exposing a crucial rift on the issue of farmers and agricultural reforms.³ The government has been projecting all three farm Acts which were passed during the Monsoon session of Parliament in 2020, as major reforms in the agriculture sector. However, farmers expressed apprehension by saying that the new laws will lead to eliminating Minimum Support Price (MSP) and do away with the Mandis, leaving them at the mercy of big corporate players.

Urban Maoist Objectives against Movements:

In this ongoing agitation it would be important to see the approached of the government and protest groups, why clashes are there between them? At the same time, it will be interesting to see why some urban Maoist involved in the agitation and what is their role and intention in the agitation? There would be questions, who are urban Maoist and why are they participating in the movement? When we discussed its approach on the adobe bill. Understanding urban Maoism is not the direction of the article. But in brief, it would be clear that the association or member of association belonging to a banned Maoist organisation or associated people can be definitely called as urban Maoist. They work in the urban area under the democratic parameters without violent tactics. They paly important



role in Maoist movement. The objective of urban politics of Maoist is clearly defined in their constitution. They have been called as front organisation or united front and urban Maoist since the recent past. The original document of Maoist defined that “This New Democratic Revolution will be carried out and completed through armed agrarian revolutionary war”. ‘During the whole process of this revolution the party, army and the united front will play the role of three magic weapons. In their interrelationship the party will play the primary role, where as the army and the united front will be two important weapons in the hands of the party’. ‘Whereas the united front will be built in the course of advancing armed struggle and for armed struggle. Mass organizations and mass struggles are necessary and indispensable but their purpose is to serve the war.’⁴ In this statement they show the importance of the urban team of Maoist organisation. They further describe that, ‘The urban movement is one of the main sources, which provides cadres and leadership having various types of capabilities essential for the people’s war and for the establishment of liberated areas. Moreover, the responsibility for the provision of supplies, technology, expertise, information and other logistical support to the people’s war too, lies on the shoulders of the urban revolutionary movement itself.’⁵ People assumed that Maoist are working in the remote area and forest for their protection, it is their need to create goodwill for them in the masses and favourable public opinion for various purposes. According to this master plan they open various fronts in the masses but secretly under the direction of Maoist constitution. It described that, The Party members in the mass organizations should maintain the utmost secrecy. The Party members in the working class, youth, women, petty bourgeoisie and other sections in the urban areas should work strictly underground keeping the strategic perspective in mind. They should mainly work openly within the masses but under various covers. In the people’s army too the Party has to work by remaining secret. It is obvious that the Party members working in the enemy’s armed forces have to maintain the utmost secrecy. The Party PRs working in various fronts should build a secret mechanism that is impregnable to the enemy. Even in the Base Areas our Party organization should remain secret.’⁶

They have organised many organisations from *galli* to *delli* or been involved in popular organisations secretly according to the plan. Mostly they carried many movements for the public need to capture society. The party document says, ‘Here the Party works through the numerous traditional mass organisations that operate in the rural and urban areas. These traditional mass organisations are the organizations normally set up by the masses to fight for their sectional interests or otherwise fulfill their needs. The Party, through its members or other activists, penetrates such organisations without exposing any links with the Party. Through the activities of the organisation, the masses, while being mobilised for their sectional interests, are attempted to be drawn towards the revolution.’⁷ In the document also reveals that, ‘This method of organising, if properly conducted, offers the best opportunity for cover work for a long period of time. It is therefore indispensable in areas of severe repression. The best organisations are those which are more oriented to struggle, like trade unions, slum and other locality based organisations, youth organisations, unemployed organisations, students associations and unions, women’s organisations, commuter associations, etc. Besides there are also other organisations which are welfare oriented, community based or are self-help organisations - like workers’ cooperatives, cultural organisations, sports clubs and gymnasiums, libraries, bhajan mandals, non-governmental welfare organisations, women’s welfare organisations, welfare organisations for oppressed castes, nationalities and minorities, etc.’⁸ Such organisations can be formed at various levels - town/city level, district level, state level, regional level, all-India level, or even at the international level”. This way the Maoist organisation are involved in the more or less every movement for their personal interest. This was only the tactics due to which Maoist organisation found intellectual from urban area. This movement was better understanding that they can’t ignore mass movement for Maoist revolution hence their presence cannot ignore in the movements against the government. According to them “Work in the urban areas has a special importance in our revolutionary war. It is the Party’s most important task to organize the basic class in the urban areas, i.e., the working class, as well as other classes and sections like the semi-proletariat, students, middle class employees, intellectuals, etc. It also has the task of dealing with the problems of special social groups like women, dalits, and religious minorities and mobilizing them for the revolutionary movement. It is on this basis that the masses are politicized and the advanced sections consolidated into the Party.”⁹



I must clear the approach of this people who are associated with maoist movement having two different approach, ie. First, they involved to create support to the maoist movement is a long time strategy and secondly we must not forget they are Indian first and Indian last, so the issues are also concern with them hence their fight cannot ignored for justice. This complex situation create hurdle in the movement of other agitator, who fight for only their innocent will.¹⁰

Government approach on farm Act:

When there is discussion on famer bill, for the government, these are the major reforms in the agriculture sector. Until 2020, farmers could sell agricultural produce only at the mandis of the Agricultural Produce Marketing Committee (APMC). But due to present acts, farmers are allowed to sell their products outside APMC mandis in India.

The key provisions of new farm laws are intended to help small and marginal farmers (86% of total farmers) who don't have means to either bargain for their produce to get a better price or invest in technology to improve the productivity of farms. The Act on Agri market allows farmers to sell their produce outside APMC 'mandis' to whoever they want. Anyone can buy their produce even at their farm gates. Though 'commission agents' of the 'mandis' and states could lose 'commissions' and 'mandi fees' respectively (the main reasons for the current protests), farmers will get better prices through competition and cost-cutting on transportation. The law on contract farming will, on the other hand, allow farmers to enter into a contract with agri-business firms or large retailers on pre-agreed prices of their produce. This will help small and marginal farmers as the legislation will transfer the risk of market unpredictability from the farmer to the sponsor. The third law seeks to remove commodities like cereals, pulses, oilseeds, edible oils, onion and potatoes from the list of essential commodities. This provision will attract private sector/foreign direct investment into the agriculture sector.¹¹

This objective given by the government under new farm laws but there is threat under the farmers that direct investment in the agriculture by the foreign or business man would chite them or there is no guaranty for product purchase in case product quality will be not better due to climate situation. Farmers have no claim for definite product purchase. The one another problem was about prise of product which is not authorised by the government and investor would give less prise of product to the farmers in case there is mass production is done. In this sinario farmer couldn't get basic cost of product and their investment of farming. So the farmers are fighting for minimum support prise (MSP), in case the repeal of this three bill is done, this movement would be carried for this guaranty of minimum product prise by the government. It is justiciable for the farmers as we are agricultural country. Around 60% population is still working based on farming but this sector is ignored always by the government so farmers are compile to live in bad life in the nation.

Understanding Maoist Politics & Socio-economics Agitations:

In fact, the Maoist movement was projected themself as a farmers' movement in the beginning. They were a stronghold in the farmer organisations and always raised issues of concern to agriculture. The Maoist politics has never been the contemporary issue for justice but it has always involved in the agitations to gain sympathy and workers-volunteer for the movement. This, however, is an old Maoist s strategy to focus on urban centres for leadership, organise masses, build a united front and engage in military tasks such as providing personnel, material and infrastructure.

Urban Naxal: How the term came about,¹² They believe in total revolution but not in parliamentary peaceful change in the society. Their involvement in ongoing issues is to get workers and strong hold in the society for their safety also. Because of Maoist involvement in many agitations, the face of the parliamentary agitation of these movements changed and mostly became violent. In these circumstances sometimes the government is compelled to declare such agitation as anti state agitation but it is also very difficult to prove such labels practically to anyone. Urban Maoist leaders have kept their identity as social workers in the society and keep their involvement in various ongoing socio-economic issues, so they hardly identify as Maoist front to the common people. Due to Maoist involvement in such social issues, the main purpose of agitation gets violated and the real leaders of the movement get discouraged. People do not understand the difference between Parliamentary communist and Maoist .¹³ hence many such Maoist get undue advantages from parliamentary communist parties to keep them safe.



It has a key rule of his politics against every possible agitation to involve them or hijack through urban organizations. They have many such organisations on common interest issues in which some dedicated person get involved common people unknowingly. The main agenda of these movements is to mobilise their ideology among people indictly and bring people close to them for their movement, not for contemporary justice.

Hijacking the farmers Protest

It is worth mentioning that the ongoing protest has seen dramatic ups and downs during the last one year. Dharna was made to continue even during the pandemic which also showed real colour on the Republic day. Irrelevant to the protest, demand to release urban naxals to fanning of *Khalistani movement* was raised during the protest. Interestingly various leaders having radical left inclination plunged into the protest programme with the view to defame the Government and create hurdles during the pandemic. They supported the protest while clubbing their own interests.

Dr. Darshan Pal (State President of Krantikari Kisan Union (KKU) and founder of People's Democratic Front of India (PDFI),¹⁴ pro-Maoist activist played a important role in the farmers' agitation. He is close to Pro-Naxal leaders like Varavara Rao, Kalyan Rao,, Nandita Haksar, S.A.R. Geelani and B. D. Sharma etc. According to a study prepared by Dr. Marri Channa Reddy Human Resource Development Institute in Hyderabad, PDFI was a part of Tactical United Front (TUF) formed by the Maoist , to consolidate and expand its base. Darshan Pal also has close association with various pro-Naxal activists in the state, including *Joginder Singh Ugraha, Jhandha Singh Jethuke, Sukhdev Singh KokriKalan (state general secretary, BKU-Ekta Ugrahan), Satwant Singh Wazidpur (Inqlabi Lok Morcha which is pro-Naxal outfit), Surjit Singh Phool, Buta Singh Burjgill (state president, BKU-Dakaunda)* who was reportedly booked under UAPA during the UPA regime in 2009.¹⁵ He was accused of having links with Naxals and placed under "intensive interrogation" in Amritsar jail. Jagmohan Singh Patiala, a member of BKU (Dakaunda), is also linked to Naxal outfit and active leader in the farmers protest.

One Adv. N.K. Jeet, coordinator of BKU stated that, "It is our conscious decision to support these accused. The Naxal movement was always a farmers' movement all over India. Releasing these accused is a demand of the BKU. We made it part of the memorandum to the government related to the farm laws." ¹⁶ He had also reportedly said, "Naxalism has helped the tribal people claim their rights". ¹⁷ The Ekta Ugrahan of the Bharatiya Kisan Union (BKU-Ekta Ugrahan) is the largest represented group demands the release of 'Urban Naxals' involved in the Elgar Parishad violence. Hannan Mollah, popular leader from CPI (Marxist) from West Bengal and eight-time MP between 1980 to 2009. He also served as the general secretary of DYFI, the youth wing of the Communist Party from 1980 to 1991 and is at present the general secretary of AIKS and joint secretary of All India Agricultural Workers Union.

Kavitha Kuruganti from Bangalore is the convenor of ASHA (Alliance for Sustainable and Holistic Agriculture). She is also a member of the Central Working Committee of the AIKSCC. ¹⁸ She was coordinating with representatives of various states to mobilize people including Yogendra Yadav and Medha Patkar for the agitation. Simultaneously, she is also leading a campaign for banning Reliance Jio mobile services. It is mentionable that more than 1500 Reliance Jio towers were identified and vandalised by her group. ¹⁹ Akhshay Kumar from Odisha has been a close associate of Anna Hazare and Medha Patkar who participated in Narmada Bachao Andolan and Azadi Bachao Andolan. He is the national convenor Nav Nirman Vikas Sangathan (NNVS)'s, a farmer front of Nava Nirman Samiti. Gurnam Singh Chaduni, farmer leader from Haryana. The residence of one Nirbhay Singh Dhudike (State President/Kirti Kisan Union) was raided by the Jalandhar Police in 2009 in connection with his close links with one arrested Naxal Cadre namely Jai Prakash Dubey. ²⁰

Ranita Hichami, head of Krantikari Adivasi Mahila Sanghathan Dandakaranya and Vijay Markam of Dandakaranya Adivasi Kisan Mazdoor Sangathan demanded immediate withdrawal of the farm laws by claiming that 'laws would favour the corporate companies'. Resorting to fear mongering, the Naxals claimed that around 80% of the country's population would be affected by new agriculture laws apart from the farmers. ²¹ It shows that most of the Maoist have their involvement of left as well as ultra-left which is influencing the mind of farmers, course of protest and providing leadership.

**Naxal's support to agitation**

Andhra Odisha Border Special Zonal Committee (AOBSZC) of Naxal outfit extended its support to the agitating farmers. They released a letter in the name of Ganesh, Secretary/AOBSZC which alleged that the Indian economy is facing a severe agricultural sector crisis that has never occurred earlier in the country.²² He further stated that the Naxal party is paying tributes to 40 farmers who sacrificed their lives and also committed suicides. Further the Central Committee and Bihar-Jharkhand Special Area Committee (BJSAC) of Naxal outfit had called for one-day Bharat Bandh on April 26, 2021 in protest against anti-Naxal operations and killing of its cadres in different encounters while extending its support to ongoing farmer's agitation.²³

On March 22, 2021 the Central Committee had called upon its mass organizations & urban network to spread anti-Govt. propaganda and hold protests across the nation from April 1 - 25, 2021 make the Bharat Bandh on April 26 successful. Telangana today,²⁴ Pretending to support farmers, the outfit laid down a 12-point agenda which included COVID-19 mismanagement, pro-imperialist MoUs, Citizenship (Amendment) Act, New Education Policy, Women safety, Unemployment, changes in working hours for labour and re-employment for migrant labour. The Central Committee which is the apex formation of Naxal outfit, through a press release dated November 10, expressed their support to one-day nationwide strike on November 26 called by ten trade unions against the 'anti-people', 'anti-labour' and 'anti-farmer' policies of the government.

Mobilization for the Republic day

The Republic day violence was not an unplanned chaos created due to the protest. Efforts were being made since long to create a scenario during the national event to defame the government. A few points which help in understanding the course of action that took place were well planned in advance. The Naxalites tried to defame Govt. by propagating anti-governmental issues. Naxal cadres from Supkhar forest range and along MP-Chhattisgarh were seen motivating the locals to organize protest rallies in support of agitating farmers in Delhi. Naxals had called to observe Republic Day as 'Black Day'²⁵ throughout the nation. There were apprehensions about the ongoing farmers' protest near Delhi was taken over by ultra-leftist and they asked villagers to organize protest rally in support of agitating farmers.

While in Chhattisgarh, the Dandakaranya Special Zonal Committee issued a press release on December 30, 2020 to boycott the Republic Day celebrations in protest against the 'anti-national' and 'anti-farmer' amendments to the farm laws. Further the farmers were cautioned against accepting the 'false' assurances of the GOI and persuaded them to continue with agitation till the withdrawal of the Farm Acts. Naxal cadres reached out to the tribal leaders and local body representatives in Naxal affected districts to influence the locals. In Madhya Pradesh, armed cadres organized a meeting (PS Lanji, district Balaghat, January 18) with the villagers exhorting them to observe Republic Day as 'Black Day' and take out a protest rally at the district headquarters in support of the farmers' agitation at Delhi. They also directed the villagers to hoist black flags in their villages.

The Maoist affiliates and ultra-left outfits from Punjab participated in a tractor rally in Delhi on January 26, 2021 which showcased their manners towards law & order and human life. Some representatives of the Coordination of Democratic Rights Organisations, a collective of Naxal affiliates and ultra-left outfits joined the farmers' protest from West Bengal and Telangana. Makkal Adhikaram (ultra-left) also sent some representatives from Tamil Nadu to participate in the farmers agitation on January 26.

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List of protesting farmers' unions with leftist affiliation.

1. Kul Hind Kisan Federation (MCPI)
2. Jamhuri Kisan Sabha (Revolutionary Marxist Party)
3. All India Kisan Sabha (CPI-M)
4. Kirti Kisan Union (CPI-ML)
5. Punjab Kisan Union (CPI-ML)
6. Kul Hind Kisan Sabha (CPI)

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Farmers' protests about low harvest prices were a recurrent issue during the harvest period. A record harvest of paddy and other crops was expected during this harvest period. Market arrivals begin from October and end until December across India. Significant efforts from the Union and state governments are needed to make arrangements for ensuring remunerative prices.

The Union government took the policy decision to guarantee minimum support price (MSP) to cover at least 1.5 times the production cost if prices fall below it. Towards this end, the Centre announces MSP for 25 major agricultural commodities each year in both crop seasons.

Problems in implementation

The bigger challenge is for the announced MSP to be translated to real gain in farmers' incomes. It is a gigantic task, needs significant budget allocations and support from state governments. Several states have different levels of capabilities. Some states like Haryana and Punjab are historically in a better position to procure, while others like Bihar, Odisha and other eastern states have limited capabilities to procure. Farmers in Haryana and Punjab, thus, receive higher prices than farmers in east Indian states for the same crops, including paddy and wheat. There were no proper procurement mechanisms for pulses, oilseeds and other crops — except paddy and wheat — since the Green Revolution. During the previous harvest season, for example, market price for soybean was 6-13 per cent less than the MSP and for groundnut 20-40 per cent less than the MSP in most of the markets.

This discriminatory policy hugely disincentivised growing these crops, resulting in huge deficits and high-import dependency. India imported 70 per cent edible oils for domestic consumption each year, for example, incurring a Rs 70,000 crore cost to the exchequer.

PM-AASHA

The Centre introduced Pradhan Mantri-Annadata Aay Sanrakshan Abhiyan (PM-AASHA) in 2018 to correct policy bias in procurement operations and ensure farmers growing pulses and oilseeds and actually get the MSPs they were promised for their crops.

The policy also took into account differences in crops, state capabilities, local preferences, feasibilities and gave flexibility to state governments to choose different operational modalities to ensure MSP for each crop.

PM-AASHA has three sub-schemes: Price Support Scheme (PSS), Price Deficiency Payment Scheme (PDPS) and the pilot of Private Procurement and Stockist Scheme (PPSS).



PSS is actual procurement by Union / state government procurement agencies at MSP from the farmers during the harvest period. It may be adopted where there is sizable concentration of production, giving economies of scale to procurement agencies in handling procurement operations.

Under this scheme, the Centre compensates states up to 25 per cent of production for any losses. Although PSS was in existence for more than three decades for paddy and wheat, its implementation for procuring pulses and oilseeds was poor.

Under PM-AASHA, PSS is implemented for procurement of pulses, oilseeds and copra at MSP. Past experience showed PSS implementation was hindered by several factors:

Lack of awareness about MSPs	Logistic arrangements like godowns
Transportation facility	Reimbursement of losses
Delayed payments to farmers	Lack of working capital with procurement agencies
Processing mills in the procuring areas	Disposal of procured stocks
Arrangement of gunny bags	Open market operations

Under PDPS, farmers are paid the difference between MSP and the modal price of the market without actual procurement. It is the most efficient method as it eliminates all logistic costs related to procurement, storage and offloading. It is advisable to implement PDPS for crops with scattered and thinly distributed production, like oilseeds.

Under PPSS, private players can procure oilseeds at the state-mandated MSP during the notified period in select districts or markets of agricultural produce market committees, for which they would be paid a service charge not exceeding 15 per cent of the notified support price.

States are free to choose among these sub-schemes for oilseeds. The most suitable mechanism for oilseeds, however, is PDPS as it does not require physical procurement by government agencies and depends on market signals and market players for buying at ongoing market prices. Historically, oilseed prices were mostly determined by free play of domestic and international market participants with almost zero import tariff rates and negligible government intervention by its MSP procurement.

With India importing about 70 per cent of its domestic consumption each year, Indian edible oilseed prices are more aligned with international prices than influenced by domestic market imperfections.

Under this scenario, the price mechanism of oilseeds is determined by free market forces. It is, thus, important for government policy to not intervene in free market forces of oilseeds and price deficiency payment through direct money transfer by using the already existing Jandhan-Aadhar-Mobile (JAM) trinity.

The actual procurement at MSP cannot reach more than 20 per cent of peasantry. The augmented procurement of pulses and oilseeds through PSS and PPSS, thus, cannot be a solution to rising farmers' incomes. The actual procurement reached only five per cent of market arrivals for pulses and oilseeds in 2019 crop season.

PPSS is a non-starter in many states due to a limit imposed on service charge to be paid by government to private procurement agencies, as 15 per cent is uneconomical in procuring from scattered and thinly distributed oilseeds production areas.

In the long run, thus, the only alternative is PDPS as it does not require physical procurement, avoids logistic and storage expenditure, is free from operational inefficiency, corruption and reaches all farmers.

The PDPS schemes can take advantage of huge procurement, storage and distributional networks of private players in procuring, transportation, storing and disposing oilseeds, coupled with



price deficiency payment to farmers using the JAM trinity. This can also reduce the burden on governments, enhancing market efficiency and cost effectiveness.

Essentially, high levels of price and income volatility for farmers are related to the market fundamentals of supply and demand. However, they can be intensified by other macro-economic variables, the broad political and legislative environment for farmers, and speculation on agricultural products.

In the first place, variations in prices and incomes are the result of shifts in supply and demand. As food demand and supply have a low price elasticity in the short run, meaning that they are not very responsive to price changes, fluctuations in agricultural prices tend to be especially strong. On the one hand, the nature of food as a basic necessity means that it is, by definition, price inelastic. On the other hand, the supply of food cannot respond quickly to price changes, since it often takes a significant amount of time to produce agricultural products. As a result of this limited price responsiveness of demand and supply, unexpected changes in the amount of output often require large price changes to restore the market equilibrium, which causes agricultural markets to be rather volatile.

Other macro-economic conditions can also be important drivers of price volatility. Some of the structural factors that can simultaneously influence the prices of different crops include exchange rates, energy and fertiliser prices, and interests rates. Additionally, due to evolutions in agricultural policies and legislations, and especially under the impulse of the WTO agreements, agricultural markets have become more open and competitive in the last decades, leading to increased price volatility and variations in farm income. Finally, as agricultural products can now also easily be sold as financial assets, they are exposed to shocks on related commodity markets (such as the energy and metal markets), and speculation on these products is deemed to be a major cause of increasing price changes.

These endogenous risks, which are the result of the behaviour of market participants, are the main causes for the volatility in agricultural prices and incomes. However, farmers are also exposed to exogenous risks, which are independent from market conditions and are caused by weather and climatic factors.

Indeed, agricultural activities are especially sensitive for climatic factors, since these play an important role in the production process. Weather conditions can strongly affect the crop and livestock production and cause annual variations in yields, while extreme weather events can significantly damage agricultural output. Therefore, the production of agricultural commodities remains much more variable than the output of other industrial sectors. Moreover, as climate change may result in worsening production conditions for farmers, these exogenous shocks are expected to increase in the future.

In short, large price fluctuations and the resulting variations in income, which are caused by the endogenous and exogenous factors described above, represent risks that are specific to farmers. However, the agricultural sector also faces multiple risks that affect other sectors as well, including business/entrepreneurial risks, legal risks, social risks, financial risks etc. Nevertheless, price and income volatility are generally considered to be the most important elements of uncertainty for farmers.

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FARMER PROTEST AND GOVERNMENT RESPONSE

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Farmer unions and their representatives have demanded that the laws be repealed and have stated that they will not accept a compromise. Farmer leaders have welcomed the Supreme Court of India stay order on the implementation of the farm laws but rejected the committee appointed by the Supreme Court. Farmer leaders have also rejected a government proposal, dated 21 January 2021, of suspending the laws for 18 months. Eleven rounds of talks have taken place between the central government and farmers represented by the farm unions between 14 October 2020 and 22 January 2021; all were inconclusive. On 3 February, farmer leaders warned of escalating the protest to overthrowing the government if the farm laws were not repealed. The stay order on the implementation of the farm laws remains in effect and the Supreme Court appointed committee continues with its tasks related to the farm laws. Six state governments (Kerala, Punjab, Chhattisgarh, Rajasthan, Delhi and West Bengal) have passed resolutions against the farms acts, and three states (Punjab, Chhattisgarh and Rajasthan) have tabled counter legislation in their respective state assemblies. None of the counter legislation passed the respective state governors.

The acts, often called the Farm Bills, have been described as "anti-farmer laws" by many farmer unions, and politicians from the opposition also say it would leave farmers at the "mercy of corporates". The farmers have also demanded the creation of an bill, to ensure that corporates cannot control the prices. The government, however, maintains that the laws will make it effortless for farmers to sell their produce directly to big buyers, and stated that the protests are based on misinformation.

Soon after the acts were introduced, unions began holding local protests, mostly in Punjab. After two months of protests, farmer unions—mainly from Punjab and Haryana—began a movement named *Dilhi Chalo* (transl. Let's go to Delhi), in which tens of thousands of farming union members marched towards the nation's capital. The Indian government ordered the police and law enforcement of various states to attack the protesters using water cannons, batons, and tear gas to prevent the farmer unions from entering into Haryana first and then Delhi. On 26 November 2020, a nationwide general strike of 250 million people, as per trade unions claim, took place in support of the farmer unions. On 30 November, an estimated crowd of 200,000 and 300,000 farmers was converging at various border points on the way to Delhi. On 21 March specific mention was made of Bengaluru, "...you (farmers) have to turn Bengaluru into Delhi. You will have to lay siege to the city from all directions". Transport unions representing over 14 million truck drivers have come out in support of the farmer unions. On 26 January, tens of thousands of the farmers held a farmer's parade with a large convoy of tractors and drove into Delhi. The protesters deviated from the pre-sanctioned routes permitted by the Delhi Police. The tractor rally turned into a violent protest at certain points as the protesting farmers drove through the barricades and clashed with the police. Later protesters reached Red Fort and installed farmer union flags and religious flags on the mast on the rampart of the Red Fort. As of 21 March 2021, according to Haryana Police, there are around 40,000 committed protestors sitting at Singhu and Tikri at the Delhi border.^[2]

While a section of farmer unions have been protesting, the Indian Government claims some unions have come out in support of the farm laws. By mid December, the Supreme Court of India had received a batch of petitions asking for removal blockades created by the protesters around Delhi. The court also asked the government to put the laws on hold, which they refused. On 4 January 2021 the



court registered the first plea filed in favour of the protesting farmers. Farmers have said they will not listen to the courts if told to back off. Their leaders have also said that staying the farm laws is not a solution. The government offered some amendments in laws. On 30 December, the Indian Government agreed to two of the farmers' demands; excluding farmers from laws curbing stubble burning and dropping amendments to the new Electricity Ordinance.

As military tanks and elaborate floats paraded through the center of New Delhi on Jan. 26 as part of India's annual Republic Day celebrations—commemorating the day India's democratic constitution came into effect—a rally just miles away turned violent. Farmers protesting agricultural reforms drove tractors through barricades and faced off with police. It was a dramatic escalation after months of mostly peaceful protests by hundreds of thousands of farmers. The protests have challenged Indian Prime Minister Narendra Modi and threatened the viability of the governing coalition leading the world's largest democracy.

At the center of the protests are agriculture reforms prompted by Modi's Bharatiya Janata Party (BJP), which pushed three farming laws through Parliament in September 2020. But thanks to the rushed process by which the laws were passed and the government's crackdown on dissent, what might have been a debate over agricultural economics has instead become a political challenge to the ruling party. The government's response to the protests has raised questions about speech rights, internet freedoms and the stifling of opposition in a country of more than 1.3 billion people. It's maybe the largest challenge for Modi since he came into power in 2014—one that exposes the limits of his strongman politics and the decline of Indian democratic institutions. Given India's role as a key player in the geopolitical system and a strategic counterweight to China, protests that affect the stability of the Indian government and the future of Indian democracy could have wide-reaching consequences.

Modi's government passed the three farming laws in September to dramatically change the decades-old system of selling agricultural goods in India in an effort to resolve India's long-standing agricultural crisis: Nearly half of India's workforce is employed in agriculture, but farming makes up only around 15 percent of the country's gross domestic product—a portion that is declining steadily. More than half of farming households are in debt, which has contributed to a crisis of suicide among farmers.

The current agriculture system dates back to the decades after India's independence. In the 1960s, with food shortages plaguing the country, the Indian government intervened in what is known as the "Green Revolution" by introducing new technologies to increase the production of rice and wheat. At that time, the government also created a new food marketing system. The system is complicated and varies across states, but, essentially, it involves farmers bringing crops to wholesale markets known as *mandis* and selling the crops to traders in an open auction. The *mandis* are run by a marketing board established by the state to prevent farmers from being exploited by large retailers. Prices can be informed by minimum support prices (MSPs)—prices set by the government and at which it buys crops in certain states.

The three new laws each deregulate a different aspect of the agricultural system: the sale, pricing and storage of goods. They allow farmers to sell their goods to private buyers outside the state-run markets and create a system for contract farming. Taken together, the laws reduce the government's role in agriculture and open up spaces for private investors.

The government argues that the deregulations increase efficiency, allow farmers greater freedom and let farmers negotiate better prices for their crops. But farmers say these reforms will devastate their earnings. Many worry that by allowing farmers to bypass the state-sanctioned marketplaces and sell directly to private buyers without paying the taxes or fees required by state-run markets, the laws will gradually make the *mandi* system obsolete. Protesting farmers' biggest fear is that this dismantling of the *mandis* will end the MSPs—a safety net that assures farmers that they will



be paid a certain price without regard to market conditions. Without MSPs, farmers would be at the mercy of private companies that have no obligation to pay them the guaranteed minimum price. The bills say nothing about the MSPs, and Modi has promised that they will remain. Still, protesters are skeptical and have demanded that the government make its promise in writing.

While experts largely agree that India's agricultural sector needs reform, many criticized the way in which Modi's government passed the laws—the bills were rushed through Parliament without significant debate and were passed in a dubious voice vote, and farmers say they were not consulted in the process. "The Indian Parliament is quickly moving from being the custodian of the dignity of legislation to being a site for the acclamation of authoritarianism," wrote Pratap Bhanu Mehta, a political science professor at Ashoka University in Haryana, of the BJP's bulldozing of the legislation through Parliament. The BJP's "parliamentary strategy is not simply to win. It is to show that it can pretty much do anything with impunity," he said.

Farmers' unions began holding local protests soon after the BJP rushed the bills through Parliament in September. Two months later, on Nov. 26, farmers from the northern states of Punjab and Haryana began marching to the capital to pressure the government to repeal the laws, and across India, an estimated 250 million others joined a strike in solidarity—likely the largest organized strike in human history. The marchers were met with police in riot gear who used water cannons and tear gas to try to keep the farmers from nearing New Delhi. But the farmers made it through, and more than 200,000 set up camp at entry points to the city. Farmers say they're prepared to remain outside Delhi until the laws are repealed. They've parked tractors and other vehicles along highways into Delhi and have set up sprawling tent cities with community kitchens, medical camps and other facilities.

Most of the protesting farmers are from Punjab and Haryana—India's biggest agricultural producers and the two states that benefited the most from Green Revolution reforms. Many are Sikhs, as the religious minority in India makes up a majority in Punjab. The farmers protesting outside New Delhi are among the wealthier farmers in the country, a group that benefits from disproportionate government buying at the MSP. In states where there are no large-scale MSP operations, private market prices tend to be lower. This system, therefore, incentivizes the wealthier farmers to lobby to maintain the status quo.

In January, on India's Republic Day, the largely peaceful protests turned violent when some farmers deviated from protest routes previously determined by the police. They dismantled barricades and drove toward the center of the capital city where they clashed with police and stormed the historic Red Fort. At least one protester died, and hundreds of police officers and protesters were injured. Farmers' groups condemned the violence, calling it the product of "anti-social elements" that "infiltrated the otherwise peaceful movement," but they refused to call off the protests.

In the following days and weeks, the police blocked roads with concrete slabs, dug trenches and even planted nails in concrete to keep protesters from entering New Delhi. The government has arrested more than 100 people and charged leaders of farmers' unions with rioting and sedition. It cut electricity and water intermittently at one farmer camp, supposedly to maintain order. The government also shut down the internet in areas around Delhi's borders—in some places for days—"in the interest of maintaining public safety and averting public emergency," according to India's Home Ministry. "The government does not want the real facts to reach protesting farmers, nor their peaceful conduct to reach the world," Darshan Pal, a leader of a coalition of farmers' unions, told CNN. "It wants to spread its false spin around farmers. It is also fearful of the coordinated work of the farmers' unions across different protest sites and is trying to cut off communication means between them."

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**ECONOMICS EVALUATION OF PRICE PARITY BETWEEN PRODUCERS
PRICES AND MSP OF PRINCIPAL CROPS IN AKOLA DISTRICT****M. P. Takote**

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Abstract

Government announces Minimum Support Price for crops and Procures the same. In this study an attempt has been made to study parity between average prices and Minimum Support Price (MSP) of principal crops in Akola district. The present study was based on the time series data of average prices of principal commodities of the APMC's of Akola district for the 10 years i.e. from 2011-12 to 2020-21. The study reveals that between 2017-18 to 2020-21, all four markets namely Akola, Akot, Murtizapur and Balapur paid below MSP for commodities Soybean, Pigeon pea, Green gram and Black gram. Often, due to various reasons which vary from insufficient procurement levels, unawareness of the MSP programme, inaccessibility of procurement agencies and pre-pledged crops, farmers sell their crops below the MSP.

Keywords: Parity, Minimum Support Price, Soybean, Pigeon pea, Green gram, Black gram.

Introduction

Minimum Support Price (MSP) is an important part of India's agricultural price policy as it's declaration before the sowing time assures farmers agricultural income besides providing a clear price signal. Government fixes Minimum Support Prices (MSPs) for 22 mandated agricultural crops on the basis of the recommendations of the Commission for Agricultural Costs & Prices (CACP), after considering the views of State Governments and Central Ministries/Departments concerned and other relevant factors. The idea behind MSP is to give guaranteed price and assured market to the farmers and protect them from the price fluctuations and market imperfections. The guaranteed price and assured market are expected to encourage higher investment and in adoption of modern farming practices. While recommending MSP, CACP considers various factors viz. cost of production, overall demand-supply situations of various crops in domestic and world markets, domestic and international prices, inter-crop price parity, terms of trade between agriculture and non-agriculture sector, likely effect of price policy on rest of economy and a minimum of 50 percent as the margin over cost of production.

The price fluctuation in agricultural commodities is a common phenomenon due to their seasonal nature of production, wide ecological imbalances compared to other crops and seasonal demand for agricultural commodities. Variability in the supply of many agricultural products subsequently leads to larger variation in market arrivals which shows much of the price fluctuation. Fluctuations in market arrivals largely contribute to price instability and price fluctuations of agricultural commodities, there is need to have an understanding of the price behaviour over time.

Materials and Methods



The present study was based on the time series data of average prices of principal commodities of the APMC's of Akola district. The data pertain to a period of 10 years i.e. from 2011-12 to 2020-21 were considered for the study. The secondary data pertaining to average prices of crops Soybean, Pigeon pea, Green gram, Black gram and wheat selected in this study were collected from selected Agriculture Produce Market Committee's (APMC's) namely Akola, Akot, Murtizapur and Balapur as the arrivals of selected principal crops in this market were highest. The data with regard to Minimum Support Price (MSP) of the selected crops were obtained from government portal. (<http://farmer.gov.in/mspstatements.aspx>)

Results and Discussion

Parity between Average Prices and MSP of Soybean

The parity between Average prices and MSP of Soybean are depicted in table 1, it is observed that no market paid below MSP during the period of 2012-13 to 2016-17. During the period of 2017-18 to 2020-21, all four markets namely Akola, Akot, Murtizapur and Balapur paid below MSP.

Table 1: Parity between Average Prices of Soybean with MSP

Year	Soybean					Remark
	Akola	Akot	Murtizapur	Balapur	MSP	
2011-12	2066.25	2103.67	2189.58	1551.08	1690	One market paid below MSP
2012-13	3271.25	3158.17	3152.17	3157.92	2240	No market paid below MSP
2013-14	3361.17	3308.58	3157.00	3303.50	2560	No market paid below MSP
2014-15	3587.58	3661.83	3480.08	3549.92	2560	No market paid below MSP
2015-16	3317.08	3329.75	3362.75	3255.58	2600	No market paid below MSP
2016-17	3226.67	3189.50	3285.25	3291.75	2775	No market paid below MSP
2017-18	2546.08	2905.08	2590.17	2681.58	3050	All four market paid below MSP
2018-19	3211.50	3214.00	3264.17	3248.42	3399	All four market paid below MSP
2019-20	3300.42	3397.00	3459.17	3417.42	3710	All four market paid below MSP
2020-21	3479.17	3424.08	3529.08	3488.58	3880	All four market paid below MSP

Parity between Average Prices and MSP of Pigeon pea

Table 2 presents the results for parity between average prices and MSP of Pigeon pea. It is observed that no market paid below MSP during the period of 2015-16 to 2016-17 and during 2017-18 to 2020-21, all four markets namely Akola, Akot, Murtizapur and Balapur paid below MSP.

Table 2: Parity between Average Prices and MSP of Pigeon pea

Year	Pigeon pea					Remark
	Akola	Akot	Murtizapur	Balapur	MSP	
2011-12	3097.92	3250.33	3266.33	2121.42	3200	Two markets paid below MSP
2012-13	3764.58	3739.58	4269.17	3536.17	3850	Three markets paid below MSP
2013-14	4144.17	4054.83	3677.92	3841.00	4300	All four markets paid below MSP
2014-15	4417.75	4433.08	4349.83	4355.33	4350	One market paid below MSP
2015-16	7087.25	6799.42	6765.08	7020.42	4625	No markets paid below MSP
2016-17	7173.83	7001.83	7290.25	7272.42	5050	No markets paid below MSP
2017-18	3960.92	4177.96	4129.67	3906.33	5450	All four markets paid below MSP



2018-19	3875.58	4199.33	4047.08	3899.25	5675	All four markets paid below MSP
2019-20	4846.92	5037.25	5108.75	5112.50	5800	All four markets paid below MSP
2020-21	5058.50	5200.92	5288.50	5211.92	6000	All four markets paid below MSP

Parity between Average Prices and MSP of Green gram

The data on average prices and minimum support price (MSP) for Green gram is presented in Table 3. It is evident from the data in Table that no market paid below MSP during the period of 2015-16 while between 2017-18 to 2020-21, all four markets namely Akola, Akot, Murtizapur and Balapur paid below MSP.

Table 3: Parity between Average Prices and MSP of Green gram

Year	Green gram					Remark
	Akola	Akot	Murtizapur	Balapur	MSP	
2011-12	4090.25	3464.58	3939	2468.33	3500	Two markets paid below MSP
2012-13	4415.83	3620.00	2825	3611.67	4400	Three markets paid below MSP
2013-14	4837.17	3878.58	3965.33	3508.17	4500	Three markets paid below MSP
2014-15	6050.08	5422.17	3714.25	4539.75	4600	Two markets paid below MSP
2015-16	7083.33	6994.92	5674.58	6994.92	4850	No markets paid below MSP
2016-17	5428.08	5396.25	2716.25	5113.08	5225	Two markets paid below MSP
2017-18	4534.75	4298.88	4037	4037.58	5575	All four markets paid below MSP
2018-19	4691.92	4436.25	3855	4062.25	6975	All four markets paid below MSP
2019-20	5173.58	5552.83	4193.33	4335.92	7050	All four markets paid below MSP
2020-21	5187.50	5390.50	1499.17	4483.25	7196	All four markets paid below MSP

Parity between Average Prices and MSP of Black gram

The data on average prices and minimum support price (MSP) for Black gram is presented in Table 4. It is observed that no market paid below MSP during the period of 2015-16 while between 2011-12 to 2013-14 and 2017-18 to 2020-21, all four markets namely Akola, Akot, Murtizapur and Balapur paid below MSP.

Table 4: Parity between Average Prices and MSP of Black gram

Year	Black gram					Remark
	Akola	Akot	Murtizapur	Balapur	MSP	
2011-12	2966.25	2585	2483.25	1922.33	3300	All four markets paid below MSP
2012-13	3209.58	2653.17	2557.92	2563.25	4300	All four markets paid below MSP
2013-14	3253.17	3018.83	2300.17	2870.75	4300	All four markets paid below MSP
2014-15	4097.00	4895.58	3911.67	3861.42	4350	Three markets paid below MSP
2015-16	7332.92	6603	6349.75	6413.75	4625	No markets paid below MSP
2016-17	8080.83	6908	2885.42	7406.50	5000	One market paid below MSP
2017-18	4714.08	4499.63	2971.67	3674.33	5400	All four markets paid below MSP
2018-19	3641.08	3642.58	3101.25	3401.17	5600	All four markets paid below MSP
2019-20	4362.42	4868.5	3322.08	3673.50	5700	All four markets paid below MSP



2020-21	4552.08	4527.83	1761.81	3661.58	6000	All four markets paid below MSP
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Parity between Average Prices and MSP of Wheat

The parity between Average prices and MSP of Wheat are depicted in table 5, it is reveals that no market paid below MSP during the period of 2013-14 and during the period of 2011-12, 2015-16, 2018-19 and 2020-21, all four markets namely Akola, Akot, Murtizapur and Balapur paid below MSP.

Table 5: Parity between Average Prices and MSP of Wheat

Year	Wheat					Remark
	Akola	Akot	Murtizapur	Balapur	MSP	
2011-12	1191.25	1067.50	1405.42	785.17	1285	Three markets paid below MSP
2012-13	1413.33	1318.42	1408.17	1305.50	1350	Two markets paid below MSP
2013-14	1723.92	1557.42	1521.42	1532.58	1400	No markets paid below MSP
2014-15	1640.92	1470.08	1452.82	1448.83	1450	Two markets paid below MSP
2015-16	1727.25	1450.42	1517.00	1440.42	1525	Three markets paid below MSP
2016-17	2112.67	1703.83	1561.17	1680.83	1625	One markets paid below MSP
2017-18	2105.50	1661.25	1552.50	1763.25	1735	Two markets paid below MSP
2018-19	2270.00	1610.17	1639.58	1798.08	1840	Three markets paid below MSP
2019-20	2315.92	2264.00	1863.83	1894.83	1925	Two markets paid below MSP
2020-21	2200.33	1624.67	1691.67	1691.00	1975	Three markets paid below MSP

Conclusion

This study examined the price parity between Average prices and Minimum Support Price (MSP) of principal crops in Akola district using annual data covering the period from 2011- 12 to 2020-21. Minimum Support Price (MSP) is price fixed by Government of India to protect the producer-farmers against excessive fall in price during bumper production years. The result revealed that the average price for the commodity falls below the announced minimum price may be due to bumper production and glut in the market. In such cases government agencies purchase the entire quantity offered by the farmers at the announced minimum price which gives fair remuneration for the farmers.

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**INDIAN AGRICULTURE: MSP AND PRIVATIZATION ISSUES IN
AGRARIAN SECTOR.****Rita Rani**

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Abstract

Through this study of issues in agrarian sector, here we tried to highlight the key features of new three bills and consequences. Certain focus is given to the issue of MSP and privatization of farming due to implementing new bills and abolition of APMC throughout the country. Also the increasing participation of multinational companies is the major concern. These new bills, which are implemented forcefully in the situation of pandemic without any required discussion with the farmer committees, created an environment of panic about the Government policies among the people, not only belonging to agrarian sector also to the civil society. Agriculture is the key occupation of people from very early ages. It always played an important role in human development since the primitive societies. Farming of domesticated products leads to live people in cities, as most of the raw material directly or indirectly dependent on the agriculture. Since independence, farmers helped to grow the GDP and strengthen the economy of India, with their hard work. Still the condition of the farmers is very pathetic. The outcome of the study is to highlight the importance of MSP for the farmers in present scenario to protect them from exploitation of private companies. Privatization of farming leads to the poor outcome for farmers, especially small farmers.

Keywords

Minimum Support Price (MSP), Privatization.

Introduction

India is a country where agriculture is the main occupation of most of the people. As per the records of 2018, more than 50 percent of people depend upon it for work force directly or indirectly. Also it gives 17-18 % to the GDP of India. More than 75% of poor population who lives in rural areas depends on agriculture. Government allocated lots of subsidies to the farmers, but still it is unable to improve the income and living standards of farmers. Every year thousands of farmers commit suicide due to poor output from agriculture. Five year plans for agriculture brought green revolution in India, increased the production, but the position of the small farmers is still pathetic. Though every political party in their election manifesto set agenda of doubling the income of farmers, but after elections nobody talk about it.

The new bills passed by present government of India, has created an environment of panic and troubles for the farmers which results in the long run series of protests and lose of many farmers lives. MSP is considered the backbone of 23 listed crops in India, but the new policies introduced by present government are trying to ward off this system. Globalization also has adverse effect on Indian agriculture and it squeeze the income of farmers, because the access involvement of international investors.

Objectives of study

- To emphasize the importance of agriculture
- To examine the issues of MSP
- To describe the increasing involvement of private companies
- To examine the consequences of new bills.

Methodology

The study is focused on the present scenario of agrarian sector and increasing involvement of private and multinational companies, which leads to privatization of agriculture. It also developed the certain



insight about the problems which agrarian sector and farmers are facing today, even after implementation of 12 five year plans for agricultural growth. Methodology is based on the study and information collected from the secondary sources and data such as magazines, internet, and journals. Content analysis method is adopted for revealing the findings of the study. The outcome of the study will enable us to develop certain insight which is relevant to the issues and challenges seen in agrarian sector by the farmers due to government policies in present time.

Emergence of five year plans for agriculture

Immediately after the independence of India then ruling government came with a new policy of five year plans for the improvement of agriculture and condition of farmers in India. This plan was based on **Harrod-Domar Model**. These plans play a very important role in the functioning of Indian economy. The work of these plans was monitored by the Planning Commission (1951-2014). This Planning Commission was replaced with the NITI Aayog (2015) by present NDA government. First five year plan was introduced on 8th of December, 1951, by the Prime Minister Pandit Jawahar Lal Nehru in the Parliament of India. Due to partition and Second World War India had faced lots of crisis, like low economy, rehabilitating refugees, agricultural development and also the requirement of sufficient food for all. The Planning commission (settled in 1950) purposed to revise these plans after every five years.

Objectives of these plans:-

1. Modernization
2. Economic Growth
3. Economic Equity and Social Justice
4. Full Employment
5. Economic Self Reliance
6. Improvement in Agriculture.

In first five year plan the total planned budget of Rs.2069 crore, only 17.4 percent was allocated to the agriculture and community development. These planes had brought Green Revolution in India. It also focused on increase of export and minimizing the import of food products. These plans were somewhat successful to improve the economy of India. For the growth rate of 6-7 percent of GDP (Gross Domestic Product) per year, farmers played a very important role. With the 4 percent growth of agricultural production changed the position of India on international index. From 1950 to 2020, there are 12 five year plans launched for the growth of agricultural production and improvement of GDP in India. Farmers did not get any benefit with it.

Issues of Current Agricultural Polices and Farmers

The new government led by Narendra Modi, has replaced Planning Commission with the NITI Ayog in 2015. Through which NDA government has introduced new agricultural policy on 22 September, 2020 via voice vote and signed by President of India on 28 September, 2020 in Monsoon session of Parliament. During the pandemic situation the government of India has passed these new Bills named:-

1. Farmer's Produce Trade and Commerce (Promotion and Facilitation) Bill 2020.

In this new bill they have introduced the direct 'farmer to buyer' relationship and try to abolish the any type of fee or cess taken under the state APMC act. With this bill the central government has takes all the control of rule related to agriculture from state to their own hands. Now state has no authority to buy or sell the production of agricultural products. They also have given freedom of inter-state trading of agricultural products.

2. Farmer's (Empowerment and Protection) Agreement of Price and Assurance, Farm Service Bill 2020.

Through this bill government has try to promote the contract farming where farmers will be free to have direct contract with the buyer even before the cultivation of any crop, anybody



can have the contract with the farmer. There is no government intervention. Farmer and the buyer have their own set of agreement and rate. It looks same as done by East India Company in India during their colonial period in 18th century. This means India is going 300 years back!

3. Essential Commodities (Amendment) Bill 2020.

Through this bill government has freed the corporate and private investors to stock unlimited production of crops in their warehouses. Also some important products like onion, potatoes, pulses and cereals are removed from essential product list by the government by implementing this new bill.

These bills are in the favor of private sector and opened a door to the privatization of agriculture. There is no provision of MSP, also these bills declared the depletion of APMC (Agricultural Produce Marketing Committee) act, which was previously works as a middleman of farmers and the buyers from last few decades. Limitless stocking may leads to black marketing of the food products which may results in high prices for the daily essentials to the common man. Though government has introduced lots of subsidy schemes for farmers and agrarian sector for its growth, like PM- Kisan Scheme, PM Kisan Maandhan Yojna, PMFBY (Pradhan Mantri Fasal Bima Yojna), Kisan Credit Card Scheme and many more (Abha Toppo, 2021), still these are not much helpful.

Role of MSP in Agricultural products

Majority of farmers are demanding guarantee of MSP (Minimum Support Price) in new agriculture policies, which is not mentioned by the law anywhere. But the government is continually insists, "MSP was, MSP is and MSP will be there." But the farmers demand a written agreement of it, which the government is not ready for. Now, here we need to understand the importance of MSP for farmers. There are 23 crops listed under the previous rule of MSP (Anju A. Chaba, 2021), which includes seven cereals (Wheat, paddy, maize, jawar, bajra, ragi, barley), five pulses (urad, moong, arhar, chana and masoor), four cash crops (sugarcane, cotton, copra, raw jute), seven oilseeds (mustard, rapeseed, groundnut, sunflower, soyabean, sesame, niger seed). The production of paddy and wheat is mostly depends upon MSP, which is mainly cultivated in Northern India (Punjab, Haryana, Uttar Pradesh). Before new agriculture bills there was the common rule of MSP works throughout the country. Nobody can procure listed crops lower than their listed price.

In the APMC market farmers go with declared price by CACP (A. Reddy, 2020). But now, the center has been claiming that MSP for all these crops is a burden of Rs. 17 lakh crore on the government, so it's not possible to legalize the rule of MSP. According to the study done by Economic Professor of Punjabi University Patiala, Kesar Singh Bhangu said, "The government of India says that half of the Indian Budget's expenditure will go in the procurement of all these crops if MSP is made legal, but this is not the actual case as it depends on the market circumstances of all such crops to a large extent."

In Bihar since 2006, there is no APMC market, so the farmers are dependent on the private buyers. They are forced to sell their crops at very low price as compare to the other states. That's by their economical situation is getting worse every year. Farmers from Punjab and Haryana are continually protesting and demanding for the legal rule of MSP in new bills. It will ensure that if any private buyers try to exploit them by low price than MSP then they may have the legal procedure. Actually MSP can improve the economic situation of farmers, as private buyers will offer somewhat more price to the farmers to lure them. Making MSP legal will make India economically more-stronger because India is an exporter of lots of agricultural products.

Involvement of Corporate and Multinational Companies

Initially farming was individual, but quietly the contract farming is promoted. At the name of enhancement of income, golden day dreams are shown to the farmers. The central government of India and some of the state governments like Punjab, Gujrat, Karnatka, Andhra Pradesh and Tamil Nadu are gradually increasing the involvement of corporate in agriculture by giving those incentives,



subsidies and other benefits. The state government of West Bengal is under pressure of changing their farming policy to contract farming. The NDA government has drafted some legal agreements for the contract farming to increase the netting of corporate and multinational companies with increment of sodality of FDI and opening the doors for private sector into agriculture without any limit of access. They want to form clusters of agricultural land.

According to R. Tongia (2021) Indian government tries to follow the model of contract farming of US and other European countries in India. But those are well developed countries and have vast technology, rather than India is an under development country. Bill Gates (US) owns 242,000 acres of land alone. He can easily use technology for farming. Whereas in India there are very small farmers are there. They can't access the technology for small piece of land. The corporate and other multinational (Indian or International) companies want to hire the land from small farmers, and start contract farming as per their own needs. Look back into 18th and 19th century, when British company did the same with Bengal Farmers. It results the poor condition of farmers. At present, some of the corporate have already purchased hundreds of acres land for their warehouses immediately after the commencement of new three agriculture bills. A handful of billionaires want to control our food from farm to fork.

“Our food system belongs in the hands of many family farmers, not under the control of a handful of corporations.” – Willy Nelson, Farm Aid Founder and President (Farmaid, 2021).

Consequences of Present Agriculture Policy

From last few decades farmers are procuring their crops in large Mandis settled up by state government under the control of APMC. These Mandis and the Market committees are the first touch points for the farmers to sell their crops perpetually. They have no problem with this system. But with the present three agriculture bills passed by NDA government in very critical situation of Corona Pandemic in haste, are not acceptable by the farmers, especially in northern states, which are larger producer of food crops. Because through this new policy the central government has not only removed the APMC and but also taken full power in their own hands from state governments. The government wants to bring the power of farming sector under their own jurisdiction. Now farmers are in panic that they will be exploited by the private buyers or corporate as there is no provision of MSP in this new policy.

Through this policy government has promoted the privatization of farming and given very easy access to corporate and multinational companies, so they will have monopoly not only on the procurement of crops, but also the market. It will affect the income of farmers; also the common man has to spend more for the same product. The policy of unlimited stock will leads to black marketing of essential products. As there is no provision to control the limit storing. As well as the farmers the common man also will have to face price increase for daily household needs and food products. The present policy is only in the favor of some corporate. If the government will continue to implement this policy, it may leads to more harsh type of protests. In India from 1995 to 2015, there 296438 farmers had committed suicide. Only in 2019, there 10281 farmers committed suicide due to poor output from their agriculture and high interest rates. With this new agrarian policy it may increase the trouble for them. Because private buyers will try to exploit the farmers, as they know there is no provision of MSP in new policy.

Conclusion

Farmers in India were living a very hard live since the history of farming started. They hardly meet both the ends of the day with their hard work. Farmers have to face lots of problems such as bad weather, insufficient water supply, transport problem, high interest rates, costly pesticides etc. There are 50 percent people are employed in farming sector, but they are growing for the whole country. These new bills have put the future of farmers into dark. Even after long period of protest, lots of people lost their lives but government is not ready to hear anything against new policy. Small farmers



will lose their piece of land to the corporate very soon as they have no other option. It will increase the suicide rate in farmers and also will enhance the migration of farmer families to other countries for their livelihood.

The future of farmers in India depends on many existing and new policies. Agriculture is the largest sector for employment, specially the people living in rural areas, with less education. The government wants to increase the use of technology following the model of America; it will reduce the use of manpower in agriculture. It results the enhancement of unemployment in agricultural sector. Poor, small and uneducated farmers will be unable to use new technology, so they will have to handover their land to the corporate. The present owners of land will become the laborers.

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**ISSUES MSP, PRIVATIZATION POLICY & AGRICULTURE****Alka W. Patil**

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Email: alkapatil3106@gmail.com Mob: 97667 25595**Abstract:**

The historical importance of the MSP (minimum support price) as a mechanism to solve the agrarian crisis and address farmer distress has been contextualised. For national food security, public distribution, farmer livelihood and welfare, and agricultural growth, the minimum support price and public procurement system are essential. Alternative methodologies to calculate MSP have been discussed with an emphasis on enhancing the economic lives of the farmers in a sector with increasing participation from global industrial behemoths. The three neoliberal farm bills adopted by the Indian government amid the escalating agricultural catastrophe, cumulative farmer agony and degrading environmental health across the globe have been critiqued with an analysis of its ramifications on the incomes of Indian farmers, weakening of the mandi system and their disproportionate impact on farmers with small landholdings. The respective research paper focuses on the lack of diversity in the crops procured through the PDS (public distribution system) and it also has suggestive approaches towards making MSP a legal right.

Keywords :

Minimum Support Price (MSP), Farm Bills 2020, APMC, Commission for Agriculture Costs and Prices (CACP), Agrifarm privatisation, Food security.

Introduction :

While agriculture's part of India's GDP has gradually dropped to less than 15% due to the strong growth rates of the industrial and service sectors, the sector's importance in the country's economic and social fabric goes much beyond this metric. To begin with, roughly three-quarters of Indian families rely on income from the countryside. The vast bulk of India's impoverished (about 70% of the population) live in rural areas. To fulfil the demands of a growing population with rising incomes, India's food security depends on producing cereal crops as well as boosting production of fruits, vegetables, and milk. The MSP system has been plagued by flaws over the years. Agricultural reforms are therefore required to address these issues, especially by strengthening the government's participation in agricultural marketing in order to assure farmer welfare. The new agricultural laws, on the other hand, promote a laissez-faire policy environment that is detrimental to farmers' interests.

MSP & OBSERVATIONS BY COMMISSION ON AGRICULTURE COSTS AND PRICES

MSP is one of the forms of intervention followed by the government to regulate the prices in the market, thereby fixing a floor price below which a consumer cannot buy the produce. It is set by the government before every sowing season, on the advice of the Commission for Agricultural Costs and Prices (CACP). CACP reaches a particular price after consulting all stakeholders like all states, farmers' organizations, and the major regulatory bodies of the crops. This price's main objective of MSP is to protect the farmers from distress sales during a bumper crop and to provide people with food at a reasonable price.

The said price had to achieve certain objectives

- 1) Providing food grains for the Public Distribution System.
- 2) Ensuring reasonable (affordable to consumers) prices for food grains.
- 3) Inducing adoption of new technology.

Keeping all these in mind and with other references like cost of living and other factors, the agricultural prices commission was formed in 1965. They followed a method of cost for fixation of



minimum support price which was not satisfactory. In order to suggest changes, there was a report published in 1980 by a committee set up under the chairmanship of Dr S R Sen. This committee suggested various changes in methodology in reaching price. It changed the nomenclature of the commission into Commission on Agricultural Costs and Prices (CACP), and it started functioning in 1985. It was set up with complete change of reference and calculating procedure for price (Sudhakar & Wale, 2017).

The CACP's final price includes all paid up costs for the cost of hired human/animal/machine labour, rent paid on land, expense on various inputs including seeds, fertilizers, irrigation, etc. It also includes the imputed value of wages of family labour and depreciation of farm machinery and building. It gives its yearly price policy after consulting all stakeholders. (Kumar, 2018)

CACP considers many factors while setting up of minimum support price, some of them are, the cost of production, changes in input-price, crop price parity, trends in market price, demand and supply, effect on cost of living, international price situation, etc. crops covered MSP: There are 26 crops covered under minimum support price regime, which includes kharif crops, rabi crops, cotton and jute. They are Cereals: paddy, wheat, barley, jowar, bajra, maize, ragi; Pulses: gram, arhar/tur, moong; urad; Lintels; Oilseeds: groundnut, Rapeseed/Mustard, toria, Soyabean, sunflower seed, sesame, sunflower seed and Niger seed. Other crops include Copra, De-husked coconut, Raw cotton, Raw jute, Sugarcane, Virginia flue cured (VFC) tobacco. (Mahalle, Rohilla, Yadav, & Thakur, 2018)

For all the above-mentioned crops there would be a minimum support price set by the government after the cabinet committee on economic affairs accepts on the advice of CACP, which would be announced before sowing season of crops mentioned above. The government, through the Food Corporation of India, has guaranteed and continues to guarantee unlimited procurement of only rice and wheat which are one of the most water consuming crops, at the minimum support price. Which led to the dramatic shift in the cropping patterns of multiple states. Therefore, one way to address the twin problems of unstable farm incomes and water depletion throughout the nation. States set their own minimum support price for crops produced in that state; they generally set it above the MSP of the central government. (Mahalle, Rohilla, Yadav, & Thakur, 2018)

States Legislative Approach

Every state brought necessary legislation to help the farmers with MSP. They all aimed at protecting farmers from distress sale and providing food grain to needy people at an accessible cost. There was state legislation in this respect and they all sought to establish Agriculture Product Marketing Committee (APMC) which is a market where all the farmers sell their products to consumers at MSP. As per 2015-2016 national agriculture census only 6 percent farmers are covered under MSP and 94 percent are not covered or their sales might be taking place outside APMC protection. But MSP in all these transactions sets a benchmark price on which farmers can bargain upon. (Balaji, 2020)

On observing some factual situations, at one situation were Farmers were denied at least Rs 1,881 crore by having to sell their produce below the MSP in October and November, according to The Wire's analysis of data from Agmarknet, the government's price information system, which sources price and quantity arrival data from around 3,000 wholesale mandis across the country.

The selling of maize suffered the most significant losses. Prices were hovering between Rs 1,100 and Rs 1,550 per quintal – much below the MSP of Rs 1,850 – and farmers were denied a staggering Rs 485 crore in October and November 2020. Farmers in the groundnut sector experienced theoretical losses of Rs 333 crore in 2020 due to sales below the MSP. Even for paddy, sales below the MSP resulted in a total loss of Rs 220 crore in various main producing states (excluding Punjab and Haryana). The average price in the other major paddy-producing states such as Chhattisgarh, Uttar Pradesh, and Telangana – was 15% below the MSP.



The information used comes from the Agmarknet system, which supplies prices and quantities for mandis transactions. A large number of transactions take place outside of the mandi, where the farmer receives a low price due to the traders' added transportation costs. (Agarwal & Mishra, 2020)

From this the government expects to maintain families for half of the year where cost of living is rising. Where farmers are protesting for better prices. (Vissa, 2017) From the above instances we can understand how important MSP is to farmers for recovering cost of production and at the same time how insufficient is MSP for farmers as per current times. This stems from the calculating procedure which is followed by CACP in order to ascertain MSP. Which only includes payments of the farmers and fails to include the opportunity cost and amount of family labour. These are some of the drawbacks of MSP. To solve this problem the government should adopt suggestions given by the Swaminathan Committee recommendation of including c_2 cost which is 50 percent of $a_2 + fl$. (Jawandhiya & Dandekar, 2020)

Privatisation Policy and Agriculture

The government has implemented these bills in the guise of “barrier-free trade for farmers’ produce.” (Jawandhiya & Dandekar, 2020)

- 1- The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Bill, 2020,

This bill enables a framework of contract farming for farmers (Vissa, 2017) with the giant agribusiness firms, manufacturers, wholesalers, traders, etc. for a mutually agreed predetermined price. (Jawandhiya & Dandekar, 2020) This bill intends to widen the scope of income of the farmer, however, the only entity which gets rewarded are the big corporate houses. These products will not only be sold in the domestic market but also in the foreign markets. (Editorial, 2020) This bill attracted the problem of not addressing various issues related to contract farming like sharecropping and tenancy issues. It also does not mention about the legalisation of ‘Minimum Support Price’, instead of which it mentions only a ‘remunerative price’ to be agreed in a contract between a farmer and an agribusiness firm. MSP as a legal right would imply that farmers would be entitled to a guaranteed remunerative price, with the government obligated to provide it. To make MSP a legal right over 200 farmer organizations came together to form the All India Kisan Sangharsh Coordination Committee, which developed the Farmers' Right to Guaranteed Minimum Support Prices for Agricultural Commodities Bill, which was also introduced in parliament as a Private Members' Bill. (Srivastava, 2020)

The “quality and standard” of the product would be specified as per that contract. (Singh, 2020)

- 2- The Essential Commodities (Amendment) Bill, 2020,

This bill amended the list of essential commodities, taking away cereals, pulses, oilseeds, edible oils, onion, and potatoes. This implies that the restrictions of the Essential Commodities Act were deregulated. It also removed the stock limits and facility of bulk purchase and storage. This amendment only attracts big corporate agribusiness in the agriculture sector, leading to new investment and hoarding large crop quantities and selling it at a higher price after an artificial shortage of goods.

- 3- Farmers’ Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020

This bill allowed the farmers to sell their produce outside the Agricultural Produce Market Committee (APMC)-governed mandis without paying taxes. This bill is beneficial for the large-scale farmers who can sell their produce outside the mandis and save their taxes and can store their produce, and have the ability to transport the large amount of produce to the private markets. This bill would eventually lead to the closing of the APMC mandis and diminish the system, which procures the produce on a Minimum Support Price. MSP plays an important role in the price determination of a particular good even if a farmer sells his/her goods outside the APMC mandi. (Agarwal, 2020)



As per the 2011 census, 96 million farmers identified agriculture as their primary occupation, down from 103 million in 2001 and 110 million in 1991. In rural fields, 46 percent of the population already works full-time. According to preliminary estimates of the 10th Agriculture Census 2015-16, the size of operating holdings for small and marginal farmers has decreased from 1.15 hectares in 2010-11 to 1.08 hectares in 2015-16, and small and marginal holdings make up almost 90% of our overall agricultural holdings. (Mahalle, Rohilla, Yadav, & Thakur, 2018) The ongoing pattern of increased numbers of small land holdings in the country is another striking characteristic of India's agriculture. The number was recorded at 71 million in the first agricultural census conducted in the early 1970s. These figures have risen exponentially over the last five decades, from 138 million in 2010-11 to 146 million in 2015-16, according to preliminary figures from the 2015-16 agricultural census. (Jawandhiya & Dandekar, 2020)

The third bill has irked the farmers throughout the country because diminishing the APMC mandi will empower the private agribusiness firm to dictate a price, which tilts the balance of power towards the private firms. It throws the marginal farmers, who eventually form 90% of the nation, on the mercy of the private corporations.

Back in 2018, the government's own Commission for Agricultural Costs and Prices (CACP) had claimed that a major portion of farmers are unable to sell their produce at the MSP and have to settle for prices which are below the MSP. CACP urged the legislation to ensure that farmers should not be forced to sell their produce below the MSP. This shows that the income of the farmers has always been insufficient before the agriculture bills of 2020. (Jawandhiya & Dandekar, 2020)

Earlier the cabinet committee of economic affairs for the year of 2020-21 had declared a rise in the MSP of Rabi crop season. This increase ranged between 2.1% and 6.2%, which implies that there would be no reduction in the procurement of produce by the government. But after these bills are passed, the question which arises is that will this benefit the small and marginal farmers which comprise the majority of the farmers in India because MSP can only be recognised on the produce procured by the government. (Editorial, 2020) However, the government is not the biggest buyer in the agriculture markets of India. In 2018 the FCI's share from the procurement of wheat and paddy was even less than 10%. The entry of private agribusiness firms will even lower the government procurement share, which might lead to insecurity for food availability and social unrest in food-deficit areas. The worst effect of the bill on the farmer's income was the potential of a guaranteed floor price within the existing APMC mandi system that is made completely prohibitive, which significantly affects the marginal and small farmers. (Editorial, 2020) Hence, the private corporations will overwhelm the marginal farmers as there would be no negotiable ground between them and the farmer must agree to the stipulated price because of the monopoly of the private corporations. Therefore, the implementation of agriculture bills of 2020 has not made the situation of the Indian farmers any better economically. These bills only benefited the large-scale farmers and private corporations.

Conclusion

It is clear that the government by introducing these Acts wants to increase the rural income but practically it is working in a negative direction. By not including specifications about MSP in the farm Act showing intention of the government to make MSP redundant, also there is no law or act which binds the government to enforce MSP. Increasing and promoting private investment is a crucial step in growth of rural income, but by not including MSP it will hamper the option of the farmers in case they are not satisfied by the prices of private players.

There is no doubt for theoretical purposes the Farmers Agreement on Price Assurance and Farm Services Act has various provisions where legislative intent is clear-cut in favour of farmers, whereas ambiguities in sections of the passed Act have potential to completely wash out the advantages of it.



Also, by allowing the store of essential commodities some big farmers and private persons are in benefit but small farmers will still be in poor condition, which may even reduce the rural income.

Both mandi and private buying should be based on the principle that a farmer has the right to recover inputs costs plus make some profit. There should be a base price for all agriculture and horticulture crops below which the farm product cannot be sold. Buying at a lower price should invoke penal action against the buyer and commission agent. The government can still have a higher MSP for limited crops they want to procure for food security. The CACP had earlier recommended legislation to iron out a concrete MSP law for farmers, but it was not accepted by the Centre.

According to our examination of comparable legislation in the past, the new farm rules, which aim to double farmers' income in two years by deregulating agricultural markets, may exacerbate inequities in the industry. The regulations may harm small and poor farmers, who account for 80% of the sector and 23% of individuals living below the poverty line, by weakening the government's price guarantee mechanism.

The new legislation has a greater impact on Punjab and Haryana farmers because the Food Corporation of India (FCI), the main government agency, and other state agencies acquire about 65 percent of wheat (2019) from these states at MSP. The new legislation will have the greatest impact on farmers that rely on the APMC-MSP model. For them, removing obstacles removes all safeguards, such as a guaranteed price, dealing with licensed agents, and resolving disputes through the mandi. Mandis also provide valuable services such as storage and soil testing. The existing arrangement benefits these states and their farmers the most.

Farmers and farmers' groups from around India, particularly from Punjab and Haryana, are protesting in Delhi, hoping to persuade the Centre to repeal the legislation. Their main demand is for a statutory minimum support price (MSP), and their main objection is to agricultural sales and marketing outside of APMC mandis (government-approved wholesale markets). They fear that by doing so, the mandis will die and exploitative private players will be able to establish the terms of purchase from farmers.

Hence, after an expansive analysis of the historical importance of the MSP and its issues we can conclude that the new farm bills adopted by the Indian government will have a long-term impact on the agrarian crisis in India. The promotion of classical neoliberal tendencies, whether it be advocating for a bypass of APMC Mandis or an incentivisation of contract farming, keeps the assimilation of large agribusiness corporations as a central medium, for what the government and proponents have justified as a mutual improvement of the consumer and the producer. While the legislative intent remains rooted in capitalist dependency, it becomes imperative to wonder if a slow, eventual abandonment of the MSP will aggravate the agrarian crisis or not.

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INDIA'S GDP AND AGRICULTURE

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Abstract

The main aim of this research is to look at how agricultural production contributed to India's economic growth from 2000 to 2020. Agriculture's contribution to GDP increased to 19.9% in 2020-21, up from 17.8% in 2019-20. This paper highlights the contribution of Agriculture Production to GDP, a time series data, for the period from 2000 to 2020. By using Johansen Test of Co integration and Vector Error Correction model (VECM) the study proves a long run association among both the variables. The analysis is performed using E-Views.

Key Words: GDP, Agricultural production, Gross Domestic Product, long run contribution, economic growth.

1) Introduction

Agriculture is a significant part of the Indian economy, accounting for roughly 25% of total GDP and employing more than 60% of the population but still primarily dependent on the monsoon. Over the last few decades, India's agriculture has grown at a rapid pace. By using Johansen Test of Integration Model, the study tries to find out the co integration of Gross Domestic Product (GDP) and Agricultural Production (AGRPROD). A long run association has been found out through this test between GDP and AGRPROD.

2) Objectives

- To study the relationship of GDP and Agricultural Production in India.
- To analyze the study for the period from 2000-2020.

3) Research Methodology:

The study is completely based on Secondary data and a time series data obtained from the Reserve Bank of India- Handbook of Statistics and Ministry of Statistics and Programme Implementation (MOSPI) Government of India for the period from 2000 to 2020. A time series data using Johansen Co integrated Test and VECM being followed in order to carry on the estimation to find out the dependency of GDP on Agricultural sector.

4) Review Of Literature:

Singariya M. & Sinha N. (2015) studies the causal relationship between per capita GDP, agriculture and manufacturing sector output in India using time series data from the CSO for the years 1970 to 2013. The impulse response function shows that any innovation in the agriculture sector boosts both its own and the manufacturing sector's growth in India. In line with the previous finding, the current study claims that agricultural sector shocks in India spill over into the Per Capita GDP and Manufacturing sectors in the long run.

Sharma V (2012) the primary goal of this research is to look into recent agricultural trends. This is investigated to highlight the differences rather than to find an explanation for them. It also identifies some key technological, institutional, and economic policy issues that the 12th Plan must address.

Kekane A (2013) the study is brief information on agriculture, playing an important part of India's economy by highlighting the current status, the salient facts about agricultural scenario, yearly contribution to GDP, the role of agriculture in Indian economy, the importance in international trade.

Pattanayak U & Mallick M (2017) studies the contribution of agricultural production to India's economic growth during 1991-2012. By using linear regression growth model, the study finds the



positive affect of the variables and the insignificance of the variables due to the decline of the agricultural production which declines the GDP growth too. Various suggestions to improve and increase agricultural productions is also put forward.

5) Materials And Methods:

a) Econometric Model: Johansen Test of Co integration and Vector Error Correction Model was used to analyze the relationship of the two variables.

b) Data Collection: The data for GDP and Industrial Production obtained from the Reserve Bank of India- Handbook of Statistics and Ministry of Statistics and Programme Implementation (MOSPI) Government of India is a time series data for the period from 2000 to 2020.

The data were analyzed statistically using E-views software, which was considered most appropriate for economic analysis and evaluation of different econometric parameters.

c) Data Analysis: The following methods were used for data analysis and evaluation.

- **Johansen Test of Co integration and**
- **Vector Error Correction Model (VECM)**

Before running the Johansen Test of Co integration, Lag selection has to be followed. The below table represents the Lag structure from which the Lag length Criteria is fulfilled.

IVAR Lag Order Selection Criteria

Endogenous Variables: GDP AGRPROD

Exogenous Variables: C

Sample 2000 2020

Included observations:17

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-277.5386	NA	6.57E+11	32.88689	32.98491	32.89663
1	-232.8162	73.66040*	5.50e+09*	28.09602*	28.39009*	28.12525*
2	-232.2896	0.743433	8.51E+09	28.50465	28.99478	28.55337
3	-229.9494	2.753155	1.11E+10	28.69993	29.3861	28.76813
4	-227.9058	1.923339	1.60E+10	28.9301	29.81232	29.01779

*indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

As per the above table *indicates lag order selected by the criterion which means in the model **Lag 1** should be chosen because as the AIC, SC, HQ shows * which says that lower the value better the model. As the Lag selected criterion is completed, Johansen Test can be proceeded. Before this test a Precondition has to be fulfilled. The precondition is variables which must be non-stationary level but when we convert all the variables into first difference then will become stationary. Which also says that variables should be integrated in same order only then we can run the Test of Johansen Co integration.

As per the estimation of GDP the results at Level of the Q statistics, P value shows 0% which as per the hypothesis: H_0 – Variables are stationary

H_1 – Variables are not stationary.



Looking at the P value which is less than 5%, we can reject the H_0 and accept the H_1 indicating that variables are not stationary. Thus First Difference of GDP value was estimated. The First difference Q statistics, P value showed more than 5%, here we cannot reject the H_0 and accept the same which says that the Variables are stationary after the first difference.

After the estimation of GDP, the AGRPROD was estimated and the result showed that Q statistics, P value is 0% which indicates that the variables are not stationary. But when estimated with First difference the Agricultural Production estimated to more than 5% to make the variables stationary.

Therefore, it could be concluded that the two variables are non-stationary at Level but when converted into First Difference they become stationary, which says that both the variables, D(GDP) and D(AGRPROD) are integrated at same order.

II Johansen Test of Co integration

(a) Unrestricted Co integration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.975831	55.9657	15.49471	0
At most 1	0.008347	0.125737	3.841466	0.7229

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

The Test of Johansen co integration is estimated through two test, the above is the Rank Test Trace table, which shows the number of co integrating model through hypothesis. The first Null Hypothesis is None, mean there is no co integration among the variables. But this can be rejected as the Trace statistics value is greater than Critical Value ($55.96 > 15.49$), it proves that we can reject the null hypothesis and accept the alternate hypothesis saying that there is co integration among the variables. Even the P value is 0% which is less than 5%, we can reject the Null Hypothesis which is None.

(b) Unrestricted Co integration Rank Test (Maximum Eigenvalue)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.975831	55.83996	14.2646	0
At most 1	0.008347	0.125737	3.841466	0.7229

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

*denotes rejection of the hypothesis at the 0.05 level

**MaxKinnon-Haug-Michelis (1999) p-values.

The second test of Johansen test is the Maximum Eigenvalue Statistics, which also shows the number of co integrating model. The above table also indicates to reject the None and accept the alternate hypothesis, as per the Max-Eigen statistic value and the Critical value ($55.83 > 14.26$) and the P-value 0% all together proves that there is co integration among the variables.

Thus from the above tests it is proved that the variables are co integrated with each other, which allows to conclude that they have long run association ship. In other words, GDP and Agricultural Production can move together in the long run. If the variables are co integrated or if there is long run association ship among the variables, then VECM model can be run.

III Vector Error Correction Model (VECM)

Vector Error Correction Estimates



Included observations: 19 after adjustments

Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1	
GDP(-1)	1	
AGRPROD(-1)	-27.02575	
	-2.66017	
	[-10.1594]	
C	42005.52	
Error Correction:	D(GDP)	D(AGRPROD)
CointEq1	-0.032791	0.039313
	-0.08842	-0.01427
	[-0.37088]	[2.75507]
D(GDP(-1))	0.373099	0.025372
	-0.30303	-0.04891
	[1.23123]	[0.51879]
D(AGRPROD(-1))	0.505843	-0.04376
	-1.4009	-0.22609
	[0.36109]	[-0.19356]
C	807.4645	19.77561
	-431.253	-69.5995
	[1.87237]	[0.28413]

The above table VECM estimation shows co integration of GDP and AGRPROD at Lag 1 as per the Lag selection criteria and automatically converts the variables into first difference. Here there are two dependent variable D(GDP) and D(AGRPROD) which consists of two independent variables D(GDP(-1)) and (D(AGRPROD(-1))) respectively. Thus two models can be generated.

The CointEq1 shows Error correction terms which has three variables that are the co efficient, standard error and the t-statistics. The t-statistics can be obtained by dividing the co efficient and the standard error. But there is no p-value to predict the result, for this system has to be run.

Two equations are been generated after running the system which are as follows:

- 1) $D(GDP) = C(1)*(GDP(-1) - 27.025748197*AGRPROD(-1) + 42005.5181565) + C(2)*D(GDP(-1)) + C(3)*D(AGRPROD(-1)) + C(4)$
- 2) $D(AGRPROD) = C(5)*(GDP(-1) - 27.025748197*AGRPROD(-1) + 42005.5181565) + C(6)*D(GDP(-1)) + C(7)*D(AGRPROD(-1)) + C(8)$

As per the above model of equation, there are 8 coefficient in the model, been estimated and this is called as System Equation Model. Through each of this equation, Ordinary Least Square (OLS) results are generated which are as below:

Dependent Variable: D(GDP)



Method: Least Squares (Gauss-Newton / Marquardt steps)

Sample (adjusted): 2002-2020

Included observations: 19 after adjustments

$$D(GDP) = C(1)*(GDP(-1) - 27.025748197*AGRPROD(-1) + 42005.5181565) + C(2)*D(GDP(-1)) + C(3)*D(AGRPROD(-1)) + C(4)$$

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.032791	0.088416	-0.37088	0.7159
C(2)	0.373099	0.30303	1.231229	0.2372
C(3)	0.505843	1.400898	0.361085	0.7231
C(4)	807.4645	431.253	1.872368	0.0808

Here C(1), C(2), C(3), C(4) is the error correction term or speed of adjustment towards equilibrium.

The above test of OLS discusses two issues (i) the Long run Causality and (ii) the Short run Causality.

(i) the Long run Causality: As the C(1) has negative sign and significant too, it can be said that there is Long run causality running from AGRPROD to GDP.

(ii) the Short run Causality: In order to check the short run causality, a Wald test has to be done which is tested through H_0 – There is no short run causality among the variables.

H_1 – There is short run causality among the variables.

IV Wald Test:

Test Statistic	Value	df	Probability
F-statistic	1.051239	(2, 15)	0.3739
Chi-square	2.102479	2	0.3495

Null Hypothesis: C(2)=C(3)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(2)	0.373099	0.30303
C(3)	0.505843	1.400898

Restrictions are linear in coefficients.

As per the Chi-square value 2.102 and its P-value 0.3495, the P-value (34.95%) is greater than 5%, which means we cannot reject the H_0 and accept it by saying that there is no short run causality among the variables viz. GDP and AGRPROD.

6) Conclusion

The relationship of GDP and Agricultural production are long term and they together result to economic growth is been proved by various tests in the study. The model used is not only significant but also is an appropriate model. Thus it can be said that as the agricultural production increases there will be an increase in the GDP, which will boost the Indian Economy towards growth. The study altogether shows the significance of GDP growth indicating in food grain production cereals and pulses as staple food of the majority of Indians, contributing positively to GDP.

The model even proves that there is no serial correlation, no heteroskedacity in the residuals and even the residuals are normally distributed. A very significant model which easily proves a long run relationship of Gross domestic product and Agricultural production in India for the period 2000 to 2020.



The following are some suggestions regarding the agricultural production:

- 1) Indian Agriculture has lagged behind the rest of the economy in terms of growth. It's time to rewrite the rules to give agriculture a new lease on life.
- 2) Benefits be extended equally to all the Cultivators and the Agricultural laborers who are the division of categories of workers, this is because the farm laborers do not receive any policy support or incentives to invest in agriculture, making it difficult to drive or sustain growth in the sector.
- 3) As investment is the growth key, recent study shows a fall in investment in agriculture due to a decrease in the share of private investment, even though public investment has increased, which is insufficient.
- 4) Crop insurance schemes to be provided to farmers in order to protect them from crop losses are failing.
- 5) National Agricultural Policy of India is almost Twenty years old which needs a revisit to address many of the current issues plaguing.

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SUSTAINABLE AND RESOURCE- CONSERVATIVE TECHNOLOGIES FOR ADAPTATION OF CLIMATE CHANGE: A STUDY ON KADAPA YSR DISTRICT OF ANDHRA PRADESH

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ABSTRACT

Crop Yield depends on moisture , rainfall and temperature. Under climate change, there are several major benefits for sustainable and resource-conserving crop management technologies. The present paper endeavours that water harvest methods, and the diversification of cropping systems in drought prone areas of Rayalaseema Region of Andhra Pradesh. Drought is a common phenomenon in the State of Andhra Pradesh. All the four Rayalaseema districts i.e., Anantapur, Chittoor, Kadapa, Kurnool and Prakasam district are drought prone. Kadapa YSR District has choosen for the present study. The present study is an attempts that how farmers are adopting the alternative irrigation methods as well as the diversification of the cropping systems in the Kadapa YSR District.

Keywords: Rainfall, Drought

1.0. Introduction:

“We need a new vision for Agriculture ...to spread happiness among farm & rural families. Bio happiness through the conversion of our bio resources into wealth meaningful to our rural families should be the goal of our national policy for farmers”

Dr. M.S.Swaminadhan

Climate is the primary determinant of agricultural productivity. For example, crop and livestock yields are directly affected by changes in climatic factors such as temperature and precipitation and the frequency and severity of extreme events like droughts, floods, and wind storms. In addition, carbon dioxide is fundamental for plant production; rising concentrations have the potential to enhance the productivity of agro ecosystems. Climate change may also change the types, frequencies, and intensities of various crop and livestock pests; the availability and timing of irrigation water supplies; and the severity of soil erosion. **(Richard M. Adams et al, 1998).**

Rainfed agriculture occupies 67 percent of net sown area, contributing 44 percent of food grain production and supporting 40 percent of the population. Even after realization of full irrigation potential of the country, 50 percent of net sown area will continue as rainfed **(CRIDA, 1997).**

The rainfed lands suffer from a number of biophysical and socio-economic constraints which affect productivity of crops and livestock. These include low and erratic rainfall, land degradation and poor productivity **(Katyal, 1994)**, low level of input use and technology adoption, low draft power availability **(Mayande and Katyal, 1996)**, inadequate fodder availability low productive livestock **(Singh, 1997)**, and resource poor farmers and inadequate credit availability. Further, **Sharma et al., (1982)** explored that the efficient conservation of rainwater is the central issue in successful dryland farming. Extensive trials conducted by the soil conservation and dryland research centres have led to the identification of a number of inter-terrace land treatments besides contour and graded bunds.

Over time, humans have adapted agricultural systems and practices to changing economic and physical conditions. This has been accomplished by adopting new technologies (including



investments in genetic improvements), changing crop mixes and cultivated acreages, and changing institutional arrangements. Such flexibility is suggestive of significant human potential to adapt to climate change (CAST 1992, Rosenberg 1992).

Shashidhara et al. (2007) studied on drip irrigation in arecanut and banana in Shimoga and Davanagere districts of Karnataka. A majority of the drip irrigation farmers expressed saving of water (95 per cent), saving in labour cost of irrigation (92 per cent) and uniform application of water (91 per cent). Improved quality of the produce was expressed by 70 per cent of the farmers. The successful adoption of Micro Irrigation requires, in addition to technical and economic efficiency, two additional preconditions, viz, technical knowledge about the technologies and accessibility of technologies through institutional support systems (Namara 2005).

1.1 Objectives:

The present paper studies the following objectives:

- i. How far alternative irrigation methods to contribute horticulture crops and which crops can be grown up by micro irrigation and the fixed and variable costs of adoption of the micro-irrigation techniques;

1.2. Methodology:

The study is based on secondary data and literature collected from the different sources such as government publications from Chief Planning Office, Kadapa, Crop and Seasonal reports, published research reports /papers and related websites.

1.3. Droughts, crop production and Rainfall status in Andhra Pradesh:

The newly formed residuary state of Andhra Pradesh took its birth on 2nd June 2014 with the jurisdiction of nine Coastal Andhra and four Rayalaseema districts. The state has 13 districts, 42 revenue divisions and 666 mandals. Andhra Pradesh is the India’s leading Agrarian State. The State contributes 27.59 per cent to state’s GSDP. Nearly 62 per cent of population employed in agriculture and related activities. Horticulture sector produce with 1.4 mn tonnes Ranked 6th in India. Moreover, it is the India’s Largest producer of Fruits, Eggs & Aqua products . 80 lakh ha cultivable net area with a potential to grow . The State of Andhra Pradesh known as Rice Bowl of India.

Table 1.3.1 Rainfall status in Andhra Pradesh: Region wise

Region	Normal	Actual (2016-17)	% DEV. Over Normal
Andhra	1078.1	784.8	-27
Rayalaseema	714.1	496.0	-31
Andhra Pradesh	966.0	677.2	-30

Source: Socio-Economic Survey, 2017

Drought is a common phenomenon in the State. All the four Rayalaseema districts and Prakasam district are drought prone. Historically, one in every three years used to be a drought year. The frequency of droughts has increased during the last 20 years when some parts of the State had experienced a drought in as many as 15 years (Commission on Inclusive and Sustainable Agricultural Development of Andhra Pradesh (Constituted by the Government of Andhra Pradesh, 2016).

Andhra Pradesh ranks 1st in the production of Oil Palm, Tomato, Chillies, Turmeric and Mango; 2nd in production of loose flowers in India.

Table 1.3.4. Horticultural Crops – Area and Production during 2015-16

Category of Crop	Area (lakh ha)	Production (Lakh MT)



Fruits	5.76	100.48
Vegetables	2.33	53.26
Flowers	0.17	1.35
Plantation Crops	4.27	22.14
Spices	2.21	10.90
Spice	0.005	005 0.090
Total	14.74	188.22

Source: Socio-Economic Survey, 2015.

AP Micro Irrigation Project (APMIP) is a first comprehensive and unique project being implemented in a big way in Andhra Pradesh for enhancing crop productivity by improving water use efficiency through Micro-irrigation systems to benefit the farmers. Micro Irrigation is being implemented under PMKSY with funding pattern of 60:40 between central and state Government from 2015-16 onwards. Government of India (GOI) allocated Rs.260.00 Crores for implementation of Micro Irrigation in an area of 1.50 lakh ha. during the year 2016-17. So far, an area of 52,094 ha. has been covered under the scheme under Micro Irrigation. Andhra Pradesh Ranks 2nd next to Gujarat in implementation of Micro Irrigation programme.

1.4.Kadapa YSR District

Kadapa district is located in southern zone with the rainfall range of 700 to 800 mm, which is contributed by south-west and north-east monsoons. Red soils are predominant in the district, occupying 53 per cent of the cultivated area and are spread over Kadapa, Lakkireddipalli, Rayachoti, Rajampet, Kodur, Badvel, Porumamilla and parts of Pulivendula. The remaining 47 per cent of area is under black soils in Muddanur, Jammalamadugu, Proddatur, Kamalapuram, and parts of Pulivendula. There are 945 revenue villages in Kadapa district, out of which 69 were un-inhabited. The district is the heart of Rayalaseema and it is surrounded by Kurnool district on the north, Chittoor on the south, Nellore on the east and Anantapur on the West. The table 1.4.1 reveals that the land utilization pattern in Kadapa.

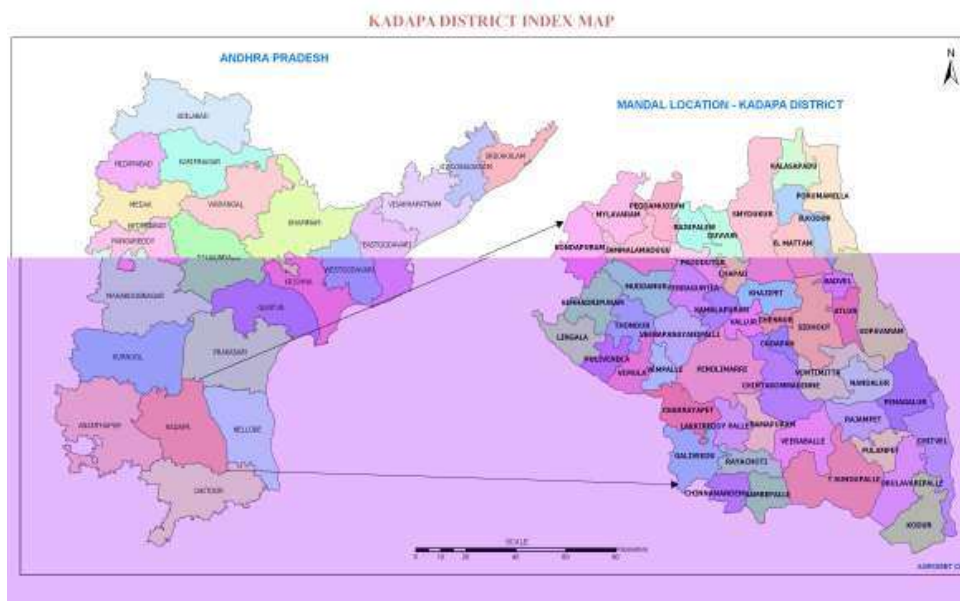


Table 1.4.1.Land utilization pattern:

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Total geographical area	15,35,900 ha
Gross cultivated area	5,02,402 ha
Net area sown	4,05,276 ha
Rainfed area	3,12,062 ha
Net irrigated area	1,90,340 ha
Area cultivated more than once	97,126 ha

The district has semi arid climate with very hot summer months. Summer temperatures go beyond 45⁰ c, while cold temperatures prevail up to 15⁰ c. Heavy winds are very common in the months of April and May coupled with hot temperature. The district average rainfall is 700 mm. 65 per cent of the rainfall is contributed by south-west monsoon, 30 per cent of the rainfall is from north-east monsoon and the rest as summer showers. **67 per cent of the cultivable land is under rain fed conditions and 33 per cent of the area is under irrigation**, mainly by K.C.Canal, Bramham Sagar, Pincha, Mylavaram, Upper and Lower Sagileru, Annamaiah, Buggavanka and Chitravathi balancing reservoir, tanks, kuntas and wells and bore wells and filter points. The following table clearly reveals the total structure of the irrigation sources as well as area irrigated.

Table 1.4.2. Major, Medium irrigation sources and area irrigated

Name of the Project	Actual area irrigated	
	Gross	Net
Kurnool Kadapa Canal	24399	22497
Telugu Ganga Project	1687	1542
Pullivendula Branch Canal including Kadapa Branch Canal	612	612
Buggavanka	429	347
Cheyyuru(Annammayya)	0	0
Lower Sagileru	2189	1259
Upper Sagileru	0	0
Pincha	802	802
Total	30118	27059

Source: Chief Planning Officer, Kadapa YSR District

1.5. Classification of Agricultural Crops in Kadapa YSR District:

Due to its biological diversity, various types of crops are grown in Kadapa District. The important among these may be classified as under.

A. Foodgrains:

These include rice, wheat, coarse cereals and pulses. There has been significant change in the cropping pattern.

B. Oilseeds:

Groundnut and Sunflower are the predominant crops in terms of total production crops. Recurring drought is the most common problem in the district. The rainfed crops, particularly groundnut, are affected at critical crop growth stages.

C. Fibre Crops:

Cotton and jute are the chief crops in this District.

D. Conditions favoring horticulture :



Kadapa, with its wide variability of climate and soil, produces a large range of horticultural crops such as fruits, vegetables, flowers, spices like turmeric and chillies. The table 1.5.2. clearly shows that the performance of the Horticulture crops in Kadapa Districts of various crops.

Table 1.5.1crop Wise Year Wise Yield Data Particulars For The Period 2009-10 To 2013-14 In YSR District.

Name of the crop	2009-10		2010-11		2011-12		2012-13		2013-14	
	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi
Rice	2933	2650	1512	2870	2985	2649	2549	2916	2445	2350
Wheat	1293		0	1303	0	1322		1342		1350
Jowar	2005	926	1452	1516	629	333	2373	1446	1570	1250
Bajra	2602	2602	2501	2501	2593	2593	1317	1317	2015	2150
Ragi	1318	2191	1515	1495	1208	2018	988	1491	1100	1150
Maize	3707	7310	1523	9117	3316	7759	4058	7086	4850	5500
Korra									850	950
Groundnut	323	3145	608	2992	330	2395	252	1567	950	2250
Sunflower	1203	1109	1097	227	999	632	209	401	670	650
Sesamum	249	333	168	352	226	513	0	572	0	425
Castor	498		0	0	61		380		550	
Bengalgram		493	0	1105		829		168		1275
Redgram	169		288	0	250		106		380	
Greengram	256	399	317	351	642	597	553	675	480	500
Blackgram	295	740	432	534	533	701	945	830	450	450
Horsegram			484	310	532	382	695	702	425	450
Cowgram			291	778	237	797	393	398	500	425
Sugarcane		87629		90315		81395		75860		80125
Cotton	241		462	0	285		350		425	
Chillies	3069	3350	2777	2042	4001	1304	4736	2278	2250	2750
Tobacco	1678	1690	1512	1763	1631	1613	1655	1411	1250	1350
Onion	8482	26877	7572	22093	13148	3050	18216	8425	18216	8425

Source: Chief Planning Officer, YSR District, 2017

Table 1.5.2: Area, Production and Productivity of the Horticulture crops grown in the District:

Sl. No	Name of the Crop	Extent in Ha	Production (M.T)	Productivity in tones/Ha
I. Fruit crops				
1	Mango	23022	230220	10
2	Sweet Orange	9192	183840	20
3	Acid lime	2522	37830	15
4	Banana	8707	435350	50
5	Papaya	2563	192225	75
6	Sapota	345	6900	20
7	Guava	189	3780	20
8	Pomegranate	100	225	15
9	Ber	75	1125	15
10	Fresh fruits	3483	52245	15



	Total Fruit crops	50198	1143740	
II. Vegetables				
1	Tomato	3443	103290	30
2	Brinjal	1125	22500	20
3	Green Chillies	3630	54450	15
4	Bhendi	688	7568	11
5	Onion	5414	108280	20
6	Other Vegetables	388	3880	10
	Total Vegetables	14688	299968	
III. Spices				
1	Chillies	642	9630	15
2	Turmeric	7447	40959	5.5
3	Coriander	4997	7495	1.5
	Total Spices	13086	58084	
IV. Betel vine		507	375000	190.12 Lakhs leaves
			Leaves	
V. Flowers				
1	Crossandra	143	572	4
2	Tuberose	147	2205	10
3	Crysanthemum	626	11268	18
4	Jasmine	161	483	3
	Total Flower crops	1077	14528	
	Grand total (I to V)	79556	1516320	

Source: Chief Planning Officer, YSR District, 2017

Horticultural sector which attained some growth in the recent years encouraged by establishing new nurseries for producing quality planting material, establishment of new gardens, rejuvenation of the old and senile orchards, introducing new horticultural crops and multistory cropping systems, hybrid varieties of vegetables, loose flowers, provision of shade nets, plant protection equipment, horticultural tools, drip irrigation etc.,

Table 1.5.3: growth rates in different sectors during 2007-12 (in per cent)

S.No.	Sub-sector	2007-08	2008-09	2009-10	2010-11	2011-12	Average
1	Agriculture	6.2	6.4	6.6	6.5	6.3	6.4
2	Horticulture	7.0	7.1	7.2	7.1	7.0	7.1
3	Sericulture	9.0	9.2	9.4	9.2	9.0	9.2
4	Animal husbandry	7.5	7.7	7.9	7.8	7.6	7.7
5	Fisheries	6.4	6.6	6.8	6.6	6.4	6.6
Total agriculture sector		6.8	7.0	7.2	7.0	6.8	7.0

1.6. Adaptation for Managing Risks of Climate Change: Micro irrigation an



efficient solution

There is need for long-term strategies and planning from adapting to the increased stress on water resources. In outdoor horticulture, climate change will directly impact on irrigation water use by affecting plant physiology, soil water balances, cropping patterns, the areas irrigated, the methods used and the volumes of water demanded for irrigation. Growers are also likely to increase irrigation efficiency to get "more crop per drop". The first experimental system of drip irrigation was established in 1959 by Netafim, an irrigation company by Blass in partnership with Kibbutz Hatzerin in Israel. They developed and patented the first practical surface drip irrigation emitter. In the United States, the first drip tape, called *Dew Hose*, was developed by Richard Chapin in 1960. In India, the Jain irrigation company heralded drip (micro) irrigation in 1989 developing 'Integrated System Approach'.

In Kadapa there are three revenue divisions, namely Kadapa, Rajampet and Jammalamadugu. In Kadapa division, 56.7 percent area irrigated by Sprinklers (58.3 per cent) and the drip cover by 21.5 per cent of area irrigated. In the case of Rajampet, most of the area irrigated by Drip i.e. 42.3 per cent. Jammalamadu division, 34.04 percent area is covered by 36.0 per cent of drip. Therefore, new irrigation techniques should be good alternative for water-starved regions. One of the innovative strategies is deficit irrigation by drip system for dry areas (Aacar et al 2006: Geerts and Raes, 2009). Conspicuously, the micro irrigation is economically benefit for Dry Land Crops in YSR District.

Table 1.6.1 Revenue Division wise Area Irrigated by Sprinklers and Drip Irrigation 2015-16

S.No.	Division	No.of Sprinklers working	Area Irrigated (in Hect.)	No.of Drip working	Area Irrigated (in Hect.)
1	Kadapa Division	2267 (58.3)	2727.91 (56.7)	1784 (21.5)	1724.29 (20.83)
2	Rajampet Division	279 (7.18)	327.24 (6.8)	3502 (42.3)	3736.34 (45.14)
3	Jammalamadugu Division	1339 (34.4)	1750.99 (36.43)	2976 (36.0)	2815.18 (34.04)
TOTAL		3885 (100)	4806.14 (100)	8262 (100)	8275.81 (100)

Source: District Handbook, 2015-16

Figures insides the parentheses are percentages

Conclusion:

The climate of India may be broadly described as tropical monsoon type. There are two seasonal winds are affected by India's climate: the North-East monsoon (known as the winter monsoon), and the South-West monsoon (summer monsoon). Mostly, the South-West monsoon brings rainfall during a year in the country. Changes in variability of monsoon rainfall in future will have impact on various facets of human activities. Interannual variability of the monsoon, leads occasionally to large scale drought and flood situations. Any increase in variability is indicates a frequent occurrence of large scale seasonal anomalies and associated drought situations. In view of this, the present paper here to examine the likely changes in the variance of monsoon rainfall in Kadapa YSR District of Andhra Pradesh. The district is one of the drought prone districts of Rayalaseema region. Only



Anantapur fares poorer than Kadapa district in terms of rainfall. The rainfall is variable between locations within the same season. It is also quite variable between seasons, with a coefficient of variation of about 46 per cent. The last five years, two were sub-normal, one was normal and the remaining two were above normal in terms of rainfall. With low and uncertain rainfall, the performance of rain fed crops is rather poor, particularly in the red soil areas. Even the rivers and other irrigation sources in the district are rainfed. In a severe water stress, both the rain fed as well as irrigated crops do suffer. More than 50 per cent of the soils are light in nature and more than two-third of the cropped area is rain fed. Kadapa YSR District suffers from drought quite frequently. Recurring drought is the most common problem in the district. In this crisis, farmers are chosen an alternative irrigation techniques to sustain the Horticultural crops. *To achieve the concept of "More crop per Drop "Micro irrigation is to be taken up particularly in the districts of Rayalaseema, which are most drought prone and backward areas. rant var*

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Electricity Consumption In Agriculture And Gsdp Of Maharashtra

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Abstract

Energy consumption is a vital component in agricultural growth either directly or as a complement to other factors of production. Moreover, explaining the relationship between agricultural energy consumption and agricultural growth can play a significant role in setting and adjustment of policies on energy sector. To fulfil the objective of this paper the data were collected from economic survey of Maharashtra, for the years 2009-2019. The data were analysed for Pearson's Correlation test between agricultural electricity consumption and GSDP of Maharashtra. The analytic result revealed that there is presence of the correlation between two variables at 1 per cent level of significance. The study also shows that out of the different sources of electricity generation thermal source contribute maximum. The major leading electricity consumptions are Industry, Agriculture and Domestic sectors. The trend of per capita of overall and agriculture consumption as well as GSDP of agricultural and allied sectors is increasing over the years.

Keywords: Maharashtra, agricultural electricity consumption, GSDP, Correlation

Introduction

Electricity power is a critical components as well as determinant of a nation's development. It is the most widely used industry, agriculture, domestic and commercial sector. It has become an inevitable necessity influencing every aspect of life and forming an increasing proposition of consumption, particularly in developing countries. It is the most economical and therefore essential form of energy for industrial and agriculture growth.

The economics of energy-use in agriculture has received less attention in most developing countries in comparison to the developed countries, particularly USA, Canada and Europe (Pachauri, 1998). According to Goelen et al. 2009, in India the total demand of electricity in 2006-07 was 526 TWH and in agriculture 99 TWH, but the projected demand in 2050 is 3229 TWH and 174 TWH respectively. In India, research work relating to energy-use for agricultural activities is largely confined to study on input-output relationship in the production. The structure of energy consumption in the Indian agriculture has changed with a marked shift from animal and human power to tractors, electricity and diesel.

The consumption pattern of both direct and indirect energy inputs has revealed that the energy consumption per hectare of net as well as gross cropped area, has increased over time and therefore, the output per unit of energy use has declined (Jha *et al.*, 2012). This shows that the Indian agriculture has become more energy-intensive and implies that energy demand in agriculture will increase sharply in the years to come in order to achieve targeted growth of 4 per cent. But, this aspect has been less studied by the economists. However, several research reports have been done so far for individual states, which indicate that high-productivity states like Punjab and Haryana use energy more than seven- times as compared to the low-productivity states like Odisha (4GJ/ha).



Therefore, the purpose of this paper is to extend the empirical literature by examining long-run co-movement and the Pearson correlation between electricity consumption (EC henceforth) for agricultural purposes and real Gross State Domestic Product from agriculture and allied sectors (GSDP henceforth) for Maharashtra state of India from 2009-10 to 2019-20.

Methodology

This study used annual time series data for Maharashtra of India. The Annual data for real GSDP from agriculture and allied sectors (2010-11=100), electricity consumption for agricultural purposes were obtained from Economic survey of Maharashtra, Directorate of Economics and Statistics, Planning Department, Government of Maharashtra, Mumbai.

The unit for GSDP is expressed in Crores and Electricity consumption is expressed in Million Units (MU). The empirical period depends on the availability of data, but overall, the data cover the 2009-10 to 2019-20 periods. All variables are in natural logarithms to investigate the linkage between GSDP and electricity consumption. The data were analysed statistically and the Pearson correlation matrix between GSDP and Electricity consumption were calculated by "IBM SPSS v.20" statistics

Analytical Tools

Pearson correlation between agricultural growth (GSDP) and Electricity consumption

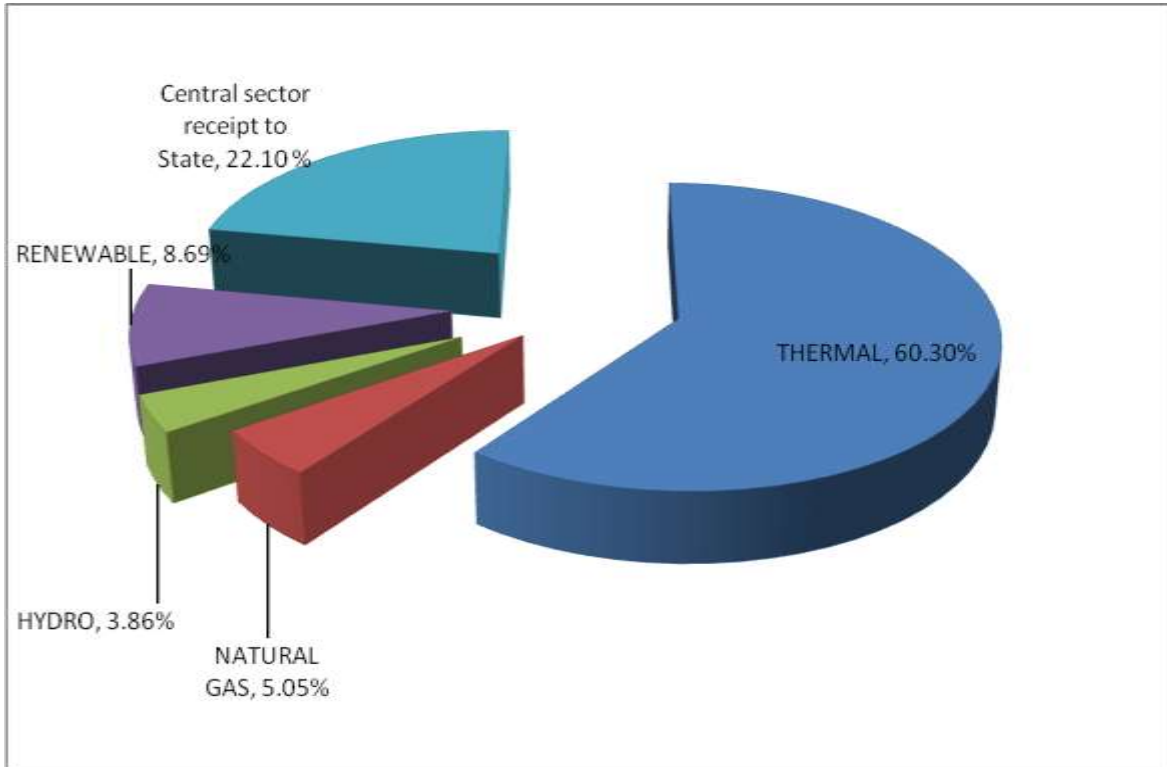
Pearson's correlation tests were used to identify any patterns seen in the data. These tests provide a greater understanding of how the variables are related. As social and economic growth could also be affected by various factors, other than EC, causality tests were not used at this stage.

To establish whether the correlation found was statistically significant, the p-value for each correlation coefficient was also calculated. The null hypothesis H_0 for this test was set at $r=0$, and the alternate hypothesis H_1 , was $r=1$. The p-value was dependent on two factors, the strength of the correlation of the existing data, as well as the sample size of the data set. From literature, it was established that the dataset may be limited, and a significance level of 10% was chosen for this study. Thus, a p-value <0.1 will ensure that null hypothesis is not rejected and that the correlation is statistically significant.

Result and Discussion

Sources of electricity generation in MH

The different sources of electricity generation in Maharashtra are thermal, Central sector receipt to State, renewable, hydro and natural energy. The total electricity generated (including renewable energy) in the State was 1,27,059 Million Units (MU) during 2018-19 and during 2017-18 it was 1,20,160 MU and electricity received from central sector during 2018-19 was 34,238 MU and it was 33,003 MU during 2017-18. The share of private, public and public-private partnership in total electricity generation during 2018-19 was 55.0 per cent. The percentage share of each sector from the year 2009-2019 is shown in Fig.1



Sector wise electricity consumption in MH

The major sector of consumption of electricity of Maharashtra are industrial, Agricultural and domestic sectors (fig. 2) Aggregate consumption of electricity in the State during 2018-19 was 1,31,866 MU, as against 1,23,938 MU in 2017-18. The consumption of electricity was highest (35.8 per cent) by industrial sector followed by agriculture (25.6 per cent) and domestic sector (22.1 per cent) in the State.

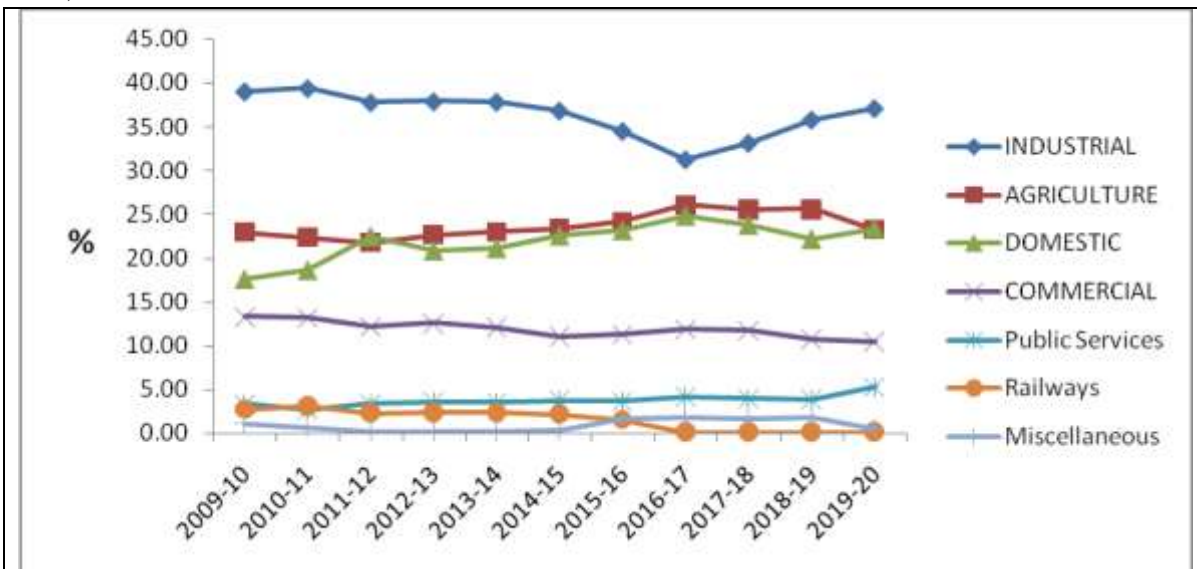


Fig.2 Sector wise electricity consumption in MH

Per capita ultimate consumption of electricity of Maharashtra and GSDP of Agriculture and allied sectors.

The overall per capita consumption of electricity during 2019-20 of Maharashtra was 1021.5 Units and the agricultural per capita consumption of Maharashtra was 237.6units (Fig. 3). The GSDP of Agricultural and Allied sectors are given in figure 4.

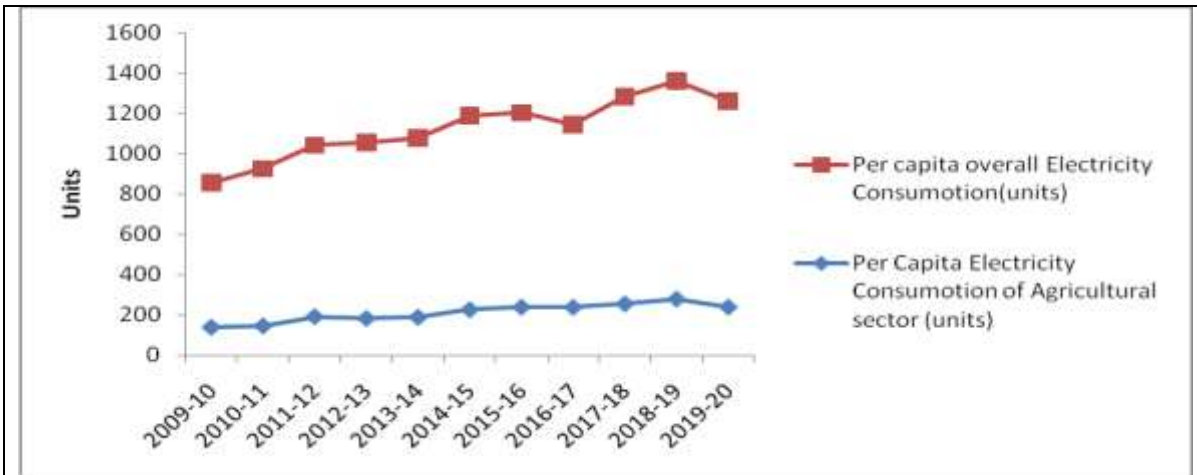


Fig. 3 Per capita ultimate consumption of electricity of Maharashtra

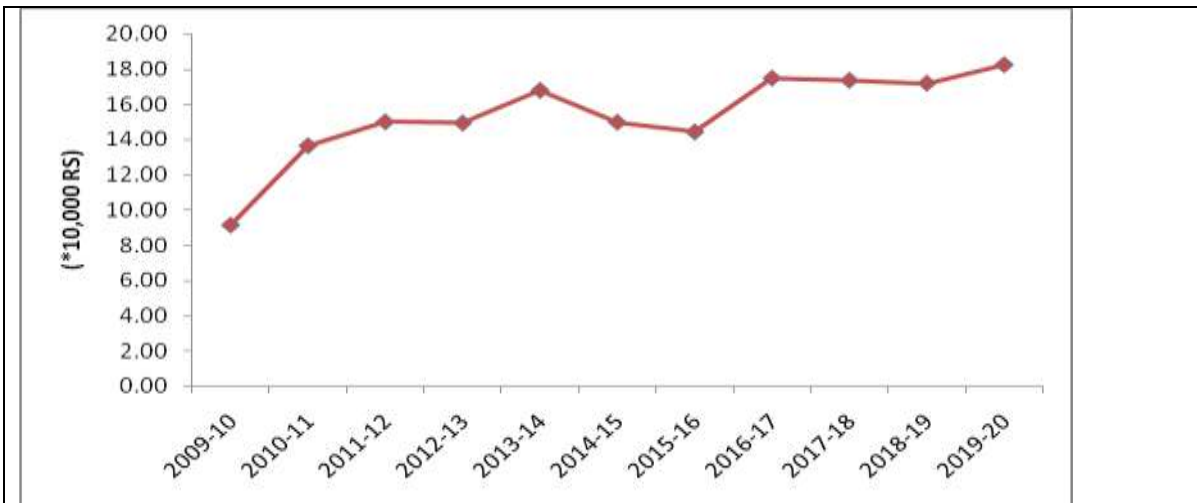


Fig. 4 GSDP of Agriculture and allied sectors.

Pearson correlation between agricultural growth (GSDP) and Electricity consumption

Pearson's correlation tests were used to identify any patterns seen in the data. These tests provide a greater understanding of how the variables are related. As social and economic growth could also be affected by various factors, other than EC, causality tests were not used at this stage.

From table No.1, it is revealed that there is presence of the correlation between two variables at 0.01 per cent level of significance confirms that denotes that acceptance of the hypothesis at the 0.01 level.

Table No. 1 Pearson correlation between agricultural growth (GSDP) and Electricity consumption (EC)

		AGRI. GSDP	AGRI. ELECTRICITY CONSUMPTION
AGRI. GSDP	Pearson Correlation	1	0.753**
	Sig.(2-tailed)		0.007
AGRI. ELECTRICITY CONSUMPTION	Pearson Correlation	0.753**	1
	Sig.(2-tailed)	0.007	



** Correlation is significant at the 1% ** level (2-tailed).

CONCLUSION

This study examined the casual relationship between agricultural energy consumption and agricultural growth in Maharashtra using annual data covering the period from 2009-10 to 2019. The findings of this study are out of the different sources of electricity generation thermal source contribute maximum. The major leading electricity consumptions are Industry, Agriculture and Domestic sectors. The trend of per capita of overall and agriculture consumption as well as GSDP of agricultural and allied sectors is increasing over the years. The analytic result revealed that there is presence of the correlation between two variables at 1 per cent level of significance.

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Abstract:

Agriculture has a significant contribution to the Indian Economy. About 54.6 percent of the total workforce in the country is still engaged in agricultural and allied sector activities (census 2011). World bank classified India as a lower middle income country. Most developing countries have a high share of agriculture in their Gross domestic product (GDP). In the 2020-21 share of agriculture to the GDP reached 20 (19.9) percent for the first time in 17 years (Economic Survey 2020-21). Agriculture is the only bright spot in GDP performance during 2020-21. Although Indian GDP is continuously increasing, the share of agriculture to the GDP is decreasing. This paper tries to understand the contribution of the agriculture sector to the GDP in the last three decades.

Keywords: Agriculture, farmer, GDP**Introduction:**

Agriculture plays a pivotal role in India's economy. The agriculture sector of India has occupied almost 43 percent of India's geographical region. The geographical position of our country has been very suitable for agricultural activities. The existence of physical factors in India is very helpful to cultivation. It is the main source for almost two-thirds of the Indian population. So from long past the Indians have witnessed agriculture as a largest provider and their basic means of livelihood in rural India. It provides food for more than one Billion people. According to the 2011 census about 54.6 percent of the total workforce in the country is still engaged in agricultural and allied sector activities.

Agriculture is the only bright spot in GDP performance during 2020-21. In the 2020-21 share of agriculture to the GDP reached 20 (19.9) percent from 17.8 per cent in 2019-20 and has positive impact on country's economy for the first time in the last 17 years, according to the Economic Survey 2020-2021.

The total food grain production for the year 2019-20 is estimated at record high 296.65 million tonnes as compared to 285.5 million tonnes achieved during 2018-19 (Economic Survey 2020-21). India continues to be the largest milk producer in the world and ranks third and fifth position respectively in egg and meat production.

India has constantly remained a net exporter of agricultural products since economic reforms began in 1991. According to the WTO's World Trade Statistical Review 2020, the country's share in global agricultural exports increased from 1.1% in 2000 to 2.2% in 2017, valued at \$39 billion, but fell to 2.1% in 2019, valued at \$37 billion. India's total agro based export basket accounts for a little over 2.5 percent of world agro based trade. Linking agricultural production to export markets is viewed by many as the simplest means to extend farmers' markets and enhance income opportunities. The top five export destinations of India are USA, Saudi Arabia, Iran, Nepal and Bangladesh.

Agriculture provides food security to the nation and also reduces poverty by creating employment opportunities and providing income mainly to the rural people. Government gets revenue from the export of agricultural products. Many Industries like cotton and jute industry etc depend on agriculture for the raw materials.



Moreover, the relative importance of agricultural export within the economy has also seen a declining trend . The primary reason for the failure of agricultural exports to translate growth in farm income is its inability to diversify its agricultural export market from primary agricultural commodities to highly valued processed food. Realizing the importance of agricultural export, the Government of India introduced a ‘comprehensive Agriculture Export Policy’ to make India prospective and a global power.

Agricultural marketing was the major problem faced by the agricultural sector . Under the Agricultural Produce Market Produce (APMC) act farmers need to sell their produce in their designated market yards (mandis) only . This led to the monopoly in the agricultural markets which prevented private entities from entering into the market thereby restricting competition. Lack of easy credit , lack of latest technology , lack of irrigation facilities , lack of transportation facilities ,lack of crop insurance , lack of knowledge of best practices ,lack of godowns and cold storages and excessive usage of fertilizers were the problems faced by the agriculture sector . Due to small land holdings the produce obtained from that land is low .

To solve the above problems and also for the comprehensive development of agriculture, the government took many initiatives . APMC act was amended from time to time to improve agricultural marketing . e-NAM (National Agricultural Market) was launched to integrate APMC’s in the country to remove information asymmetry . Soil health card scheme launched in 2015 to guide the farmers regarding soil quality of their land and recommend the nutrients and fertilizers needed to improve the productivity of their land . Pradhan mantri krishi sinchayi yojana launched in the year 2015 to extend the coverage of irrigation . Paramparagat krishi vikas yojana launched in 2015 to boost up organic farming in India .Pradhan mantri Fasal Bima Yojana launched in 2016 to protect the farmers through insurance cover in case of damage to their crops due to natural calamities , diseases and also extended to localized calamities and post harvest losses such as flooding , cloudburst and natural fire .

Enhancements in farming efficiency make social and monetary far reaching influences. Aadhaar seeding has helped in speedy claim settlement directly into the farmer accounts. So States have been provided flexibility to rationalize that the adequate benefits can be availed by farmers. Indian agrarian sector actually requires very innovative ideas for uplifting of this sector. In 2020, the President gave his assent to three reforms related to the agriculture sector. The newly introduced farm laws herald a brand new era of market freedom which may go an extended way within the improvement of farmer welfare in India.

According to Economic survey 2021 the new farm laws as a “remedy” and “not a disease ” in a message to the farmer community opposing the laws. The three farm laws (The Farmers’ Produce Trade and Commerce (Promotion and Facilitation) Act, 2020, The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act, 2020 and The Essential Commodities (Amendment) Act, 2020) are brought by the government to remove inefficiencies in the market . These farm laws will benefit small and marginal farmers who form around 85 percent of the total number of farmers.

Data Analysis :**Gdp Data From 1990 To 2019 :**

Time	Series Name	India (IND)
1990	GDP (constant 2010 US\$)	507.6
2000	GDP (constant 2010 US\$)	873.4
2011	GDP (constant 2010 US\$)	1763.4
2012	GDP (constant 2010 US\$)	1859.7
2013	GDP (constant 2010 US\$)	1978.4
2014	GDP (constant 2010 US\$)	2125



2015	GDP (constant 2010 US\$)	2294.9
2016	GDP (constant 2010 US\$)	2484.4
2017	GDP (constant 2010 US\$)	2659.4
2018	GDP (constant 2010 US\$)	2822.2
2019	GDP (constant 2010 US\$)	2940.2
Data are in Billions		
Source : World Bank Data		

In 1990 India's GDP was 507.6 billion dollars calculated at constant 2010 US dollar prices . In the first decade of the 21st century Indian GDP doubled from 873.4 billion dollars in 2000 to 1763.4 billion dollars in 2011 measured at constant 2010 US dollar prices . This increase in GDP due to new economic reforms initiated in the 1990s . After three decades in 2019 India's GDP reached 2940.2 billion dollars .

Time	Series Name	India
1990	Agriculture, forestry, and fishing, value added (% of GDP)	26.9
2000	Agriculture, forestry, and fishing, value added (% of GDP)	21.61
2011	Agriculture, forestry, and fishing, value added (% of GDP)	17.19
2012	Agriculture, forestry, and fishing, value added (% of GDP)	16.85
2013	Agriculture, forestry, and fishing, value added (% of GDP)	17.15
2014	Agriculture, forestry, and fishing, value added (% of GDP)	16.79
2015	Agriculture, forestry, and fishing, value added (% of GDP)	16.17
2016	Agriculture, forestry, and fishing, value added (% of GDP)	16.36
2017	Agriculture, forestry, and fishing, value added (% of GDP)	16.36
2018	Agriculture, forestry, and fishing, value added (% of GDP)	15.41
2019	Agriculture, forestry, and fishing, value added (% of GDP)	16.02
Source :World Bank Data		

In the year 1990 the contribution of agriculture and its allied activities to the GDP was 26.9 percent. After two decades in 2011 its share to GDP was 17.19 percent which is around 36 percent decrease . Share of agriculture in Indian GDP has been showing a fluctuating trend from 17.19 percent in 2011 to 16.02 percent in 2019 ,with a dip to 15.41 percent in 2018 . India's total agricultural production increased in these years . In absolute terms , agricultural production and its contribution to the GDP has increased . It is the relative contribution to GDP that decreased .

Conclusion :

The ongoing health crisis around COVID19 has affected all walks of life. Protecting the lives of individuals affected by the disease also as frontline health responders are the priority of countries . Governments have swung into action, since the Corona virus attack created an unprecedented situation. During these challenging times, how does Indian agriculture answer the crisis and the way government measures affect 140 million farm households across the country and thereafter impact the economy of a really important country within the developing world. Achievement of the \$5-trillion economy goal by India might be pushed by a few years from the initial deadline of 2024-25, because of the pandemic-induced recession during 2020-21. Only a V-shaped recovery during 2021-22. A focus on reforms in agri-marketing and agri-exports, along with the promotion of high-tech, digital and precision agriculture, is a suitable recipe for changing the agricultural sector, while doubling farmers' income.



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**IMPACT OF GLOBALIZATION ON INDIAN AGRICULTURE****Prity Kale –Patil**

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• Introduction

Globalization as a process is represented by doing away of controls. Removed of protection barriers in trade, reduction in import and export tariffs and paying way for force trade. The focus of all process thought had been on the improvement of the Indian Manufacturing and tertiary sectors to make them internationally competitive and enhance technological capabilities. It is called New Economics Policy (NEP) started in the year 1991. But there was no specific policy that was devised to strengthen either agriculture production or create employments opportunities in the rural areas. There was no specific programmer that was meant for improving technological capabilities in the agriculture sector at all. Indian agriculture which has been neglected for dictate after the green revolution (GR) of the mid-1970s, did not receive boost even in the current globalization context. Hence this paper examines the impact of globalization on Indian agriculture and also highlights the recent trend in export and import of agricultural commodities.

• Impact of Globalization

The implication of globalization for a national economy are many. Globalization has intensified interdependence and competition between economic in the world market. These economic reforms have yield the following significant benefits: Globalization in India had a favorable impact on the overall growth rate of the economy. This is major improvement given that India's growth rate in the 1970s was very low at 3% and GDP growth in countries like Brazil, Indonesia ,Korea and Mexico was more than twice that of India. The pickup in GDP growth has helped to improve India's global position Consequently India's position in the global economy has improved from the 8th position in 1991 to the 4th place in 2001: when GDP is educated on a purchasing power parity basis .During 1991-1992 the first year of Rao's reforms program the Indian economy grew by 0.9% only. However the Gross Domestic Product (GDP) growth accelerated to 5.3% in 1992-93. And 6.2% in 1993-94. A growth rate of above 8% was an achievement by the Indian economy during the year 2003-2004. India's GDP growth rate can be seen from the following graph since the independence of India- a growing economy.

Agriculture is still the background of Indian economy with nearly 56 percent of work force depending on agriculture for its livelihood. It is contributing to ¼ of total GDP. It is the sector which is the provider of basic food security to the teeming millions and is a sizable contributor to the foreign trade. Despite its prominence attached to the Indian economy, the agriculture sector has been grossly neglected and exploited over the times. The hostile British policies in pre-Independence era have exploited the agriculture with more burdens and less incentives to it. At the stroke of the Independence, the growth rates were so tardy that the country witnessed its worst ever food crises.

In the Independent era policy formulation centered on the planning process, have given initial fillips to the agriculture sector with strong budgetary support. The period of Green Revolution opened new challengers to the agriculture sector and to the population dependent on it. The Revolution has provided enough impetus to the growth of agriculture in India, but with backwardness in irrigation, rural electrocution and other basic inputs it could not provide anticipated spread effects. The capitalist mode of cultivation emerged on to the forefront with the application of HYV seeds, fertilizers and pesticides. It has created new spectrum of agrarian relations, where inter-regional and



inter-personal inequalities have had increased and these inequalities divided and sub-divided the rural socio-economic setup.

During the different phases of Green Revaluation, the small and marginal farmers, though benefited to some extent were gradually marginalized in the spurt of competition and market driven policy implications. The globalization may not be new to the Indian economy, but it has entered during 1991 with strong motives guided by uni-polar world dictate with sole prescription of USA. The liberalization process has affected the agricultural sector more adversely than the other sectors. The gradual reduction of subsidies, Liberalization of import duties and changed priorities of central and state government in the new conditions has rendered the farming community in to helpless situation.

The individual farmers are invariably forced to go for personal investment on irrigation, electricity, purchase of pumps sets and other major inputs including seed, fertilizers and pesticides. As the agricultural sector is not in a position to provide adequate gainful employment, the rural workforce is migrating to semi-urban and urban centers in search of employment. This sort of trends has become a countrywide phenomenon and particularly in the backward dried region. It is causing greater concern to the farming community in peak periods of agricultural operations. The agricultural marketing in India is highly centered on number of middle men.

- **Impact of Globalization Indian Agriculture Sector.**

Agriculture sector is the mainstay of the rural Indian economy around which socio-economic privileges and deprivation revolve and any change in its structure is likely to have a corresponding impact on the existing pattern of social equality. No strategy of economic reform can succeed without sustained and broad based agriculture development, which is critical for

- 1) Raising living standers
- 2) Assuring food security
- 3) Making substantial contribution to the national economic growth

Studies also show that the economic liberalization and reforms process have impacted on agriculture and rural sectors very much.

According to Bhalla, 93 of the three sectors of economy in India, the tertiary sector has diversified the fastest, the secondary sector the second fastest, while the primary sector, taken as whole, has scarcely diversified at all. Since agriculture contains to be a tradable sector, this economic liberalization and reform policy has far reaching effects on

- a. Agriculture exports and imports
- b. Investment in new technologies and on rural infrastructure
- c. Patterns of agricultural growth
- d. Agriculture income and employment
- e. Agricultural prices and
- f. Food security (Bhalla 93).

Reduction in commercial Bank credit to agriculture in live of this reforms process and recommendations or Khusrao Committee and Narosingham Committee. Might lead to a fall in farm investment and impaired agricultural growth (Panda 96). Liberalization of agricultural and open market operations will enhance completion in “resource use” and “marketing of agricultural production which will force the small and marginal farmers (who constitute 76.3% of total farmers) to restart to ‘distress sale ‘and seek for off farm employment for supplementing income.

- **Indian Agriculture today**

Agriculture employs 60% of the Indian population today, yet it contributes only 20.6% to the GDP. (Isaac, 2005). Agricultural production fell by 12.6% in 2003. One of the sharpest drops in independent India’s history, Agricultural growth slowed from 4.96% in 1991 to 2.6% in 1997-98 and to 1.1% in 2002-03. (Agricultural statics at a glance, 2006). This slowdown in



agricultural is in contrast to the 6% growth rate of the Indian Economy for almost the whole of the past decade. Farmer suicide were 12% of the suicide in the country in 2000. The highest ever in independent India's history (Unofficial estimates put them as high as 100,000 across the country, while government estimate are much lower at 25000. This is largely because only those who hold the title of land in their names are considered farmers and this ignores women farmers who rarely hold land little's, and other family members who run the farms . (Sainath P.) Agricultural wages even today are 1.5-2.0 a day. Some of the lowest in the world. (Sainath,2005) An NSSO2 survey in 2005 found that 66% of all farm households own less than one hector of land. It also found that 48.6% of all farmer households are in debt.

The same year, are part by the commission of farmers welfare in Maharashtra concluded that agriculture in the state was an advanced stage of crisis: the most extreme manifestation of which was the rise in suicide among farmers.

- **The crisis facing Indian Agriculture**

The biggest problem Indian agriculture faces today and the number one cause of farmer suicide is debt. Forcing farmers into a debt trap are soaring input costs, the plummeting price of produce and a lack of proper credits facilities which make farmers turn to private money lenders who charge exorbitant rates of interest. I will examine each one of their 3 causes which led to the current crisis in Maharashtra, Kerla, and Andhra Pradesh. And analyze the role that liberalization policies have played.

- **Liberalization and Growth.**

According to the center for Economic and policy research, which studies impact of liberalization reforms and the developing world, key economic and social indicators such as increase in life expectation infant or child mortality, education and literacy levels slowed down in the 20 years between 1980 or 2000 when liberalization policies were implemented, compared to the 20 years leading to 1980.

Following the suicides in 2000, the World Bank and Britain's DEID abandoned power reforms in Maharashtra four years before schedule. It admitted that it had substantially underestimated. That it had substantially underestimated. The complexity of the process and that there must be increased consultation with the formers to get their acceptance of any further reform.

The economic strategy of the past decade at both central government and state government levels has systematically reduced the protection afforded to framers and exposed them to market volatility and private profiteering without adequate regulation. Has reduced critical forms of public expenditure, has destroyed important public institutions. And has not adequately generated other non-agricultural economic activities, a report and suicides in Kerala similarly held the liberalization policies of the government responsible. (Mohankumar or sharma, 2006).

- **Conclusion.**

However, this is not to say that privatization. Liberalization and globalization are per say had, or inherently inimical to an economy. It is the 'one size fits all' brand of liberalization adopted by the IMF and the World Bank which forces countries to privatize. Liberalize and globalize without exception which has failed. Without taking into account the state of an economy, and in this care, the state and nature of the agricultural sector in India the IMF and the World Bank, with the cooperation of the Indian government, embarked a mismatched reforms, which have caused misery and despair among millions of Indian farmers. Driving large numbers of them to suicide.

Remember that India was as the brink of a financial crisis in 1999 when it applied for the IMF loan and accepted its conditions perhaps the course of economic reform in India would have taken a very different course if there was no urgent need to borrow from the IMF. The start to this process may have already occurred.



Recognizing the failure of its liberalization policies, the Blair government of Britain announced in 2004 that it will no longer make liberalization of privatization conditions of aid. The lesson of recent experience is that a country most carefully choose a combination of policies that best enables it to take the opportunity – while avoiding the pitfalls.

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FARMER SUICIDE CAUSES AND SOLUTION

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The Indian government does not have a fixed definition for a 'farmer'. Various government estimates (Census, Agricultural Census, National Sample Survey assessments, Periodic Labor Force Surveys) give a different number of farmers in the country ranging from 37 million to 118 million as per the different definitions. Some definitions take in to account the number of holdings as compared to the number of farmers. Other definitions take into account possession of land, while others try to delink land ownership from the definition of a farmer. Other terms also used include 'cultivator'.

India's National Policy for Farmers 2007 defines farmer as: For the purpose of this Policy, the term "FARMER" will refer to a person actively engaged in the economic and/or livelihood activity of growing crops and producing other primary agricultural commodities and will include all agricultural operational holders, cultivators, agricultural laborers, sharecroppers, tenants, poultry and livestock rearers, fishers, beekeepers, gardeners, pastoralists, non-corporate planters and planting laborers, as well as persons engaged in various farming related occupations such as sericulture, sericulture, and agro-forestry. The term will also include tribal families / persons engaged in shifting cultivation and in the collection, use and sale of timber and non-timber forest produce.

As per the 2014 FAO world agriculture statistics India is the world's largest producer of many fresh fruits like banana, mango, guava, papaya, lemon and vegetables like chickpea, okra and milk, major spices like chili pepper, ginger, fibrous crops such as jute, staples such as millets and castor oil seed. India is the second largest producer of wheat and rice, the world's major food staples.

One report from 2008 claimed that India's population is growing faster than its ability to produce rice and wheat. While other recent studies claim that India can easily feed its growing population, plus produce wheat and rice for global exports, if it can reduce food staple spoilage/wastage, improve its infrastructure and raise its farm productivity like those achieved by other developing countries such as Brazil and China.

In fiscal year ending June 2011, with a normal monsoon season, Indian agriculture accomplished an all-time record production of 85.9 million tons of wheat, a 6.4% increase from a year earlier. Rice output in India hit a new record at 95.3 million tones, a 7% increase from the year earlier. Lentils and many other food staples production also increased year over year. Indian farmers thus produced about 71 kilograms of wheat and 80 kilograms of rice for every member of Indian population in 2011. The per capita supply of rice every year in India is now higher than the per capita consumption of rice every year in Japan.

India exported \$39 billion worth of agricultural products in 2013, making it the seventh largest agricultural exporter worldwide, and the sixth largest net exporter. This represents explosive growth, as in 2004 net exports were about \$5 billion. India is the fastest growing exporter of agricultural products over a 10-year period, its \$39 billion of net export is more than double the combined exports of the European Union (EU-28). It has become one of the world's largest suppliers of rice, cotton, sugar and wheat. India exported around 2 million metric tones of wheat and 2.1 million metric tons of rice in 2011 to Africa, Nepal, Bangladesh and other regions around the world.



Aquaculture and catch fishery is amongst the fastest growing industries in India. Between 1990 and 2010, the Indian fish capture harvest doubled, while aquaculture harvest tripled. In 2008, India was the world's sixth largest producer of marine and freshwater capture fisheries and the second largest aquaculture farmed fish producer. India exported 600,000 metric tones of fish products to nearly half of the world's countries. Though the available nutritional standard is 100% of the requirement, India lags far behind in terms of quality protein intake at 20% which is to be tackled by making available protein rich food products such as eggs, meat, fish, chicken etc. at affordable prices

India has shown a steady average nationwide annual increase in the kilograms produced per hectare for some agricultural items, over the last 60 years. These gains have come mainly from India's green revolution, improving road and power generation infrastructure, knowledge of gains and reforms. Despite these recent accomplishments, agriculture has the potential for major productivity and total output gains, because crop yields in India are still just 30% to 60% of the best sustainable crop yields achievable in the farms of developed and other developing countries. Additionally, post harvest losses due to poor infrastructure and unorganized retail, caused India to experience some of the highest food losses in the world.

India is classified as an agrarian country, which means that around 70% of the people residing in the nation are directly or indirectly dependent on agriculture for their survival. Most of the country's rural areas support a very self-employed approach towards their livelihood; this essentially means that the Indian rural sector depends on their own farmlands for their survival. Hence, farmer suicide issues become very essential to discuss as they directly influence the nation's sentiment towards the topics. The Central Government has had a troubled time dealing with the issues and they have rolled out many policies but they haven't had a significant effect. Since the year 2013, there have been over 12000 suicides which reported every year, these numbers seem very worrying. All in all, farmer suicides account for approximately 10% of all the suicides in India. There is no denying that the menace of farmer's suicides exists and runs counter to the aspirations of reaping benefits of our demographic dividend.

Farmer's Suicides

There are seven states in India which account for approximately 87.5% of total suicides in the farming sector in the country. The major states which account for these suicides are Maharashtra, Karnataka, Telangana, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, and Tamil Nadu. There are different sects of farmers which are affected by the farmer's suicides and these sects need to be addressed by the government. They need to formulate certain laws which would help them counter such problems. The problem has started affecting the different areas of farmers too, as both the marginal as well as the small farmers are committing suicide. The different states have been affected by the problem, the worst hit has been to Maharashtra, no matter how many reforms have been introduced there, the pictures which these suicides have painted are very depressing as well as an eye opener for the general public as it has the Indian society directly affected. There is a need to understand there have been laws which have tried to have some positive impact on the solution, but it has become essential for the government to come up with different techniques which are suited better for the new age and problems. Punjab was the state which was very positively affected by the Green Revolution; however, in today time irony remains at its finest as there have are over 4500 farmer suicides in Punjab. Between the time period of 1995 and 2015, Mansa, a district in the state of Punjab has recorded 1334 farmer suicides alone, the numbers seem to increase substantially and comes out as a cry for help for the farmers of the nation.

The issues for the farmer's suicides fall in a spectrum of monsoon failure to personal issues, every different region has a different problem and it requires individual action as the problems posed are fairly unique. Some of the problems are as follows:

**The surge in input costs**

The farmer of the nation has been burdened with the inflated prices of the agricultural inputs, the overall increase in the cost of cultivation for wheat especially at present in three times the amount it was in 2005. The cost of chemicals and seeds has become expensive for the already in debt farmer, a farmer requires certain fertilizers, crop protection chemicals and other things for a proper harvest at the end of the agricultural year. The cost of the agricultural has also seen an increase in prices, items such as tractors, pumps, and other machinery are very essential for every farmer, however, it becomes quite a daunting task for the small and marginal farmers to buy this equipment. The labor costs have gotten costlier too in recent times and the MNREGA is responsible for the hike in labor prices.

Failed Loan Repayments

The NCRB claims that 2474 suicides of the 3000 farmer suicides in 2015, the farmers have been victims of unpaid loans from the local banks. One should not focus on the aspect of the local banks harassing the farmers; instead one should look to focus on the different policies which should be made in order to counter the bigger issue of loan repayments. There is a strong correlation between the farmer suicides as well as debt repayment as Maharashtra and Karnataka have recorded 1293 and 946 respectively have also seen the most amount of unsuccessful debt repayments by the farmers of the states.

Water Crisis

Maharashtra as well as Karnataka have been water deficient areas and also have one of the highest suicide rates of farmers. It is believed that without proper water manifestation techniques the farmers have been suffering a lot as they don't get provided with a sufficient amount of water for their crops. The failure to meet the production demands at the end of the harvest has always been the major reason behind the farmer suicides. The issue generally arises due to the continued failure of monsoons. Inter-state water disputes also have an important role to play as with bureaucracy in play, the farmer and common folk are bound to suffer.

Countering the Problem

The problem has certainly attracted the eyes of the government and has constantly come up as an issue in the recent elections, there were many manifestos in the 2019 Lok Sabha Elections which highlighted certain relief packages for the farmers. However, it becomes essential to understand the difference between feasible techniques in comparison to the manifestos; most of the "promises" proposed in the manifestos seem distant in the near future.

Some packages which were provided by the government were lauded by the policy analysts but did not prove of much importance to the farmers. For instance, one such program has been the 2006 Relief Package which was aimed at 31 districts of the four states of Andhra Pradesh, Maharashtra, Karnataka, and Kerala which have a relatively high number of farmer suicides. Another one was the Agricultural Debt Waiver and Debt Relief Scheme, 2008; it has said to have benefitted over 36 million farmers at a cost of Rs 65000 Crore. The main aim of the policy was at writing off part of the principal as well as the interest of the loans which the farmers had already collected. In 2013, the Government of India launched the Special Livestock Sector and Fisheries Package for the farmers which were in the same suicide-prone districts; the main aim of the package was to diversify the income sources for the farmers.

The state governments have also taken upon themselves to introduce many other new initiatives but it still remains an uphill task to initially put an end to these suicides and secondly actually improve the conditions set for the farmers in order to prevent such accidents in the future.

The Way Ahead

There are many other ways which could help the farmers of the nation to be a bit more stable in this time of crisis. Policies look to play a very important role in the solving of problems, there should be a proper exercising of power by the government over all the entities which are involved



directly or indirectly in the problem. Proper policies of integrated pest management to prevent pest damage needs to be an approach to start with, it should integrate biological, chemical, mechanical as well as the physical methodology that should be used to prevent crop damage. Vietnam's no spray early rule seems to be a good inspirational starting point, it essentially cut the pesticide requirement by 50% and India could definitely use a tactic like that. The fertilizer industries should also be kept in check as their costs need to be cut down, this can be done through internal funding as opposed to external borrowing and that should lower the input costs. Scientific and technological advancements should seek to help the farmers in need as they have to gather any resource which they can gather in this time of need. The government should focus on policies which would help import modern technological inputs which are provided by foreign entities on a subsidized fee. Subsidies should be routed towards capital generation and entrepreneurial Custom Hiring Centers (CHC) and the implementation of such steps should be ensured in the correct fashion. The Corporate Social Responsibilities (CSR) must be encouraged in the agricultural sector which has particularly towards capacity building and skill development techniques. There should be direct funding involved through the government to the farmers in order to solve their sorrows.

The community should come forward as a whole to counter such an issue as it is not merely a farmer's issue now but the issue of the whole nation. The awareness factor becomes very essential as it is very important to make the farmers understand that suicide isn't the solution but at this hour everyone needs to come together and present a united front. They should create model approaches towards the solutions which they want the farmers to follow and they should make them realize that we are all here for them and that even if one farmer commits suicide it is a serious problem.

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**FARMER SUICIDE: CAUSES AND SOLUTION****Vk Khobarkar**Assistant Professor, Deptt. of Agricultural Economics and Statistics,
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Abstract

The well-known problem of farmers' suicides is one of the vital concerns that need to be addressed by the Government. Considering the paramount importance of this issue, the NCRB, for the first time, has collected detailed data on farmers' suicides. Farmers include those who own and work on field (viz. cultivators) as well as those who employ or hire workers for field work/farming activities. This paper focused on the causes and solutions to curb the problem of farmers' suicide in Maharashtra and India. There is a wide array of factors that has led to the increasing spate of farmer suicides in India. The lands are not as productive as before, the markets are failing, the debts are piling up, and the pests cannot be kept at bay. More than an economic problem, this has now assumed political and humanitarian dimensions, especially since the past decade. To eradicate requires large public investment in irrigation and rural infrastructure, rejuvenation of the cooperative credit, marketing and processing system, strengthening of the agricultural extension services and sympathetic administration working closely with the farming community.

Keywords: Farmers Suicides, Causes, Solutions**Introduction**

India is a developing country and After China it is considered as one of the fastest developing nation of the world. Further, it is an agrarian country with around 48.9% of its people depending directly or indirectly upon agriculture. Despite a steady decline in its share to the gross Domestic Product (GDP) agriculture remains the largest economic sector in the country. Low and volatile growth rates under the sector and the recent escalation of an agrarian crisis in several parts of the country pose a threat not only to national food security but also to the economic wellbeing of the nation as a whole.

Nowadays the problem of farmers' suicides is one of the vital concerns that need to be addressed by the Government. Considering the paramount importance of this issue, the NCRB, for the first time, has collected detailed data on farmers' suicides. Farmers include those who own and work on field (viz. cultivators) as well as those who employ/hire workers for field work/farming activities. It excludes agricultural labourers. At least 10,281 persons involved in the farm sector ended their lives in 2019, accounting for 7.4 per cent of the total number of suicides in India which was 139,516, suggests the Accidental Deaths and Suicides in India report 2019 by the National Crime Records Bureau.

The 2019 figure is marginally lower to 2018 when 10,348 people took their lives. The story, however, changes when one looks at suicides committed by farmers / cultivators, which is 5,957 as against 5,763 in 2018 — a three per cent increase between 2019 and 2018. The top six states are



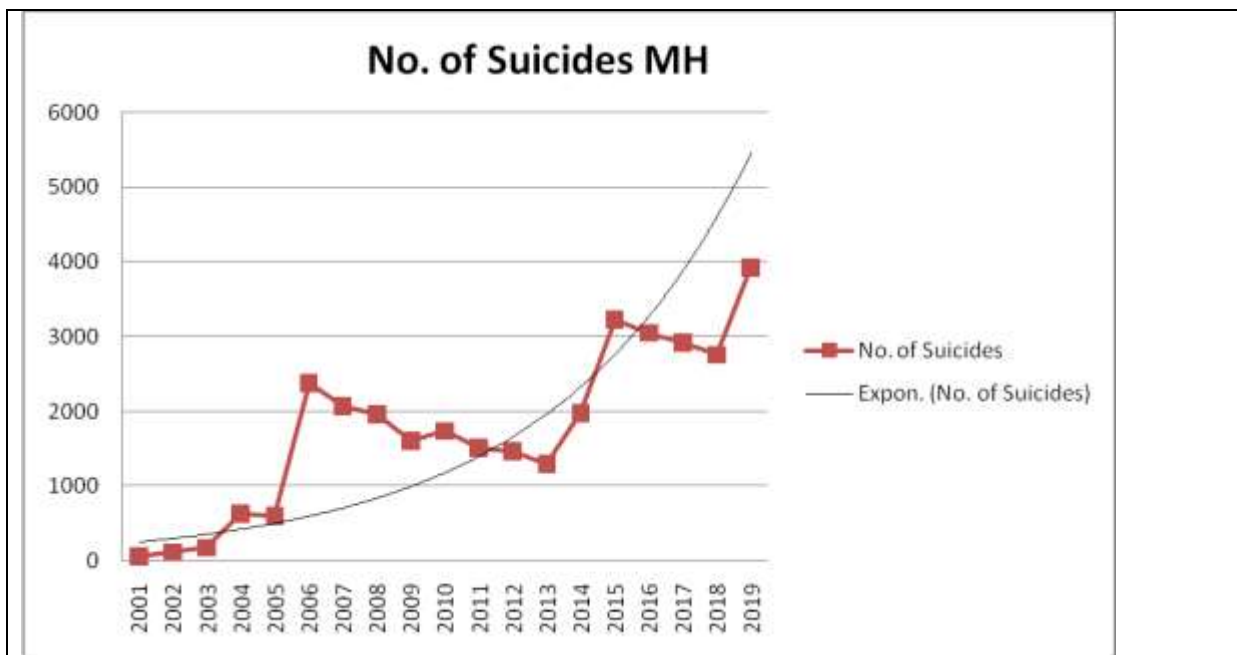
Maharashtra (3,927 suicides), Karnataka (1,992), Andhra Pradesh (1,029), Madhya Pradesh (541), Chhattisgarh (499) and Telangana (499) are account for 83 per cent of the deaths committed by persons involved in farm sector.

This paper focused on the causes and solutions to curb the problem of farmers' suicide in India.

Table No.1- **Farmers Suicides in the state of Maharashtra**

Sr. No	Year	No. of Suicides (Numbers)
1.	2001	62
2.	2002	122
3.	2003	180
4.	2004	640
5.	2005	609
6.	2006	2376
7.	2007	2076
8.	2008	1966
9.	2009	1605
10.	2010	1741
11.	2011	1518
12.	2012	1473
13.	2013	1296
14.	2014	1981
15.	2015	3228
16.	2016	3052
17.	2017	2917
18.	2018	2761
19.	2019	3927
Total		33530

Source: State Crime Records Bureau. Data and NCRB



**Fig 1- Farmers Suicides in the state of Maharashtra****Causes of Farmers Suicides in India:**

Analysis and interpretation of above data shows that the farmers' suicide in India for the above mentioned period considerably increased. According to the expert in the field of agriculture, farmers' suicides in India for the same period are worlds highest. Analysis of above data focused on following reasons of farmer's suicide: There is a wide array of factors that has led to the increasing spate of farmer suicides in India. The lands are not as productive as before, the markets are failing, the debts are piling up, and the pests cannot be kept at bay. More than an economic problem, this has now assumed political and humanitarian dimensions, especially since the past decade.

- ❖ **Financial reasons:** As an agrarian economy more the 48.9% population of India depends on agriculture and its allied activities. But for the successful running of agriculture and its allied activities requires capital. More than 80% of the Indian farmers are marginal land owners and they are economically poor. So they are facing economic problems for successful running of agricultural activities. At the same time nationalize banks are not willing to lend funds to farmers as there is no surety to return it. Even the private money lenders don't lend funds to them as they don't have any mortgage except their land. Even they lends funds to farmers they charges high rate or compound rate of interest. In addition to this, the farmers has their family responsibilities like education, marriages and health provisions of their family members and children, which requires huge money. Even the Government of India and concern state government also fails to give economic relief to farmers. The government always declares various packages in Crores of rupees to farmers for relief but due to corruption in distribution, wrong criteria's of assigning aids, unwillingness about farmers problems needy farmers don't get benefits of government help. The burden of these entire things turns them towards suicides.
- ❖ **Issues of weather and climate:** The weather in India these days has become erratic at best and rainfall does not happen at the right time. Moderate rainfall, which is needed so much for proper agriculture, is now becoming a thing of the past and things have reached the extreme. The situation is especially bad in Central India, which can be regarded as the agricultural heartland of India. In the past three years, the weather patterns have been changing. The situation does not become any better even when there is normal rainfall. 56% of the country depends on snow-fed rivers for its water and in such a situation even marginal fluctuations can have devastating effects. The ambivalence of extremely dry and equally wet conditions often leaves unmitigated devastation in its wake. The problems are further exacerbated by the fact that 85% of precipitation in India happens because of rainfall. Dry spells can be very bad especially during the initial periods of the process of growing crops. If there are sustained repetitions of dry spells then there can be some massive crop loss. Thanks to these conditions, these days even experienced farmers are at a loss when it comes to predicting the right time to sow their crops and the right time to harvest them. The fact that pests, weeds, and diseases are evolving has only added to the farmers' misery. Soil erosion is also a major problem faced by farmers.
- ❖ **Quality of Seeds, Pesticides, and Fertilizers:** Farmers in India have to often make do with poor quality seeds. There are many reasons for this sorry predicament – ignorance on part of farmers, corruption of officials, ineffective and coercive laws, and improper enforcement of the same. The fertilizers and pesticides that they use are of a poor quality. All these factors often lead to complete loss of crops. Quite often it so happens that the better quality seeds are so expensive that the small and medium farmers cannot buy them. As far as manure is concerned, most small farmers and peasants have to use cow dung, which is an effective one. However, the problem for them is that this cow dung is used as fuel too, which means that not enough cow dung is available for all. Chemical fertilizers are mostly out of bounds for the poor farmers. It is also stated that organic manure is highly necessary to make sure that soil stays healthy. However, it has also been



observed that excessive usage of these has led to the soil being infertile and affected the quality of crops.

- ❖ **Inadequate Storage Facilities:** Food such as fruits and vegetables enjoy high demand round the year. However, these crops are destroyed due to abnormal rainfall. Farmers who do not have cold storages have to sell their produce as early as possible so that they do not rot. This means they are sold at a loss since supply exceeds demand by some distance. It is very costly, and thus impossible, for a small farmer to own and operate a cold storage.
- ❖ **Unsatisfactory Realisation of Prices:** One of the most crucial problems faced by farmers in India is regarding marketing. The laws in India are outdate and most often a farmer has no option but to sell his produce in regulated markets, where the middlemen are the ones making the maximum gains. At times, they can make up to 75% profits. If the middlemen can be eliminated then the farmers could have sold their products at better rates. On the other hand, the farmers have to be satisfied with the bare minimum. The situation is especially dire in the sugar factories where the weighing scales are always said to be dodgy and it takes a significant time for the farmers to just break even. In some situations the farmers also need to give away their produce for free to the moneylenders. Distress selling in small villages is a pretty common phenomenon as well. The Rural Credit Survey has correctly stated that nothing is favourable for the farmers in terms of time, place or conditions of sale.
- ❖ **Scales of Operation:** Real estate prices have gone up to such a level that people are finding it hard to buy a home as it is. In such circumstances it is unrealistic for the average people to think of owning farms for cultivation. Majority of the people who have their own land to till have got it from their ancestors. Since more often than not, after the death of a farmer his land is divided among his sons, it leaves precious little for a farmer. This is the reason that the scale of operations here is so small. At the most, it is just a couple of acres. This in turn leads to small income that does not permit processes like mechanization and automation that are needed to stay relevant. This is why the small cultivators have no option but to rely on human labour, which in this day and age is woefully inadequate. At times, thanks to the increasing real estate prices, small farmers that are not doing so well are encouraged to sell their land to realtors and ensure a good life for themselves. This also means that the amount of land available for farming is decreasing thus affecting Indian agriculture in general.
- ❖ **Political reasons:** Politics in India is another reason for farmer's suicide in India. For the success of any business & profession, in addition to favourable economical and weather condition, political environment also plays important role. The Indian politicians who plays important role in policy making and decision making are totally shy and neglected agriculture sector. They are failing to take effective measures for soundness of agriculture. The politician has totally neglected agriculture sector and always gives preference to Industrial and service sector. While deciding MRPs of agricultural produces they don't consider the cost incurred for the production of same. They frequently declare various relief packages for farmers but failing to take effective implementation of the same. So the needy farmers don't get the benefits of such packages. The government also frequently bans export of agricultural products as per terms & conditions of WTO & GAATs. This is harmful for the exportable agricultural produces. at the same time most of the small and marginal farmers are belongs to backward communities like SCs, STs, OBCs and Muslims (Inferiors in Indian Politics) and even today politics is the monopoly of self-declared superiors. This is resulted in biases in distribution of financial help and subsidies.

Solutions to avoid Farmers Suicides

Giving monetary relief is not an effective solution. The solutions should aim at the entire structure of agriculture. Here are some solutions that could help in improving the state of the farmers:

- 1. The dependency of agriculture on nature should be reduced.** These calls for effective



Management of water during seasons of good monsoons. Prevention of crop failure should be the primary aim of the Government. In most cases, it is not the lack of water but the lack of proper management on the government's part that causes water shortage. A simple example for this is the recent case of the farmers in the Penna delta of Nellore District of Andhra Pradesh. In spite of the availability of ample water for a second crop, the Government decided against permitting the second crop, in view of proposed repairs and up gradation to the reservoirs. The proposal would result in draining of precious water into the sea which could be used to the benefit of the farmers. It was only after several agitations by the farmers' organizations that the Government relented and allowed the second crop. Water management should be made more effective through interstate co-operation on water resources, where surplus water from perennial rivers can be diverted to those regions facing drought, as it is always seen in India, where in state there is severe drought, another state has to face worst floods, such regional imbalances can be managed by effective utilization of water resources throughout the country.

2. Making institutional finance available to every farmer is another important solution to

Save to the farmers from debt traps of money lenders. Where institutional finance is available, it should be made easily accessible to the poorest farmers. This calls for removing of elaborate formalities and procedures for obtaining the loans. A poor farmer would be unable to understand the complexities of procedures; he needs a simple solution for his financial needs. Effective monitoring of the disbursed funds is also required because in many cases, the poor farmer is used as a front-end while in fact the benefit of the loan is availed by a bigger land owner. In addition, monitoring is also needed to ensure that the farmers are using the funds for the right purposes.

3. Farmers need to be advised and guided on economical methods of cultivation which

would save finances for them. The technological advancement in agriculture should be passed down to the small farmers. Where the existing crops would not do well under current drought and weather conditions, the farmers could be helped to shift to the cultivation of crops that would be easy and economical to cultivate in adverse conditions. Agriculture should be approached professionally and not as a traditional occupation.

4. The government could also explore the possibility of pooling of the lands of small farmers and making a bigger chunk of economically cultivable land. Through pooling of lands, the small farmers can avail the economies of cultivating on a larger scale.

5. Small farmers should be encouraged to develop alternative sources of income and the government should take up the responsibility of providing training to the farmers to acquire new skills. In drought affected areas, the Government could start alternative employment generation programmes to reduce the dependency on agriculture as the sole source of income.

6. Provision of relief facilities alone is not sufficient as it has been observed in the case of Andhra Pradesh where farmers committed suicides just to avail the benefits of relief packages. Relief packages should be given as a benefit to farmers to enable them to sustain their livelihood rather than as a relief to families of farmers who commit suicide. As has been mentioned earlier, there cannot be one single and most effective solution to prevent the suicides of farmers. The trend can be reversed through active participation of the Government in addressing the real issues of the farmers that are driving them to suicides. Social responsibility also goes a long way to help the farmers. The big land owners in most places do not lend a helping hand to struggling farmers, in most cases; they grab the benefits which are otherwise meant for the poor farmers. General public, NGOs, Corporate and other organizations too can play a part in helping farmers by adopting drought affected villages and families and helping them to rehabilitate. The solution to the farmer's plight should be directed towards enabling the farmers to help themselves and sustain on their own. Temporary measures through monetary relief would not be the solution. The efforts should be targeted at improving the entire structure of the small farmers wherein the relief is not given on a drought to drought basis, rather they



are taught to overcome their difficulties through their own skills and capabilities. The Government needs to come up with pro-active solutions and the nation has to realize that farmers' suicides are not minor issues happening in remote parts of a few states, it is a reflection of the true state of the basis of our economy.

Conclusion

The above data shows that, the GOI and concern state governments have totally neglected agricultural sector and its allied activities. It also fails to take effective measures and its effective implementation, which is resulted in farmers suicides, which are continuously increased in last 20 years and rate of farmers suicides is considerably increased Hence, it can be concluded that, unless all these causes are simultaneously dealt with the situation cannot improve. It requires large public investment in irrigation and rural infrastructure, rejuvenation of the cooperative credit, marketing and processing system, strengthening of the agricultural extension services and sympathetic administration working closely with the farming community. Indian farmers need is a means to sustain throughout their lives without having the face the desperation that adversity drives them to. If India has to shine, it is these farmers that need to be empowered.

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GEOGRAPHICAL STUDY OF TRIBAL AGRICULTURAL LABORS AND CULTIVATORS IN NASHIK DISTRICT, MAHARASHTRA

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Abstract

There has been no conceptual change in defining the workers between 1981 and 1991 census. At the 1991 census there has been mainly a three-fold classification of population namely main workers, marginal workers and non workers which was adopted for 1981 also. In addition to this, the main workers of 1991 are distributed in nine industrial categories of economic activities but in earlier census of 1981 this presentation was up to four industrial categories only.

A person was considered working as *cultivator* if he or she was engaged either as employer, single worker or family worker in the cultivation of land owned or held from Government or from private person or institution for payment in money, or in kind or on the basis of sharing of crops. Cultivation also included supervision or direction of cultivation. A person who had given out his/her land to another person or persons for cultivation for money, kind or share of crop and who did not even supervise or direct the cultivation of land, was not treated as cultivator. Similarly, a person working on another person's land for wages, either in cash or in kind or a combination of both, (agricultural labourer) was not treated as cultivator. A person who worked on another person's land for wages in money, kind or share of crop was regarded as an '*agricultural labourer*'.

Keyword: Agricultural Labour, Cultivators, Occupation, Work

Introduction

The study of occupational structure provides background for formulating future development plans. The term 'work' is used in special sense in Census, 1991 as below. The work is defined as a participation in economically productive activity. This participation is physical and mental in nature. However, person doing any economically productive activity is considered as worker. Thus, work involved actual work, effective supervision and direction of work. The distribution of population in different types of occupations is referred to as occupational structure. It can be categorized into two types, namely, main workers and marginal workers. Main workers can be sub-categorized as farmers (Cultivators), agricultural labours, domestic workers and other workers. Main workers are those who work at least six months in one year preceding. The marginal workers are those who work some time but not for the period more than six months in one year preceding.

Food, shelter and clothes are the basic needs of human being and in order to fulfil these needs human being involves in occupations. The economically active population actually takes part in the process of goods and services (Henry, 1971). During ancient times, needs of food were fulfilled by hunting and collecting necessary materials from the forest. A few decades ago a man started farming followed by industrial activities. Later, started to avail technology and exchange services for earning purposes. Thus, increasing purchasing power of human resulted the development of industrial and service sectors. Hence, the study of occupational structure holds a key position. The socioeconomic development of any region depends on the number of persons who are economically active with the quality and regularity of work. The ratio of economically active population in various occupations indicates the economic profile of various group of society. The occupational structure of society is a product of a variety of intimately related factors. The nature and variety of physical resource base lays



down a basic foundation for the availability of land for agriculture, fishing, forestry and mining (Chandana, 1986). Therefore, study of occupational structure is essential to understand the activities carried by scheduled tribe, its distribution and participation in different economic activities. If more people are engaged in primary activity implies that the region is undeveloped, if more people are engaged in secondary activity means that the country is in the process of development and if more people engaged in tertiary activity means the field is farming.

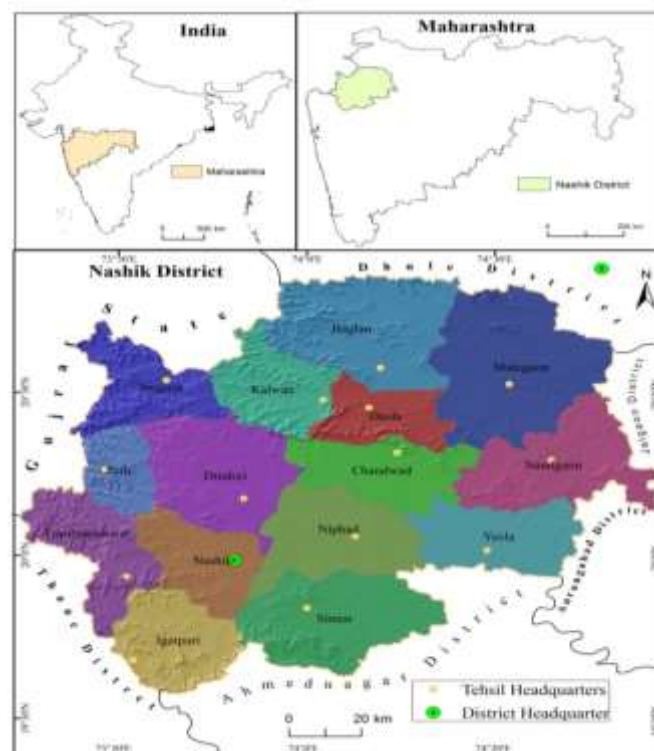
Rational of the study

A study of tribal agricultural labours and cultivators provides the groundwork for social and economic development for policy makers and planners. This paper has attempted to assess the agricultural labours and cultivators of tribal population in Nashik district. The data pertaining scheduled tribe population has obtained at Tahsil level from District Census Handbook Nashik District in 1981 and 2011. These data were then converted into a percent and represented by choropleth method.

Study Area

The district comes into being in 1869 when Britishers re-arranged districts of Maharashtra state. Nashik district is located in northwest in Maharashtra state. This district extends from $19^{\circ} 33''$ to $20^{\circ} 52''$ north latitudes and $73^{\circ} 16''$ to $74^{\circ} 56''$ east longitudes. The study region spreads over 15530 square kilometers and ranks fifth in Maharashtra state accounting 5.04 percent area. Nashik is 4th most populous district out of the total 35 districts in Maharashtra and it is 11th most Populous district in India.

Fig. No. 1



Location Map of Study Area

Objective

- To study the Distribution of Tribal Agricultural Labours in Nashik District
- To assess the Distribution of Tribal Cultivators in Nashik District

Hypothesis

- Tribal male are more engaged in main workers activities

Data Sources



The present study is primarily based on both secondary and primary data. The secondary data have been obtained from Nashik District Census Handbook, Statistical Handbooks, Socioeconomic Abstract of Nashik District, Tribal Development Department Nashik and Census of India from 1981 to 2011.

Tribal Main Workers in Nashik District

It is observed that among tribal population there were 45.90 percent cultivators and 45.77 percent agricultural Labours in 1981 in study region, accounting total 91.67 percent workers in agriculture. Only 8.33 percent workers have involved other than agriculture. In 2011, there were 32.70 percent cultivators and 56.49 percent agricultural Labours together 89.19 percent and only 10.82 percent workers have engaged in other than agricultural activity. During last two decades 13.20 percent cultivators have found decrease and 10.72 percent agricultural labours have increased in agricultural sector. The proportion of other workers is found less and it has decreased by 2.34 percent because of high illiteracy, lack of skills and technical education among tribal population. The household workers are slightly increased by 0.15 percent. The percent of agricultural labours have increased during study period due to small land holding as they work on other’s fields as labourers.

Tribal Agricultural Labours in Nashik District

A person who works in another person’s land for wage in terms of money or kind of share of production is regarded as agricultural labour. He or she has no risk in cultivation, simply work on another person’s land for earning wage. An agricultural labour has no right of less or contract on land on which he or she works.” (District Census Handbook, Nashik 2011). Agriculture Labours getting their daily wages from the owner of farm. Droughts and rainfall are largely controlling the farming activity and their work. The distribution of tribal labour in study region is uneven. It is found that proportion of tribal percent of agriculture labours are more in non-tribal area in study region.

Table No. 1: Tribal Main Workers in Nashik District

Items	Year		Volume of Change
	1981	2011	
Cultivators	45.90	32.70	-13.20
Agricultural Labors	45.77	56.49	10.72
Household Industrial Workers	00.33	0.48	0.15
Other Workers	08.00	10.34	2.34

Source: District Census Handbook, Nashik District for 1981 and 2011.

Note: Calculated by Researcher, Figures are given in percentage.

Table No. 2: Distribution of Tribal Agricultural Labours in Nashik District

Tahsil	Agricultural Labors			Volume of Change 1981-2011
	1981	2001	2011	
Nashik	35.92	47.70	36.26	0.34
Peint	27.91	32.00	53.64	25.74
Dindori	42.40	47.14	52.64	10.24
Surgana	20.86	32.63	45.21	24.35
Kalwan	44.58	32.93	42.49	-2.09
Baglan	64.72	58.77	65.11	0.39
Malegaon	77.36	77.28	79.27	1.91
Chandvad	70.93	74.30	79.25	8.32
Nandgaon	65.32	72.35	77.17	11.85



Yevla	78.25	80.69	82.49	4.25
Niphad	86.77	81.81	84.28	-2.49
Sinnar	53.73	63.81	68.89	15.16
Igatpuri	21.90	27.39	41.70	19.79
Trimbakeshwar	N.A.	26.48	46.09	N.A.
Deola	N.A.	82.39	82.70	N.A.
District Total	45.77	48.10	56.49	10.72

Source: District Census Handbook, Nashik District for 1981 and 2011.

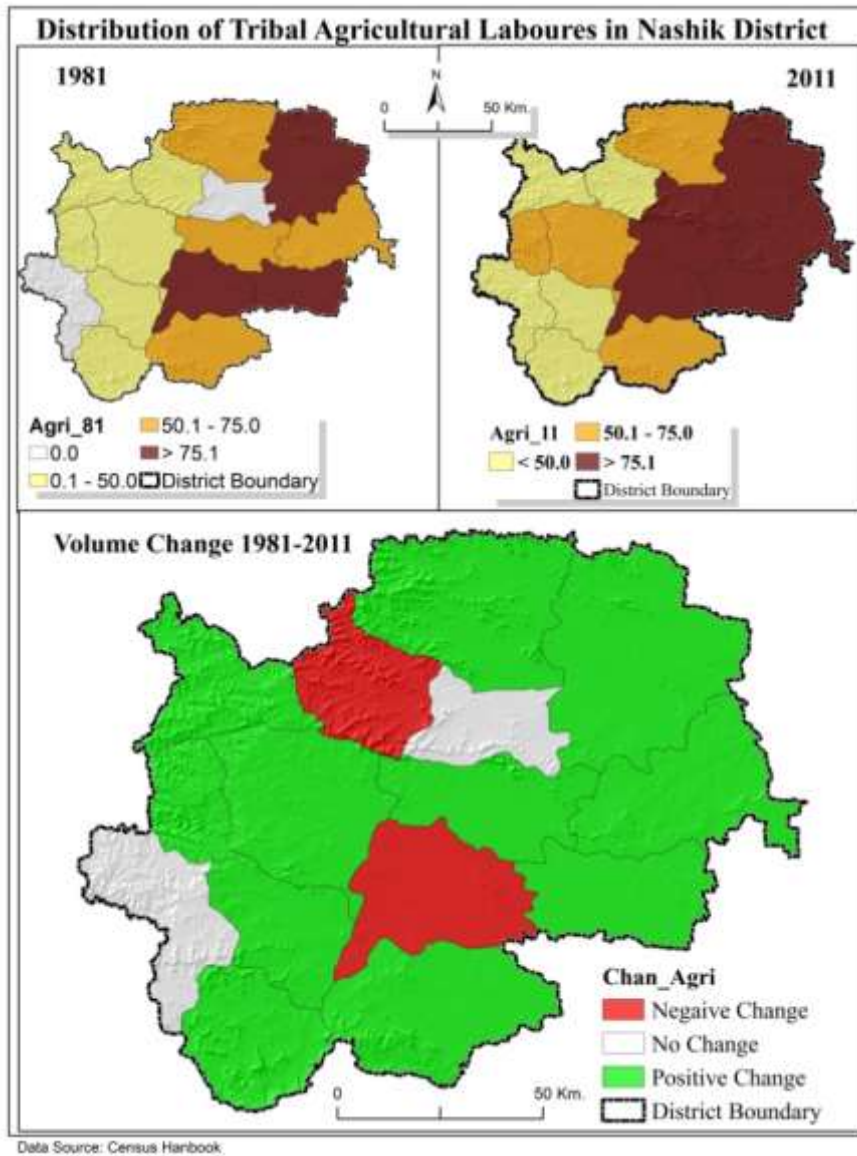
Note: Calculated by Researcher, Figures are given in percentage, N.A. = Data not available.

In study region, tribal agricultural Labours accounts 45.77 percent in 1981. The northeast and central parts tahsil in study region have more than 60 percent agricultural Labours. Niphad tahsil has 86.77 percent tribal agricultural Labours followed by Yevla (78.25), Chandvad (70.93), Nandgaon (65.32), Malegaon (77.36) and Baglan (64.72) tahsil. The percent of tribal agricultural labours have decreased towards west part in study region. In 2011, highest agricultural labours are found in Niphad tahsil (84.28), followed by Deola (82.70), Yevla (82.49), Malegaon (79.27), Chandvad (79.25), Nandgaon (77.17), Sinnar (68.89) and Baglan (65.11). These tahsil are located in north, east and central part of the study region. Peint (53.64), Dindori (52.64), Surgana (45.21), Kalwan (42.49), Igatpuri (41.70) and Trimbakeshwar (46.69) tahsil have 40 to 60 percent tribal agricultural labours. Less than 40 percent tribal agricultural Labours have observed in west part in study region and percent of cultivators are more as compared to agriculture labours. The percent of tribal labours is found more in east part as unskilled tribal population migrated in search of works as tribal's don't have their own land. During study period it was found increasing trend of tribal agricultural labours which is apposite to total population. More than five percent tribal agriculture labourers were found decrease in north part in study region in Kalwan and Baglan tahsil. Surgana, Nashik and Sinnar tahsil have identified increasing tribal agricultural Labours in Nashik (0.34), Surgana (24.35) and Sinnar tahsil (15.16) due to agricultural and Industrial development during study period.

The percent of tribal agricultural labours have decreased towards north part in study region. The proportions of tribal agricultural labourers have been rising during the study period in study region. This has attributed the numbers of wage-earners have increased in primary sector in study region.



Fig. No. 2: Distribution of Tribal Agricultural Laboures in Nashik District
of Tribal Agricultural Laboures in Nashik District



Tribal Cultivators in Nashik District

“A person is classified cultivators, if he or she is engaged in cultivation of land owned or held from government or held from private person or institution for payment in cash or other kind of share. The cultivators include supervision or direction of cultivation, plugging, sowing, harvesting and production of cereals and millet crops and other crops such as wheat, paddy, jawar, bajara, rabbi, sugarcane, tobacco, ground-nuts, etc. and pulses, raw jute and kindred fiber crop, cotton, cinchona and other medical plants, fruits and vegetables growing or keeping orchards or groves etc. cultivation does not include the crops i.e. tea, coffee, rubber and coconut.” (District Census Handbook, Nashik District, 2011). Table No. 3 presents that 45.90 percent main workers among tribals are engaged as cultivators in 1981. The Table also reveals that Surgana tahsil has highest tribal cultivators 74.35 percent whereas, Igatpuri (69.47) and Peint (68.74) tahsil have found more than 60 percent cultivators in study region. 40 to 60 percent cultivators have recorded in Dindori (51.72) and Kalvan (50.69) tahsil. The lowest cultivators of less than 40 percent have found in central and east parts in study region in 1981. The similar trend is found in 2011. The percent of tribal cultivators has decreased



during study period. It is observed that percent of tribal cultivators have declined in west part in tribal dominant tahsil in Surgana, Igatpuri, Peint, Dindori tahsil and drought prone area in Sinnar, Yevla, Nandgaon and Malegaon tahsil. The central part in Kalvan, Baglan, Chandvad and Niphad tahsil have increased tribal cultivators because these tahsil have fertile soil and irrigation facility on Godavari and Girna rivers. Kalvan tahsil has recorded highest growth of tribal cultivators. Thus, percent of tribal cultivators have decreased by -13.20 percent in study region.

Table 3: Distribution of Tribal Cultivators in Nashik District

Tahsil	Cultivators			Volume of Change 1981-2011
	1981	2001	2011	
Nashik	39.51	34.65	11.79	-27.72
Peint	68.74	62.07	42.27	-26.47
Dindori	51.72	46.22	41.55	-10.16
Surgana	74.35	63.01	51.22	-23.12
Kalwan	50.69	61.48	52.72	2.04
Baglan	30.64	37.04	30.94	0.30
Malegaon	12.35	11.45	9.97	-2.38
Chandvad	15.47	18.13	16.94	1.47
Nandgaon	22.32	20.21	13.51	-8.81
Yevla	14.04	11.40	10.85	-3.19
Niphad	6.08	7.03	6.62	0.54
Sinnar	31.93	21.03	18.09	-13.84
Igatpuri	69.47	59.40	46.97	-22.50
Trimbakeshwar	N.A.	68.49	47.29	N.A.
Deola	N.A.	11.33	12.80	N.A.
District Total	45.90	44.33	32.70	-13.20

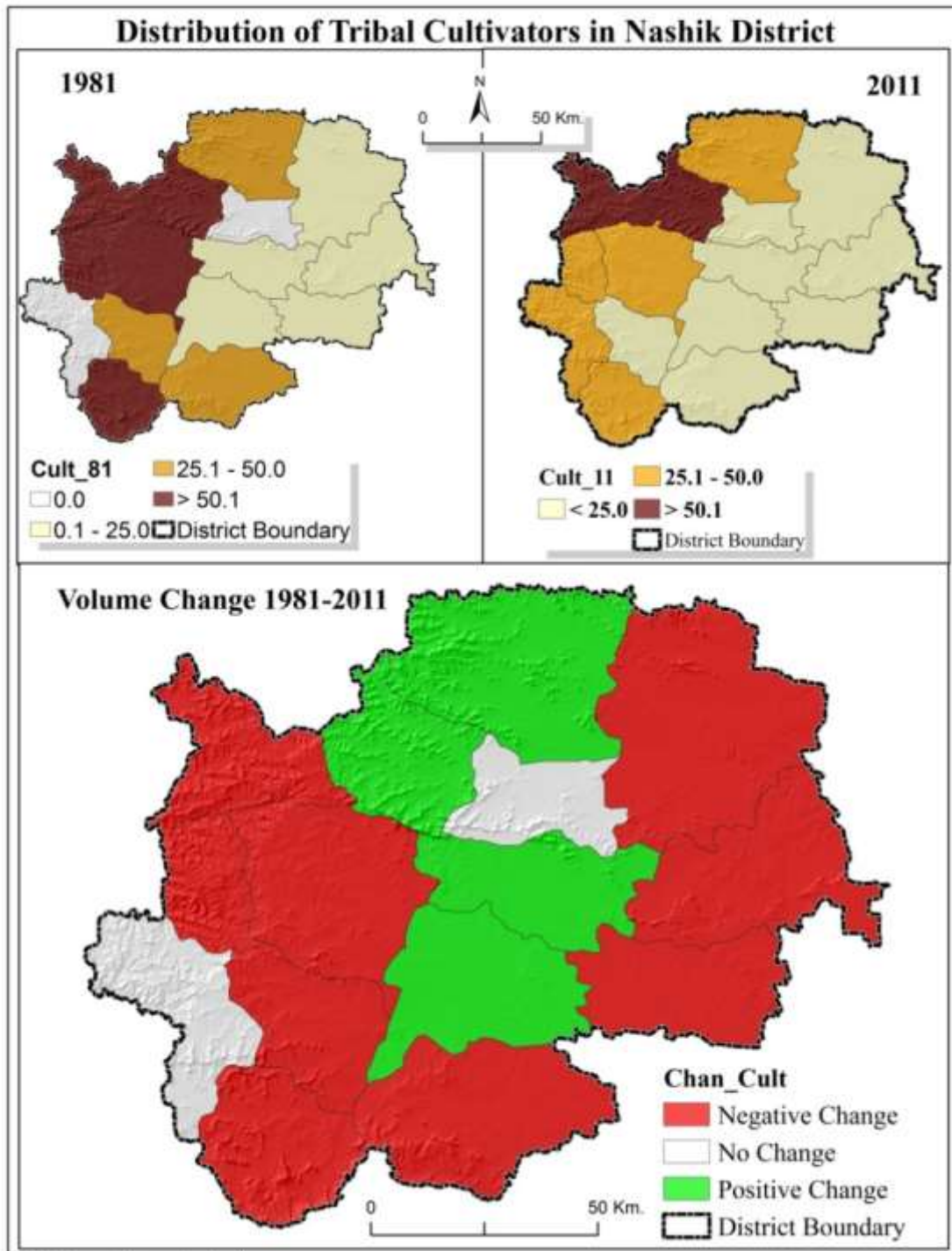
Source: District Census Handbook, Nashik District for 1981 and 2011.

Note: Calculated by Researcher, Figures are given in percentage, N.A. = Data not available.

Table No. 3 shows spatial pattern of tribal cultivators from 1981 to 2011 in study region. In 2011, highest percent tribal cultivators were recorded in Kalwan (52.72) tahsil followed by Surgana (51.22) having more than 50 percent tribal population. The lowest percent of cultivators appeared in Niphad tahsil (6.62) followed by Malegaon, Deola, Chandvad and Yevla tahsil lying in east part and have less than 20 percent tribal cultivators in study region. The growth of less than 10 percent of tribal cultivators was found in north part in study region during study period in Kalvan, Chandwad and Baglan tahsil. Chandwad and Niphad tahsil have identified more than 40 percent irrigation; hence tribal cultivators have increased in these tahsil. The decline of tribal cultivators was found in Nashik tahsil (-27.72) and southwest part in study region due to rigid topography, undulated slopes and marginal land holdings.



Fig. No. 3: Distribution of Tribal Cultivators in Nashik District



**Finding**

- 1) In study region, tribal agricultural Labours accounts 45.77 percent in 1981. The northeast and central parts tahsil in study region have more than 60 percent agricultural Labours.
- 2) Niphad tahsil has 86.77 percent tribal agricultural Labours. In 2011, highest agricultural labours are found in Niphad tahsil (84.28).
- 3) Less than 40 percent tribal agricultural Labours have observed in west part in study region and percent of cultivators are more as compared to agriculture labours.
- 4) The percent of tribal labours is found more in east part as unskilled tribal population migrated in search of works as tribal's don't have their own land.
- 5) More than five percent tribal agriculture labourers were found decrease in north part in study region in Kalwan and Baglan tahsil.
- 6) The percent of tribal agricultural labours have decreased towards north part in study region.
- 7) In 2011, highest percent tribal cultivators were recorded in Kalwan (52.72) tahsil.
- 8) The lowest percent of cultivators appeared in Niphad tahsil (6.62).
- 9) The growth of less than 10 percent of tribal cultivators was found in north part in study region during study period in Kalvan, Chandwad and Baglan tahsil.
- 10) The decline of tribal cultivators was found in Nashik tahsil (-27.72) and southwest part in study region due to rigid topography, undulated slopes and marginal land holdings.

Recommendations

- It has been noted that the tribal youth farmers get very low output from agricultural activity. Taking into account the difficulty, lack of capital for agricultural activity the government has contrived the system to give subsidy for the purchase of farm implements under this scheme farmers
- Adding to the confusion, adult services are often provided through multiple agencies with eligibility requirements that differ from agency to agency. Thus, families and counsellors need to help youth see the importance of disclosure and work to educate youth to disclose appropriately.
- To help tribal youth understand the importance of disclosure and to lead them through various situations where disability disclosure may be an issue.
- Manpower this kind of problems has been created mainly due to the propensity of the employers not to remain in the tribal regions. Some of the employees have been reported at the time of field study that they have been transferred in the tribal zone as a matter of punishment thus it seems that there is a need to motivate the manpower involved in the scheme. It is necessary to improve their initiatives and efficiency.
- The tribal peoples in the sinner, Nashik and Igatpuri tahsil were getting sufficient employment through some small scale industries which have been already trained in their region in those regions such as Surgana, Peint and Trimbak, the small scale industries have so far not been produced. In these regions also the small scale industries on the basis of minor forest product may be started. In this way the tribal people in these regions may make more benefit in conditions of usage. For this purpose MIDC can play vital role in the growth of the industrial backward region.

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THE PRIVATE SECTOR AND INDIA'S AGRICULTURAL TRANSFORMATION

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Abstract:

There is often ambivalence about the private sector in agriculture. But successful agricultural growth and transformations are inconceivable without a dynamic private sector serving and driving agriculture, farming, and agri-food value chains. The private sector plays decisive roles in India's agricultural transformation today, fostering productivity improvements and creating jobs and value in supply chains "from farm to fork." This is a relatively new phenomenon, made possible by the economic reforms of the early 1990s and policy changes since then. There remains much to do. Government is challenged to offer the required enabling, regulatory, and institutional support.

Keywords:

Agricultural transformation, food security, private sector, crop technology, food processing, job creation, enabling support

Introduction:

Successful models of agricultural development and growth rely on more than favorable weather and hard-working farmers. First, technology is fundamental, such as high-yielding seed. Second, value chains that absorb products and deliver inputs, services, and consumer goods to farmers are essential. Third, the policy environment is key—there can be no agricultural development without support through public goods. Fourth, the public and the private sectors both play vital roles. In India, the private sector's contribution is now especially dynamic, as this article shows, but this is a relatively new phenomenon. For many years after independence, the public sector powered agricultural development and growth in India. Looming food shortages prompted government to back farming; an illiberal economic regime kept private initiative at bay. The Green Revolution 50 years ago was largely an achievement of the public sector. Food security was lastingly improved. Since then, agricultural performance has been mixed. This is partly because of periodic rainfall irregularity, but there are also two other main reasons.

First, governmental support and public investment in agriculture have gone in cycles. Second, public agricultural research has lost steam. Its more recent innovations (such as new crop varieties) have brought at best incremental improvements in farm productivity; earlier releases had made major differences. The economic reforms of the early 1990s set the stage for an enhanced and growing role by the private sector. Economic growth accelerated, particularly after 2000, with major modernizing effects on agriculture, farming, and agri-food value chains. High levels of economic growth fueled the demand for food, and continue to do so, while also creating off-farm jobs in rural and urban areas. In rapidly expanding urban centers, a growing middle class with refrigerators demands more packaged and processed food. This development encourages the formalization and modernization of trading, storage, processing, wholesale, and retail in new value chains. Mobile telephony and the digital revolution support new ways of doing business and sharing data. They also make markets more transparent, for all participants from primary production to final consumption. Shaped and accelerated



by these changes, agricultural transformations are in full swing across the country. Three trends, at least are apparent:

The farm sector is becoming more commercial and diversified. Cereals were the main driver of the Green Revolution. Their relative importance in the output value composition is declining as production shifts to higher value sectors including dairy, horticulture, fruit, fisheries, poultry farming, and aromatic and medicinal plants, among other lines of production. Large numbers of small farmers are known to benefit from this trend .

The share of agricultural employment is coming down, from 60 percent of the total work force in 2000 to 49.7 percent in 2013, according to World Development Indicators. • Rural poverty is declining, from 42 percent of the rural population in 2004 to 26 percent in 2011, according to World Development Indicators based on the headcount ratio at national poverty lines.

Government played a role in these achievements, but so did the private sector. Public investment amounted to close to 4 percent of agricultural GDP in 1981. It then declined, except for a period during the early 2000s when it recovered to a degree). Private investment has been rising, particularly since 1994. It attained almost 16 percent of agricultural GDP in 2011 but declined to between 12 and 13 percent in 2013 in a context of rising inflation. In 2013, the private sector accounted for 83 percent of gross capital formation in agriculture, the public sector for 17 percent. Private investment helps drive the transformation of agriculture referred to above. We elaborate on this in the next two sections with reference to crop technology, inputs, and agri-food value chains. The last section discusses “public-private interactions” and the role of government to enable the private sector to function and thrive.

The Private Sector in Agricultural Research, Input Delivery and Extension

Private agribusiness companies are at the forefront of heavy investment in agricultural R&D and technological innovation.² Private sector innovations are dominant in plant genetics and seed (particularly hybrids and biotech traits). They also lead in seed treatment, agricultural chemicals, biologicals, plant growth regulation, animal genetics and health, biofuels, machinery, irrigation, soil analysis, and dataintensive precision farming tools. Total private investment grew by a factor of 10 in constant dollars during the 25-year period considered.

The public sector (through the Indian Council on Agricultural Research, ICAR) continues to invest in the development of new varieties of self-pollinated crops including rice, wheat, many pulses, and oilseeds, as well as animal breeding and veterinary sciences. But in the eyes of many observers, the public agricultural research system “is under significant stress today with lack of clarity on focus and inefficient use of financial resources. Links among sister [research] institutions have weakened and accountability declined over time. There is a need for a rethink of the [public] R&D system” (NITI Aayog, Government of India, 2015). Private agricultural research, in turn, has flourished over the years. As it is funded from sales proceeds, the research naturally focuses on market opportunities and farmers’ preferences. Surveys sponsored by the Syngenta Foundation in 2011 showed that at that time, 71 companies were active in research and agricultural product development in India, 22 in seeds, 19 in agrochemicals, 10 each in fertilizer solutions and mechanization (including irrigation), and 10 in other endeavors, including agronomic research on specific crops .

Th effects and impact of R&D-based innovation by the private sector in Indian agriculture as follows:

- Seed/biotech innovations have led to documented increases in yields in key field crops, vegetables, and fruits.
- Proprietary hybrids of pearl millet, sorghum, and maize lifted the productivity of these crops in semi-arid settings not well served by the Green Revolution.
- Proprietary hybrids cover at least 75 percent of the area planted to improved varieties and hybrids.
- Farmers captured substantial economic gains from yield increases in these settings and crops.



- Private research has helped India increase exports of crops, technology, and agricultural inputs such as agrochemicals and machinery.

Despite these achievements, sizeable parts of Indian agriculture are underserved in terms of technology. Drought and heat-tolerant genetics for dry land conditions are in short supply, for example. Low profit margins limit the seed industry's incentives here. Recently introduced controls on seed prices may lead to reductions in research expenditure because of declining margins and perceived regulatory uncertainty going forward.⁴ This is a matter of concern. Public research and extension efforts have not solved the problem. Joint public-private research and go-to-market strategies, including appropriate de-risking of private contributions, might help.

Agricultural extension plays a key role in technology dissemination, and the private sector is increasingly active in this domain. Public knowledge services for farmers have for many years been contending with problems such as budget limitations and staff renewal. Extension delivery has become more pluralistic in this context, with different types of non-profit and for-profit actors stepping in to address opportunities and fill gaps. The role of the private sector has increased through the direct participation of input suppliers and off-takers of commodities under contract farming arrangements.

Agri-food Processing, Wholesale, and Retail:

The private sector has transformed the agri-food landscape in the period since the early 1990s as India shifted from import substitution and protectionism to more open markets. The dairy sector illustrates this. The rapidly growing demand for milk and milk products “offers an opportunity for processors and organized retailers to expand their businesses by integrating their ‘front end’ activities of wholesaling, processing, logistics, and retailing with their ‘back end’ activities of production through institutional arrangements such as contract farming and producers’ associations”. The private sector’s milk processing capacity grew steadily since deregulation, and in 2012–2013, it was 70 percent greater than that of cooperatives . The progressive formalization of dairy value chains has also improved farmers’ access to finance. Input suppliers, off-takers, and financial institutions are willing to lend to farmers against the prospect of steady incomes and loan repayment capacity linked to milk sales.

Food supply chains in general are undergoing profound change in India. This is true both in midstream segments (processing, wholesale, and logistics) and downstream (retail).

Food retail transformations have come about in different waves, from government to cooperative retail chains in earlier periods to private ones in the past 15–20 years. In 2001–2010, modern food retail is estimated to have grown at the astonishing annual rate of 49 percent (from a low basis). The potential for further growth remains enormous. Versions of modern retail are spreading to lower tier cities. Retailers’ procurement and handling of fresh and processed/semi-processed products continues to evolve.

The private sector is the main actor in the current transformation of food supply chains. As a direct buyer and seller, the government accounts for 7 percent of the national food economy (25 percent in grains).

Sales of the private processing sector and food services industry are growing rapidly. Performance and market shares of the formal food processing industry exceed those of the more traditional “unorganized” sector. Midstream processing with various levels of value addition is a sizeable economic factor in such segments as oils and fats, grain milling, sugar, meat, poultry and fisheries, snack foods, beverages, animal feed, dairy, and ready-to-make items. There is a symbiosis between large processors and modern retail. Processed food consumption rises with income and urbanization, implying huge growth potential ahead.

The food processing, wholesale, and retail industries offer choice and convenience to consumers. It creates jobs, investment opportunities, intra-industry linkages, and opportunities to link farmers to



markets. Its penetration in domestic markets is uneven. Where purchasing power is low, sales of processed products from organized brands are low, and modern retail may be missing entirely. Overall, the food processing, wholesale, and retail industries are important segments of the economy, growing much faster than primary agriculture, attracting foreign direct investment, and performing better than the manufacturing sector and the industrial sector as a whole in recent years (Government of India, 2016). This leads to opportunities for farmers and thus agricultural development and growth. Because there are many farmers, it will, however, take time to link most of them reliably to modern supply chains. New quality and traceability requirements are among the complications farmers face

The industry confronts challenges, including infrastructure bottlenecks (leading to post-harvest wastage of produce) and differences in rules regarding contract farming across states. Raw material procurement constraints arise from the array of policies regulating the movement of agricultural commodities in the country, including differences in the operation of the Agricultural Produce Market Committees (APMC) Act in different states (Government of India, 2016).

To address these and other issues, the government and industry bodies have launched initiatives to promote food processing. Highlights include the reduction of excise duties on certain food processing and packaging machinery, special credit lines to designated food parks, the Reserve Bank of India's classification of loans to food and agri-based processing units and cold chains as "priority sector lending," and measures by the Ministry of Food Processing Industries, such as the creation of an "Investors' Portal" and "Food Maps of India" to facilitate sourcing (Government of India, 2016).

Along with new markets and consumer segments, these and other supportive endeavors suggest a prospect of continued evolution and growth for the industry with benefits for farmers through backward integration. Both parties should benefit: farmers from steady sources of income and the scope for modernization and diversification of their operations, and processors from supplies of the right kinds and quality of raw material at the right time (India Brand Equity Foundation [IBEF], 2015).

Workers benefit from employment growth in labor-intensive food processing industries—particularly in low-wage locations in poorer and relatively more agricultural states. This fosters poverty reduction and the agricultural transformation through non-farm jobs. The relative capital and labor intensity of agri-food processing, wholesale, and retail vary both spatially and across time, however, depending on agglomeration effects, wage trends, the cost of finance, technological change and the degree of organization, and "formality" of firms. Organized agri-food manufacturing operates at different scales and is relatively more capital intensive than processing in the unorganized segment with its unregistered informal firms.

Conclusion

The private sector plays decisive roles in India's agricultural transformation today, driving productivity growth and creating value and jobs in supply chains "from farm to fork." These roles are, however, conditioned by government, which has the power to support or in extremis prevent the private sector from functioning.

Private investment responds to changes in the business climate, which is the consequence of many factors. They include governance and institutions, law and order, respect for property rights, a functioning regulatory system and financial sector, and public investment and policies of different kinds. How government manages these factors is absolutely crucial. The choices being made are political in nature and best interpreted in historical perspective. When it comes to implementation, there is a technocratic dimension as well. India's well-designed and well-intentioned policies in agriculture have sometimes not delivered the expected results because of shortfalls in their on-the-ground implementation.

There is a strong need for appropriate regulation and well-administered enabling policies. Regulatory reform is in many respects succeeding at the center, but not yet backed up by coherent action in the



states (Singh & Mitra, 2010). Competition for private investment in food value chains across states may prompt local measures such as tax breaks to counteract structural effects. But there is a wider reform agenda. In agricultural marketing, for example, this should foster agro-industrial linkages, farm productivity, and off-farm employment. Measures here include APMC Act reform, rationalization of taxes on agricultural commodities, e-trading, and disintermediation (Chand & Singh, 2016).

In addition, there would appear to be a case for public expenditure and investment reform. Public investment in agriculture is in decline, as we have shown. This is a source of concern, not only for farming itself, but for the broader rural economy. It is generally surmised that public investment in infrastructure, services, and public goods such as roads and broadband connectivity also crowds in private investment.

An important reason why public investment in agriculture is declining is that it is being displaced by rising subsidies in given budgets, in particular for fertilizer and power. These subsidies cater to special interests and outdated policy priorities at the expense of public goods. Since the mid-1980s, they have claimed a growing share of public expenditure in agriculture (Chand & Kumar, 2004). The public goods/subsidies imbalance is believed to interfere with the pace of additional private investment, implying rates of agricultural development, and growth below potential. It also encourages both wasteful uses of natural resources and agronomic choices with questionable effects on the environment and sustainability.

Where does this leave us at the end of this discussion? The private sector will continue to drive India's agricultural transformation. To do its job well—creating value innovatively, competitively, and profitably—it needs implicit governmental guidance and enabling support. The government's challenge is to supply this in the best possible way.

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INTERCONNECTIONS OF AGRICULTURE MANAGEMENT WITH THE INTERNET OF THINGS

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Abstract:-

We aspire to make a system which study the agricultural circumstances in India by utilizing different available sensors and technologies. As the worldwide population of the world continues to rise, the demand for additional crops is growing day by day. There is a need to eliminate the gap between production and consumption. This can be achieved by reducing waste and continuous monitoring of soil situation so that the plantations do not die due to lack of nutrition. Air pollution, which is often ignored is also one of the key factors which causes wastage of agricultural product.

Keywords :- Precision Agriculture ,Big data, Microcontroller, Sensor .

1.Introduction

.We are live in a world of digitization. Almost all very soon about us is touch by digitisation. The role the knowledge has to play in agriculture sector is attractive more and more observable day by day. Since year of its inception announcement has played an main part in agriculture, it was not just limited to in area of crop diagnostics but it has played pivotal role in the adaption of age old agricultural practices. One can also witness development in different methodologies and technologies being used in the agricultural organization. On the different, the agriculture sector in India is witnessing losing ground every day that has affected the production capacity of the ecosystem. There is an up-and-coming need to solve the problem in the said domain to restore vibrancy and put it back on higher growth. A large scale agricultural system requires a lot of maintenance, knowledge, and supervision. In the given paper we are aiming to automate the Maintenance, Control of Insecticides and pesticides, Water Management Irrigation and Crop Monitoring.

2.Literature survey

The IoT technology has started coming across the agriculture sector and assisted the pace of the growth in agriculture into a large extent. This technology has gradually changed the way of farming which has been practiced and implemented in many developed Indian countries. Crops and plants are monitored with complicated devices with different parameters so as to ensure the growth of particular plants is stable and healthy. The system first checks the moisture of the soil. If the moisture is less than the threshold value then the irrigation system is checked. If the irrigation system is not working then the farmer and the service team is informed about the issue and necessary actions are taken to fix a system. If the irrigation system is working normally then the water level at the reservoir is checked.



Is the water level is low then the farmer and servicing are informed about the situation and water in the tank is leveled. If the water level is sufficient then crops are irrigated.

3.Proposed Methodology

To the extent of our information, there has not been a application for an interactive cultivation sensing system via instant messaging applications. In this section, we give details in brief some of the IoT automation systems which we used as a reference while creating and executing our future system. This agriculture kit is mount with multiple sensors used to retrieves information which affects the growth of crops. These data include water level, soil moisture, temperature, humidity, pHlevel, and carbon dioxide level. Images of the crops are also obtained using a camera. Both data and images would then be analyzed to conclude the quantity of growth.

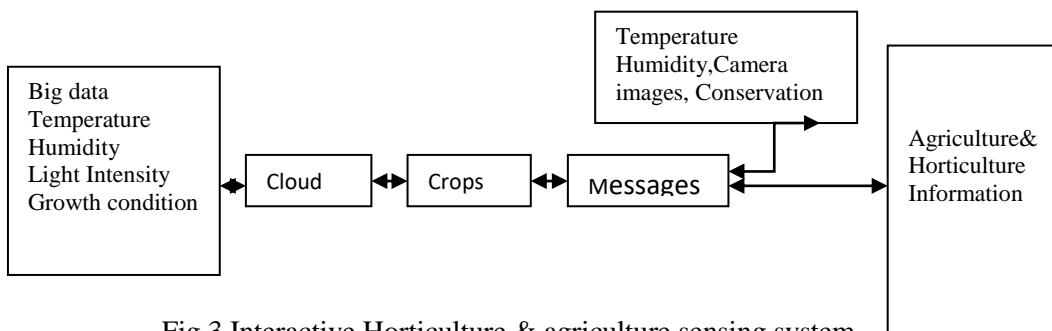
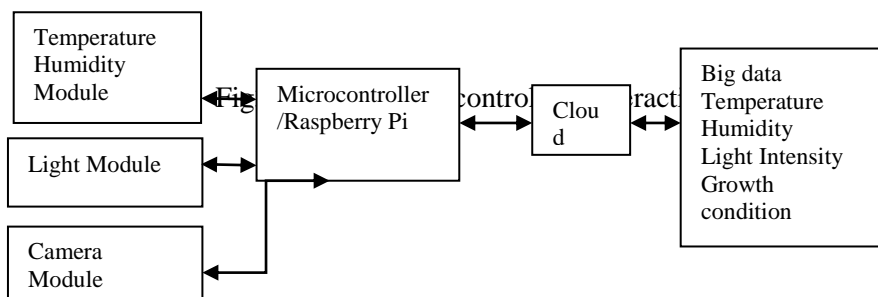


Fig 3 Interactive Horticulture & agriculture sensing system.

.The farming kit is up to with a network function, and sensor data is collected by the server. Based on sensor data collected in various home gardens and other outdoor environment, machine learning can be performed as big data, collectively with image data. Thus it is possible to associate the development status of the crops with sensor information.

The next applications can be expected to be developed by realizing the interactive agriculture sensing system.



3.1Software arrangement

The software for controlling interactive devices consists of the following modules. Fig 3.1.

Sensor Module: The various sensors are activate base on the schedule set for each crop, and the essential data are formatted. By utilizing the time organization function installed by the operating system (OS), flash photography is performed at night. An infrared camera was used for crops that had a prohibition period of lighting. The program and the settings in the module are switched depending on the type of crops.

Communication Module: The data formatted by the sensor component is sent to the server. Besides that, based on the consequence of learning by the server, the approximate condition of the crops is transferred to the speech module.



Speech Module: Based on the estimation situation from the server a function to convey the situation to the farmer as a voice is realized.

External database: Sensor information and images from sensor modules would be collected and combined with cultivation advice from well established farmers to produce appropriate cultivation advice as output. This advice would be transmitted as reference for new farmers in case they face difficulties in crop cultivations depending on the situation of crops. In cooperation with many other interactive devices big data for cultivation support according to a variety of regions, climates and environment are constructed.

4. Conclusion:-

As technology is growing quickly, the idea of utilizing knowledge in the agriculture sector has also been developed gradually. However, since recent years, a revolutionary idea of using sensor and Internet of Things had emerged. Internet of Things is basically the interconnections of physical devices over the network such as camera, home appliances, vehicles and traffic lights in which data are collected and send it to the cloud .These data can be remotely forced easily through handheld devices and controllers. The Internet of Things has been evolving in all application areas and so a lot of companies are focusing towards IoT enabled systems.

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**COVID IMPACT ON AGRICULTURE****Varun Kumar**

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Abstract

The Noval Coronavirus pandemic has unsettled the Indian agricultural sector comprehensively. However, the current quarterly GDP estimations post-COVID situation showcases sturdiness and flexibility in Indian agriculture, the single sector to list a optimistic growth of 3.4% during the financial year 2020–21 (Quarter 1: April 2020 to June 2020). At the same time, the immediate past quarter growth was estimated at 5.9% witnessing a decline by 2.5% point, While the contribution of the agriculture sector to Gross Value Added (GVA) declined from 18.3% to 17.8% between 2014-15 and 2019-20, it is estimated to increase to 19.9% in 2020-21. In this context, we aim to create the initial evidence of the COVID impact on the Indian agricultural sector *viz.*, production, marketing and consumption followed by a set of possible plans to improve and succeed post-pandemic. Study findings indicate that the epidemic has affected production and marketing sector through labour and logistical restrictions, whereas the adverse income shock limited access to markets and increased prices of food commodities affecting the consumption pattern. The calamity as an opportunity, the state announced a bundle of measures and long-pending reforms.

Keywords

Covid-19, Covid Impact, Agriculture Sector.

Introduction

The Covid-19 pandemic has given rise to an instant, serious, and worldwide human health issues. Essential counter actions to the virus, e.g. isolations and other restrictions will continue in place for many months. National efforts to control the virus by restrictive human movement is inevitably causing economic shocks and social costs that will affect the running of agricultural and food systems in India. The indirect effects of the pandemic on agricultural systems across the Nation. It massively declined demand for restaurant and marketable food services in combination with restrictions in labour, processing capacity and storage has led to farmers dumping their output. Quarantine measures are severely affecting labour availability for key time-critical farming from sowing vegetable crops to picking fruit and other laborious work. Outbreak of Covid-19 develops, these impacts are likely to turn into more widely and deeply felt in agricultural sectors and national economies. The consequence and severity of Covid-19 pandemic, and its likely impact on agriculture nationwide, calls for substantial reflection in both the short term and long-term. We need to understand the instant consequences for the national network of agricultural and food systems on which we rely so heavily. We should track unforeseen risks, weaknesses and systemic shifts to understand short-term effects as well as those that may be long-lasting. The outbreak of Covid-19 pandemic shock can have a greater impact on economies due to lost human lives compared to a weather blow such as drought or flood or a trade restriction. Undeniably, all these shocks affect agricultural systems; however, pandemic shocks affect all the sectors of an economy. The pandemic disrupts demand and supply of food impacting the global food supply chain; although droughts tend to be localized affecting only the associated sector or sponsors.

**Objective**

- To study the impact of Covid-19 on Agriculture.
- To know the problems and challenges face by the farmers.
- To study immediate impacts of Covid-19 on Agricultural systems.

Research Methodology

The research is mainly focused on impact of Covid-19 pandemic on Agriculture .The methodology followed for this paper comprising literature review, secondary data, Publication of books, journals, magazines and report of Agriculture sectors.

Literature Review

Emma C. Stephens- Believing that it is essential to capture the immediate effects of the COVID-19 pandemic on agricultural and food systems in their comprehensive senses. Hence, they launch a fast-track Special Issue on current and potential impacts of COVID-19 on agricultural and food systems.

AG Adeeth Cariappa -Initial investigation in India shows that restriction on movement, transportation difficulties and reverse labour migration have disrupted national supply chains which ultimately contributed to increases in wholesale and retail prices of a few products like pulses, wheat flour, milk and vegetables. Though India has emerged as self-sufficient and a net exporter of food in recent years, the pandemic led chain of events has variously affected the domestic agricultural systems specifically production, marketing & consumption. Raising revenue by offloading excess buffer stock and increased credit to the agriculture sector should be the top priority for post-pandemic economy restoration.

ICAR-NIAP (2020)-They do not anticipate a major long-term covid-19 impact of the lockdown or lower economic progress on Indian agriculture. That was seen with a four-per cent growth in agriculture in 2019- 20 and 3.4% in first quarter of 2020-21. The prospect of Kharif 2021 is quite encouraging. A usual agricultural growth (4%) in 2019-20 and exemption of farm operations throughout the lockdown period have contributed to better farm income.

Vikas Rawal -In this paper, they have looked at the impact of COVID-19 lockdown on agriculture and rural economy of India. We also examine the major announcements of the government related to agriculture and the rural economy, and point out the several misleading claims made by the government.

Covid Impact On Production

The government of India rapidly countered to the epidemic and imposed nationwide lockdown in the country on March 25, 2020 to stop the spread of corona virus infection. Interruption in economic activities is anticipated to have an adverse effect on food and nutritional security due to demand and/or supply side shocks in the food system. The supply shocks may arise due to reduced food production or disruptions in supply chain of food commodities on account of movement restrictions imposed by the authorities or profiteering activities of errant traders. The 3.4% growth in gross value added (at 2011-12 prices) of agriculture sectors during April June, 2020 over the previous year revealed no adverse effect on food production in the country (GoI, 2020). Disruptions in supply chains are reflected through the variations in food prices. The demand-side shocks may arise due to reduced affordability of food, particularly by the poor and lower-middle income-class families, and changes in food consumption patterns from high to low perishable products. The impact of COVID-19 on availability and accessibility dimensions of food security are discussed at national and household level in the following sections. a. Food production and household demand of food products The onset of green revolution in agriculture sector during the 1960s successfully transformed India from a food-deficit economy to one, which is not only food-sufficient but also a net exporter of agricultural commodities at an aggregate level. The evidence at the national level revealed sufficient production of food to meet the actual household consumption in 2016-17 . As per the second



advanced estimates released on February 18, 2020, food grain production for the year 2019-20 will be 291.95 million tonnes that is 5.7% higher than the production in 2016-17. This is adequate to cover the domestic demand of food in the nation. It is worth noting that household food demand does not include food consumed outside home and other indirect demand (seed, feed, wastage etc.). Throughout the lockdown period, demand due to food consumed away from home is expected to be negligible.

Covid Impact On Consumption

Availability of food may be an essential but not a sufficient condition for ensuring food security. Actual intake of food by persons may depend on diversity of household-specific factors. Amongst others, income is the chief important factor affecting economic access to food. Fall in income of the households due to closure of economic activities will have adverse impact on food intake. For the duration of April-June, 2020, gross value added (at 2011-12 prices) and private final consumption expenditure (PFCE) reduced by 22.8% and 26.68% over the preceding year (2019-20), respectively. The impact of change in income and thus expenditure on consumption pattern (of both food and non-food) has been measured under alternative expenditure scenarios using estimated expenditure elasticity's. The probable impact on consumption has been measured under three expenditure scenarios. Scenario-1 April to June assumes that subsequent quarters (Q2, Q3 and Q4) of 2020-21 may witness same level of decline in PFCE as in quarter 1 (-26.68%). Scenario-2 July to September assumes a gradual recovery wherein PFCE during Q2, Q3 and Q4 of 2020-21 will be 15%, 10% and 0% less than the previous year. Consequently, overall decline in PFCE during 2020-21 will be 12.54% over the previous year. Scenario-3 October to December assumes 100% recovery wherein PFCE during Q2, Q3 and Q4 of 2020-21 will be equal to the level of 2019-20. In this scenario, overall decline in PFCE during 2020-21 will be 6.26%. Expenditure elasticity's for food and non-food groups have been estimated using Linear Approximation-Almost Ideal Demand System (LA-AIDS) model (Table 01). Additional, expenditure on food and non-food items was estimated using 68th round (2011-12) of consumption expenditure survey of the National Sample Survey Office (NSSO) and expressed at 2019-20 prices using Consumer Price Index (2011-12=100). A perusal of Table 1 reveals that during period (2019-20), average monthly per capita consumption expenditure of Indian households was Rs. 2367, out of which 44.3% was expended on food items. Due to loss in income, average expected drop in monthly consumption expenditure during 2020-21 is estimated to range between 6.26% and 26.68% under different scenarios taken into consideration. Non-food items are comparatively more elastic than the food items; decline in the expenditure on non-food items would be relatively steeper than on food. Non-food expenses are expected to be squeezed by 7.69% to 32.79%, while food expenditures may be reduced by 4.98% to 21.24% during 2020-21. Among the broad food category, the decline in consumption will be least for staple commodities like cereals, edible oils, pulses, vegetables as compared to other food commodities (Table 01).

Table 01- Likely decline in Consumption Expenditure during 2020-21

- Elasticity of food (total) is weighted (expenditure share) average of all food items.
- Elasticity estimated using 68th round (2011-12) of Consumption Expenditure Survey of NSSO.

Particulars	Expenditure elasticity	Consumption expenditure (2020-19) Rs/capita/month	Change in consumption expenditure during 2020-21in (%)		
			April-JUNE	July-Sep	Oct-Dec
Cereals	0.37	238	-9.89	-4.65	-2.32
Pulses	0.53	67	-14.05	-6.60	-3.30



Milk	0.89	202	-23.62	-11.10	-5.54
Edible oils	0.42	78	-11.32	-5.32	-2.66
Non-veg	0.96	77	-25.56	-12.02	-6.00
Vegetables	0.58	100	-15.42	-7.25	-3.62
Fruits	1.25	32	-33.43	-15.71	-7.84
Other foods	1.29	256	-34.30	-16.12	-8.05
Food total	.80	1048	-21.24	-9.99	-4.98
Non food	1.23	1318	-32.79	-15.41	-7.69

Covid Impact On Marketing

On June 5, 2020 the Government of India brought out ordinances to reorganise agricultural marketing structure. These are: (1) Essential Commodities (Amendment) Act, 2020 (2) The Farmer’s Produce Trade and Commerce (Promotion and Facilitation) Act, 2020; and (3) The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farmers Services Act 2020. More than six decades old, the Essential Commodities Act, 1955, was being criticized as a barrier to post-harvest investment due to unusually lower stocking limits on agricultural commodities and its frequent invocation in the case of sudden price increases. The Government of India has significantly amended the Act by removing stocking limits on cereals, pulses, edible oils, onions and potatoes from the list of essential commodities. This is expected to attract investor including foreign direct investment (FDI) in warehousing and cold storage and also help farmers realize remunerative prices for their products. The Act, however, can be invoked throughout extra-ordinary circumstances, such as natural calamities, war and excessive price rises etc The main purpose of the Farmer’s Produce Trade and Commerce (Promotion and Facilitation) Act, 2020) allows hassle free intra-state and inter-state trade in agricultural commodities beyond the APMC markets that are often blamed for being non-transparent and exploitative of the farmers. The Act will push up application to e-NAM, its leads to integration of agricultural markets in the nation. The Act prohibits state governments from levying and market fees or cess on the volume traded outside the APMC regulated markets. The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farmers Services Act, 2020 aims at promoting contract farming, reducing price risk and enhancing farmers’ access to support services. It provides for the pre-agreed price contracts but with provision of sharing the benefits of higher than the agreed prices with farmers, and accords legal status to contract farming. The other key feature of the Act is that it provides for institutional mechanisms for dispute settlement. The COVID-19 virus outbreak has brought out many behavioural and institutional changes that are likely to influence the agro-food value chain activities from genetics to end consumption in the post-pandemic period. Agriculture and agroindustry will confront new challenges or standards related to technologies, support services, marketing, trade, financing, governance, consumer likings, etc. Government’s emphasis on supply chain administration and development of micro-food processing would bring primary processing facilities such as grading, processing, storage and branding closer to the farm gate, and provide a big push to rural industrial development. E-commerce that directly attaches producers to consumers is likely to be a new normal in post-pandemic agriculture, and is expected to encourage private investment in agro-tech start-ups connecting farmers directly to the consumers. Customers’ concerns for food safety and sanitation have never been as prominent before as during this pandemic. These will compel value chain participants from the genetics to end-consumption to comply with domestic and international food safety standards. These long-awaited market reforms have the potential to evolve new market architecture for agricultural products aligning with the new normal in agriculture in the 37 post-pandemic periods. A new vertically coordinated marketing structure, driven by the institutions, such as contract farming, cooperatives and farmer producer organizations (FPOs),



will reduce transaction costs of trade, making it easier for small farmers to access inputs, finance, services and technologies, and for firms to ease uncertainty in the procurement of farm produce.

The Welfare Schemes of the Government of India for the Poor in the wake of COVID-19

As part of the Rs 1.70 lakh crore Pradhan Mantri Garib Kalyan Package (PMGKP), the Government of India announced free food grains and cash payment to women and poor senior citizens and farmers. The swift employment of the package is being continuously supervised by central and state governments. More than 42 crore poor individuals received financial assistance of Rs 65,454 crore under the scheme of Pradhan Mantri Garib Kalyan Package (PMGKP). Till September 08, 2020, the progress achieved, under various components of PMGKP is as follows:

- Rs 17,891 crore front loaded towards payment of the first instalment of PM-KISAN to 8.94 crore beneficiaries.
- Under Pradhan Mantri Garib Kalyan Ann Yojana, 37.52 LMT of food grains has been distributed to 75.04 crore beneficiaries in April 2020, 37.46 LMT distributed to 74.92 crore beneficiaries in May 2020, and 36.62 LMT distributed to 73.24 crore beneficiaries in June 2020. The Scheme was further extended for 5 months till the month of November. Later then, 98.31 LMT food grains has been picking up by States /UTs so far. In July 2020 36.09 LMT food grains has been distributed to 72.18 crore beneficiaries in August 2020, 30.22 LMT distributed to 60.44 crore beneficiaries, and in September 2020 1.92 LMT distributed to 3.84 crore beneficiaries as on 7th September of 2020.
- In addition under Pradhan Mantri Garib Kalyan Ann Yojana, total of 5.43 LMT pulses has also been distributed to 18.8 crore beneficiaries between April – June 2020. The Scheme was furthermore extended for the 5 months till November, 2020 for distribution of Chana. 4.6 LMT Chana has been dispatched so far. In the month of July 1.03 LMT Chana has been distributed to 10.3 crore beneficiary families, in the month of August 23,258 MT distributed to 2.3 crore beneficiary families. As on 7 Th September, 2020, 1475 MT of Chana distributed to 0.15 crore beneficiary families in September, 86 MT distributed to 0.008 crore beneficiary families for October, and 40 MT distributed so far to 0.004 crore beneficiary families for November. 43
- Under Atma Nirbhar Bharat, Government announced supply of free foodgrains & Chana to migrants for 2 months. The estimated number of migrants provided by the States was about 2.8 crore migrants. Throughout the distribution period up to August, total 2.67 LMT of food grains was distributed to 5.32 crore migrants' peoples. This works out to an average of about 2.66 crore beneficiaries per month, which is nearly 95% of the estimated number of migrants. Similarly, Under Atma Nirbhar Bharat, total quantity of Chana distributed is 16,417 MT to 1.64 crore migrant households, which is 82 Lakh households on an average per month.
- MNERGA: Increased rate of has been notified w.e.f 01-04-2020. In the present financial year, 195.21 crore individual's man-days of work produced. Additional, Rs 59,618 crore released to states to liquidate pending dues of both wage and material.

Source: PIB <https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=1652231>

Concluding Remark

As the epidemic of covid-19 continues to threaten the worldwide food system, the role of state becomes much more relevant. In order to defend and safeguard the livings of millions of individuals associated with the agricultural system, the state should increase spending on social safety nets instantly and take up other short term and medium term policies. Rising income by offloading excess buffer stock and increased credit to the agriculture sector should be the top main concern for post-pandemic economy restoration. The COVID-19 nationwide lockdown was implemented without any



groundwork or planning, and has been implemented in a manner that completely lacks of transparency. Individuals are provided no clear viewpoint of how lengthy is the lockdown going to continue, and what is the government doing to contain COVID infections and alleviate people's suffering, whereas it extends the lockdown week after week, and month after month. The disruptions began by the lockdown have resulted in considerable further economic burden on farmers because of higher costs, increased debt liability, inability to sell the produce at reasonable prices and crop losses. A large number of farmers, in particular, manufacturers of pulses, oilseeds, vegetables and fruits, have been forced to sell their produce at low prices to local traders because of disruptions in functioning of the markets. It must also be stated that the impact of such a disaster in the rural economy is likely to be extremely differential across different classes. News from various villages across the country shows that poor peasants and landless households and women workers are the worst victims in the crisis. Such a disaster would make worse imbalances in the villages because of increased dependency of these economically vulnerable sections on dominant classes for credit, land and employment. In this situation, basic issues such as agricultural reforms, democratisation of local governments and social justice are likely to become even more relevant.

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AGRICULTURAL COMMODITY STORAGE UNDER FCI : AN OVERVIEW

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Abstract-

Food Corporation of India (FCI) is a Public Sector Undertaking, under the Department of Food & Public Distribution, Ministry of Consumer Affairs, Food and Public Distribution. It was established against the backdrop of major shortage of grains, especially wheat. It has primary duty to undertake purchase, store, transport, distribute and sell food grains and other foodstuffs. India witnessed largest food grain production of all time but the losses due to food grain damage is also highest. This damage to food grains is mainly due to inefficient storage facility under FCI.

Private sector participation in agriculture warehousing sector has made it more competitive. FCI needs proper investment and efforts in providing proper storage facilities. The paper reveals the issues and challenges faces by FCI due to storage inefficiency, statewise procurement and storage capacity under FCI. The paper also reveals the strength, weaknesses, opportunities and treats of FCI.

This Paper has objectives as under-

1. To study the foodgrain storage under FCI and other.
2. To study the statewise procurement and storage capacity.
3. To identify the Strength, Weaknesses, Opportunities and Threats.

Keywords- FCI, foodgrain, procurement, storage capacity, SWOT

Introduction-

The Food Corporation of India was set up under the food Corporation Act 1964 and was set up to secure strategic position in food grains trade and implement the National Policy for Price Support operations, procurement, storage, inter-state movement and distribution operations, in short to operate the Central Pool. Today FCI is the country leader in food grains management and is fully focused on helping Farmers feed the country, better and more efficiently, today and tomorrow. Food constitutes the main requirement of every human being. In a sub-continent like India where millions of mouths depend to targeted Public Distribution System (TPDS) and other welfare schemes of Govt. of India, FCI, plays a leading role in making food grains available to the extent of 30 lakh tones during a month, to respective State Govts. For its distribution among beneficiaries. To procure, store, preserve and move such a huge quantity of stocks spreading over vast areas.

To nurture the Green Revolution, the Government of India introduced the scheme of minimum assured price of food grains which are announced well before the commencement of the crop seasons, after taking into account the cost of production /inter-crop price parity, market prices and other relevant factors. The food Corporation of India alone with other Government agencies



provide effective price. Assured for wheat, paddy and coarse grains. FCI and the State Govt. agencies in consultation with the concerned State Govts. Establish large number of purchase centers throughout the state to facilitate purchase of food grains Centers are selected in such a manner that the farmers are not required to cover more than 10 kms. To bring their produce to the nearest purchase centers of major procuring states.

From the days when there was insufficient foodgrain to meet internal requirements to today's self-sufficiency, from the days of import of food grain to the days of maintaining buffer stocks and to the days of export of food grains, FCI has come a long way. In the year 1965, the allocation of food grain was only 59 Lakh tons for wheat and rice, which has increased enormously to approximately 755 lakh tons i.e. an increase more than ten times in these 55 years. FCI has played a vital role in providing food security to the nation. As the principal implementing agency of the food policy of Government of India, the FCI undertakes procurement of foodgrains at the minimum support price to provide remunerative prices to farmers and also to prevent distress sale of their produce. The FCI also maintains a satisfactory level of operational and buffer stocks of foodgrains to ensure national food security. It offers foodgrains to various State Governments for being distributed to consumers through a wide network of fair price shops under the Public Distribution System (PDS), at the Central Issue Price fixed by the Government.

Methodology

The study is basically based on secondary data available in the electronic information domain. The study tries to analyze the issues in the food grain storage capacity under FCI.

Data Collection

Data for the period of 15 years from 2005-06 to 2019-20 has been collected from secondary sources such as Annual Reports of Food Corporation of India, Directorate of Economics and Statistics. The data has been analyzed to find the capacity, stock position and percentage of utilization of warehouses during the last 15 years.

Analysis and Discussion-

The food grains at farm level are stored in traditional as well as in modern storage structures. Food grains are stored in bulk in these storage structures, which are neither rodent proof nor moisture proof. There are estimates that substantial quantity of food grains (about 6.0% to 10% of total production) are damaged in these storage receptacles due to moisture, insects, rodents and fungi and also due to transportation. In the table given below we can see that production continues to increase.

Table1: Production of Major crops in India

(in Lakh Metric Tonnes)

YEAR	PRODUCTION
2005-06	208.60
2006-07	217.28
2007-08	230.78
2008-09	234.47
2009-10	218.11
2010-11	244.78
2011-12	259.29
2012-13	257.13
2013-14	265.04
2014-15	252.03
2015-16	251.54
2016-17	275.11
2017-18	285.01



2018-19	284.95
2019-20	291.95
CV	10.40

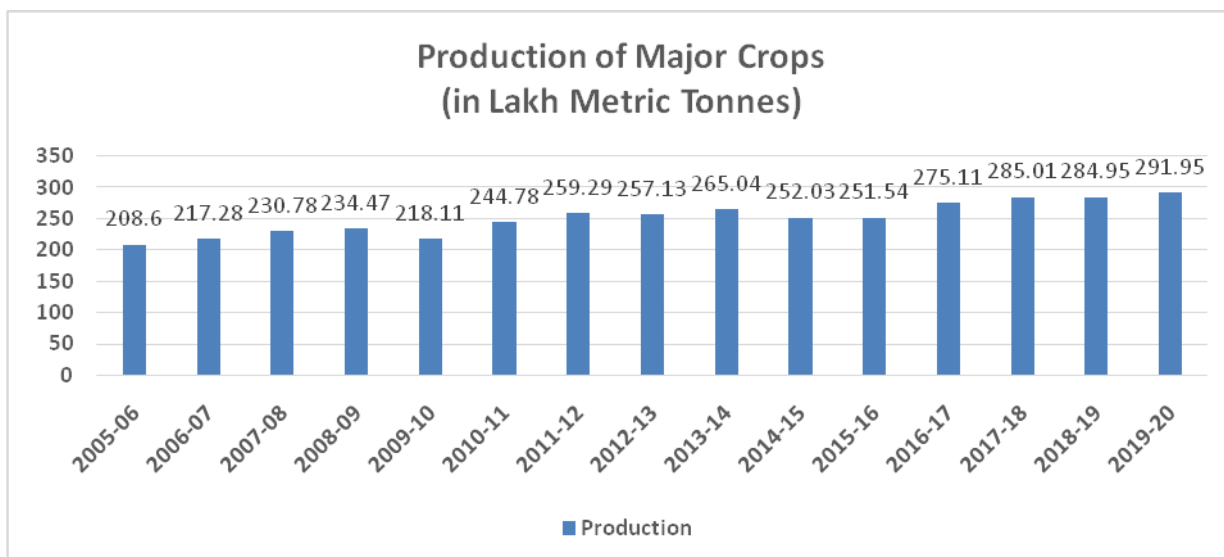


Fig 1. Agriculture production of Major crops in India (Sources: Directorate of Economics and Statistics, Ministry of Agriculture, GoI.).

Here, in the table, the total production for the year 20 05-06 was Lakh Metric Tonnes and that in the year 2019-20 is increased to 291.95 Million Metric Tonnes. The Co-efficient of variance for the given production of foodgrains is 10.40. The warehousing capacity available in India, with various agencies/sectors is as follows:

Table 2 : Storage capacity with FCI and other Agencies

The storage capacity is seen to be fluctuating from the year 2011 to 2020. For the year 2011, the storage capacity under FCI was 316.10 LMT, under other agencies it was 291.32 LMT making it

As on	Capacity of FCI	Storage Capacity With Other Agencies	Total (in Lakh Metric Tonnes)
01-04-2011	316.10	291.32	607.42
01-04-2012	336.04	341.35	677.39
01-04-2013	377.35	354.28	731.63
01-04-2014	368.90	379.18	748.08
01-04-2015	356.63	352.59	709.22
01-04-2016	357.89	456.95	814.84
01-04-2017	352.71	420.22	772.93
01-04-2018	362.50	480.53	843.03
01-04-2019	388.65	467.03	855.68
01-04-2020	412.03	343.91	755.94

to the total of 607.42 LMT storage capacity. The storage capacity for the year 2020 under FCI is 412.03 LMT whereas under Other agencies it is 343.91 LMT. Thus, the total storage capacity is 755.94 LMT.

FCI had to hire space from various agencies such as CWC, SWC, SGA and Private parties as its own storage capacity was insufficient to accommodate the Central Pool stock of food grains. The total storage capacity available with FCI is given in table:



Table 3 : Total Covered and CAP Storage Capacity under FCI

(fig in Lakh Metric Tonnes)

YEAR	Covered		CAP		Grand Total	Stock held	%Utilisation
	Owned	Hired	Owned	Hired			
2005-06	129.31	99.05	22.11	5.09	255.56	118.7	46
2006-07	129.41	93.42	22.92	6.23	247.85	156.0	54
2007-08	129.48	87.13	22.06	0.27	238.94	117.5	49
2008-09	129.67	101.24	21.73	0.15	252.79	275.4	76
2009-10	129.69	128.90	25.08	4.69	288.36	278.01	73
2010-11	129.91	154.64	26.16	5.44	316.15	302.65	91
2011-12	130.03	172.13	26.37	7.51	336.04	263.64	78
2012-13	129.96	209.95	26.37	11.07	377.35	303.74	82
2013-14	130.03	208.62	26.38	3.87	368.9	279.54	73
2014-15	127.16	202.02	26.02	1.43	356.63	255.20	68
2015-16	128.05	203.80	26.02	0.02	357.89	263.77	72
2016-17	128.19	198.50	26.02	0	352.71	233.87	66
2017-18	128.42	208.06	26.02	0	362.50	276.18	73
2018-19	127.33	235.30	26.02	0	388.65	306.25	79
2019-20	127.77	258.24	26.02	0	412.03	356.88	87

- FCI is having a total covered storage capacity of 284.55 Lakh tonnes as on 31.12.2010.
- The covered storage capacity of FCI on 31.3.2020 was 386.01 lakh tonnes.
- Thus 16.45 lakh tonnes of covered capacity has been added since. The capacity has increased by almost 5% in a period of 10 years.
- Sufficient storage capacity is provided so that procurement operations as well as storage can be ensured in a scientific manner.

Procurement

- The Central Government extends price support for procurement of wheat, paddy and coarse grains through the FCI and State Agencies. All the food grains conforming to the prescribed specifications are procured by the public procurement agencies at the Minimum Support Price (MSP) plus incentive bonus announced, if any.
- Whatever Wheat and Paddy is offered by the farmers is purchased at Minimum Support Price (MSP) by State Government agencies and FCI for Central Pool.
- Farmers are required to sell it within the stipulated time period and confirm to any of the specification prescribed by Government of India (GoI)



- Farmers are not obliged to sell only the government and can sell outside as well in case they get a higher price than MSP.

Table 4 : Procurement of wheat for central pool

(in lakh metric tonnes)

Sr. No.	Year	Procurement of Wheat
1	2011-12	283.4
2	2012-13	381.5
3	2013-14	250.9
4	2014-15	280.2
5	2015-16	280.9
6	2016-17	229.6
7	2017-18	308.3
8	2018-19	358.0
9	2019-20	341.3
10	2020-21	364.6

Procurement of wheat for central pool is seen to be increasing from 283.4Lakh Metric Tonnes to 364.6 Lakh Metric Tonnes from the year 2011-12 to 2020-21 respectively.

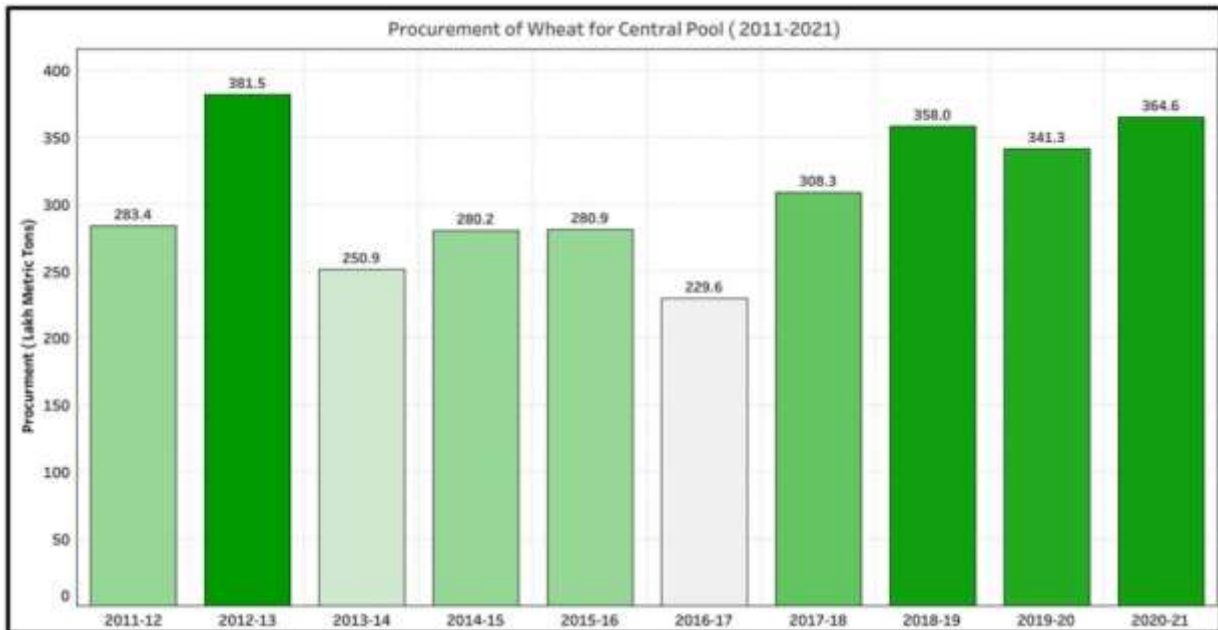


Fig 2. Procurement of Wheat for Central Pool.

Table 5: Procurement of Rice for central pool

(in lakh metric tonnes)

Sr. No.	Year	Procurement of Rice
1	2010-11	342.0
2	2011-12	350.4
3	2012-13	340.4
4	2013-14	318.5
5	2014-15	320.4
6	2015-16	342.2
7	2016-17	381.1



8	2017-18	381.9
9	2018-19	444.0
10	2019-20	477.1

The procurement for rice is seen to be increasing from 342 Lakh Metric Tonnes to 477.1 Lakh Metric Tonnes from the year 2010-11 to 2019-2020 respectively.

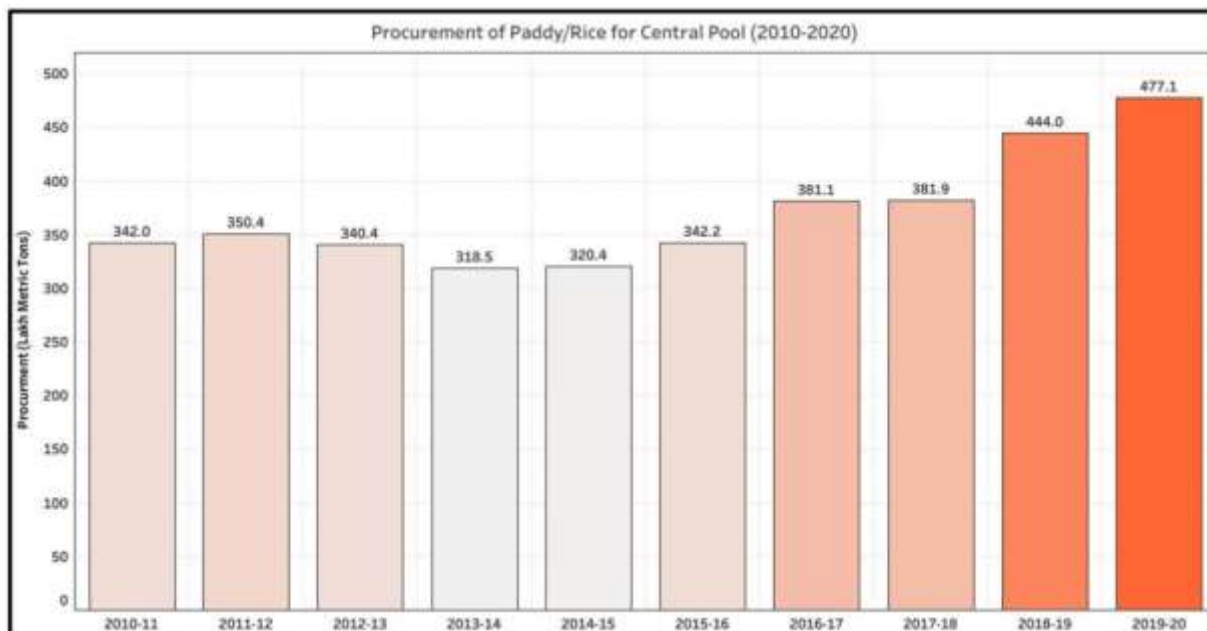


Fig 3. Procurement of Rice for central pool.

Table 6: Statewise storage capacity under FCI

(in lakh metric tonnes)

YEAR	PUNJAB	HARYANA	MP	UP	MH	OTHERS	TOTAL
2005-06	71.05	22.05	34.21	25.27	15.65	87.33	255.56
2006-07	67.33	21.3	34.79	21.02	16.35	87.06	247.85
2007-08	63.56	21.65	33.67	25.05	15.87	79.14	238.94
2008-09	63.18	23.16	34.22	26.13	17.84	88.26	252.79
2009-10	76.29	24.45	38.18	26.87	20.13	102.44	288.36
2010-11	83.22	26.24	44.55	37.44	21.28	103.42	316.15
2011-12	83.97	27.1	49.53	47.53	21.23	106.68	336.04
2012-13	103.24	33.46	46.31	57.32	23.32	113.7	377.35
2013-14	117.09	40.25	29.68	47.06	24.81	110.01	368.90
2014-15	111.93	47.43	24.81	44.27	20.4	107.79	356.63
2015-16	109.70	52.33	19.82	50.31	20.57	105.16	357.89
2016-17	113.02	53.3	17.55	46.34	19.28	103.22	352.71
2017-18	115.23	54.83	18.8	51.2	18.3	104.01	362.37
2018-19	116.05	57.65	27.01	54.86	19.89	113.18	388.64
2019-20	119.11	61.93	36.13	54.17	20.38	120.33	412.05
CV	23.31	40.34	30.72	31.10	13.15	11.36	

Punjab is having the highest storage capacity amongst the states of India i. e. 23.31 Lakh Metric Tonnes. Second large storage capacity is seen to be in the state of Haryana then Madhya Pradesh, Uttar Pradesh, Maharashtra, etc. Overall storage capacity is seen to be increasing from 255.56 Lakh metric Tonnes to 412.05 Lakh Metric Tonnes from the year 2005-06 to 2019-20



respectively. Coefficient of variation for Punjab is seen to be 23.31, that of Haryana is 40.34. For Madhyapradesh, Uttar Pradesh, Maharashtra and others Coefficient of variation is seen to be 30.72, 31.10, 13.15 and 11.36 respectively.

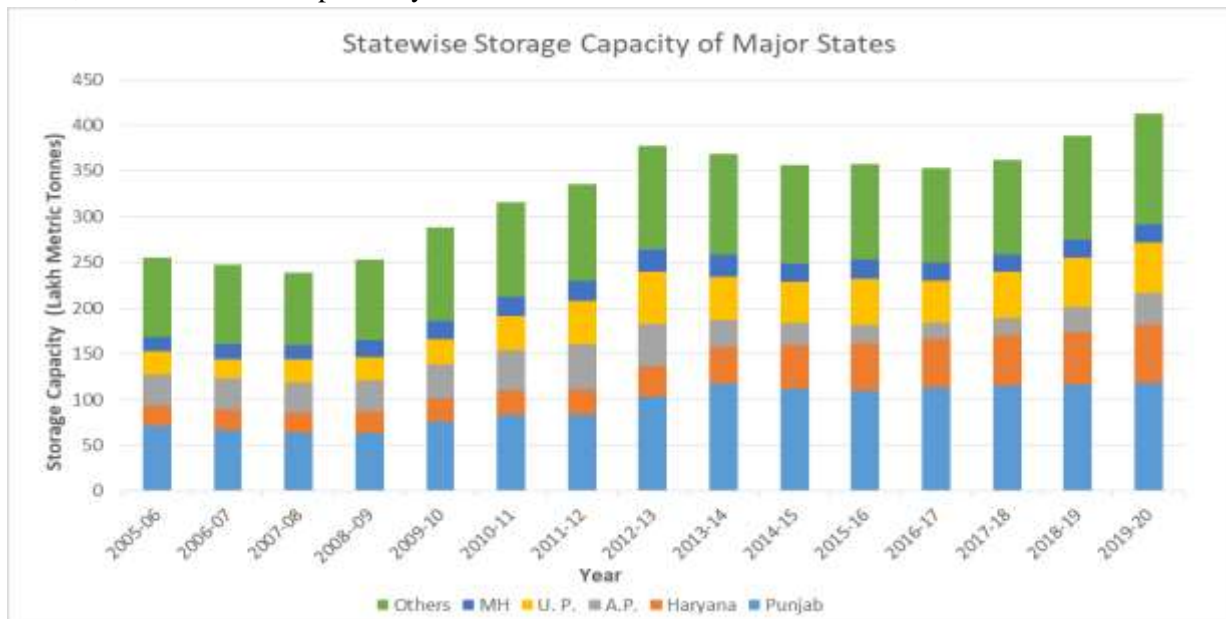


Fig 4: Statewise Storage Capacity of Major States

Status of silo Construction

- State-run Food Corporation of India (FCI) has entered into an agreement with Adani group for construction of two silos to store wheat, at an estimated cost of about Rs 80 crore.
- The two silos would have a combined storage capacity of 75,000 tonnes.
- As part of the agreement, Adani Agri Logistics will construct silos at Kotkapura in Punjab and Katihar in Bihar in the next two years, a senior government official said.
- The silos will be designed, built, financed and operated by the private partner while it will be owned by the FCI.
- FCI, the government's nodal agency for procurement and distribution of foodgrains, would provide guarantee of rentals for 30 years, the official added.
- The silo at Kotkapura would be of 25,000 tonne capacity and will require an investment of about Rs 35 crore, while the other silo at Katihar would have a capacity of 50,000 tonnes to be built at a cost of about Rs 45 crore, a source said.
- A silo is a steel structure, comprising large size cylindrical shape bins normally each with a capacity of about 12,500 tonnes, where grains can be stored without jute bags for longer duration.
- FCI will provide the rent assurance for 30 years. For the first year the rate is fixed at Rs 97 per tonne per month. The rates will keep on revising based on the predecided formula, the source added.

Rent paid by FCI to each agency for hiring of godowns agency wise, the Ministry furnished the details of the rent paid by the FCI for hiring of godowns are as under:-

Table 7: Rent paid by FCI to other agencies

(in crore Rs.)

Year	Amount Paid as Rent
2004-05	478.10
2005-06	403.67
2006-07	317.31



2007-08	271.06
2008-09	359.30
2009-10	457.21
2010-11	683.24
2011-12	884.13
2012-13	1470.01
2013-14	2026.61
2014-15	2227.66
2015-16	1844.97
2016-17	2059.85
2017-18	2345.42
2018-19	2413.78
2019-20	2643.12
CV	68.75

Source: Compliance audit Union Government Food Corporation of India

The rent paid by FCI to various private parties and agencies has been seen increasing throughout the period. There is tremendous increase in the value of rent paid by FCI in the year 2004-05 and that in the year 2019-20. Coefficient of Variance for the value of rent paid is seen to be 68.75 which means as the years passes the value of rent paid by FCI will tend to increase in huge amount.

SWOT Analysis

- SWOT analysis is a framework used to evaluate a company's competitive position and to develop strategic planning. SWOT analysis assesses internal and external factors, as well as current and future potential.
- Strengths and Weaknesses are often restricted to company's internal - resources, skills and limitations.
- Opportunities and Threats are factors that are analyzed in view of the prevalent market forces and other factors such as legal & environmental, technological, social, health & safety, economic, and political.

9. Conclusion and Recommendations

- It is concluded that unless some drastic measures are taken to improve the storage capacity of food grains, the wastage of food grains can not be curbed which could be utilised for feeding millions of poor people.
- Adequate man power and supervision is required for scientific and safe storage.
- FCI has tremendous potential in serving the nation if it caters to few existing problems.
- FCI should do the needful to utilize the unused space efficiently in order to relieve of the stress from other locations.
- A suitable location has to be found to make for a new warehouse/location.
- With proper foresight and planning in lifting the stock of the central pool in time from SGAs, money paid as hiring charges and carry over charges to SGAs can be utilized for construction of new storage spaces.
- Adequate manpower and supervision is required for scientific and safe storage in CAP storage.
- To save costs, proper plinths should be constructed in vacant government lands which can be used for temporary storage of food grains during peak procurement seasons.
- Intervention of state governments in identifying and handing over land for construction of covered storage spaces without undue delay in obtaining of various clearances will speed up addition of storage capacity.



- The total barren and uncultivable land in India is 17.29 million hectares which can be used for the construction of new storage structures.

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**DIGITIZATION ACTIVITIES IN INDIAN AGRICULTURE****R D Vaidkar,**

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National e-Governance Plan (NeGP)

The National e-Governance Plan (NeGP), takes a holistic view of e-Governance initiatives across the country, integrating them into a collective vision. Around this idea, a massive countrywide infrastructure reaching down to the remotest of villages is evolving, and large-scale digitization of records is taking place to enable easy, reliable access over the internet. The ultimate objective is to bring public services closer home to citizens. As a part of agricultural extension (extending research from lab to the field), under the National e-Governance Plan - Agriculture (NeGP-A), various modes of delivery of services have been envisaged. These include internet, touch screen kiosks, agri-clinics, private kiosks, mass media, Common Service Centres, Kisan Call Centres, and integrated platforms in the departmental offices coupled with physical outreach of extension personnel equipped with pico-projectors and hand held devices. However, mobile telephony (with or without internet) is the most potent and omnipresent tool of agricultural extension. Technology for Farmers under NeGP would facilitate farmers to get real time price information, online ordering of inputs and online cash, loan, and relief payment with mobile banking. Technology for Financial Inclusion shall be strengthened using mobile banking, Micro-ATM program and CSCs/Post Offices.

M-Kisan

M-Kisan is a mobile-based agriculture advisory services that enables all Central and State government organizations in agriculture sectors to give information/services/advisories to farmers by SMS in their language, preference of agricultural practices and location

*Subscribers receive real-time and interactive advice direct from a panel of experts on crop and livestock such as insects, diseases and nutrition helpline

*Farmers also receive regular weather bulletins, pest and disease alerts and market price information to support on-farm decision-making

*Advice is delivered through voice based messages using IVR (interactive voice response) technology available on all mobile phone types.

The service has recently been expanded to provide a farmer helpline across three Hindi speaking states of central and eastern India (Madhya Pradesh, Bihar and Uttar Pradesh). The call centre provides farmers direct contact with subject matter experts, and answers queries to farming problems in their own language. The service enables the farmer to select specific subjects, for example, insect problems of tomatoes, record a query and listen to the solution either straight away or when an expert is available. The query data generated by the call centre will help mKisan gain an overview of the type and extent of farmers' queries, and will further help to expand and tailor the service's content to better support its subscribers.

PLANT PROTECTION INFORMATICS GROUP



Plant Protection Strategy and activities have significant importance in the overall crop production programme for sustainable agriculture. Plant Protection efforts aim at minimizing crop losses due to ravages of insects, pests, disease, weeds, nematodes, rodents etc. The major thrust areas of plant protection are promotion of Integrated Pest Management, ensuring availability of safe and quality pesticides for sustaining crop production from the ravages of pests and diseases, streamlining the quarantine measures for eliminating the chances of entry of exotic pests and for human resource development including empowerment of women in plant protection skills. Directorate of Plant Protection, Quarantine and Storage (DPPQ&S), Department of Agriculture and Cooperation (DAC) is the nodal agency for plant protection at national level through its network of regional and field units namely Central Insecticides Board and Registration Committee (CIBRC), Central Insecticide Laboratory (CIL), Regional Pesticide Testing Laboratories (2), National Plant Protection Training Institute (NPPTI), Plant Quarantine Stations (31), Central Integrated Pest Management Centres (31) and Locust Warning and Control Centers (11) located across the country. The Directorate has strong linkage for information exchange with state governments for implementing various central schemes. The plant protection and quarantine services of DPPQ&S; focus to sustain crop production by reducing the losses in crop production from pests and diseases and ensure biosecurity. It includes:

*Pest Surveillance and forewarning

*Locust surveillance

*Conservation and augmentation of bio-control agents

*Production and release of bio-control agents

*Preparation and propagation of IPM practices

*Conducting of Farmer Field School (FFS)

*Plant Quarantine, fumigation, pesticide registration, pesticide sample quality testing services

*Registration of pesticides dealers

*Availability and distribution of pesticides

*Infrastructure Development and Capacity buildings in Plant Protection and Quarantine activities

To harness the potential of ICT for effective Plant Protection and Quarantine services in the country in information reporting, processing and dissemination, Agricultural Informatics Division of NIC envisaged strengthening of Plant Protection Informatics Network (PPIN) in collaboration with DPPQ & S; DAC, Ministry of Agriculture and Farmers Welfare.

IMPROVING FARMER'S LIVELIHOOD THROUGH M-COMMERCE AND E-COMMERCE IN AGRO-CHEMICALS IN INDIA

Prime Minister Narendra Modi launched a new mobile app— Kisan Suvidha— which will provide farmers information on the five parameters of weather, input dealer, market price, plant protection and expert advisories. Given that India has the world's second largest smartphone market, with 87 million rural mobile Internet users, and agriculture is the mainstay of Indian economy, with more than 60 per cent of the workforce employed in it, it is presumed that this app is likely to have many takers and is poised to change the face of Indian agriculture. However, there are some worrying factors. First, a smartphone is required to operate this app. Secondly, at present; the information is available only in Hindi and English. Both these factors are currently proving detrimental to the large-scale impact this app set out to create. According to IAMAI, the Active Internet User (AIU) base in rural India was 6.7% of the overall rural population of 905 million and accounted for 61 million as per verified 2014 data, which is projected to be 109 million by mid-2016. However most of these users use the same for messaging service WhatsApp only. Not all mobile-based services are useful as they mostly provide generic advisory which doesn't help in a single catch tool. A half-hour episode once a fortnight can inspire someone to be a better farmer but not necessarily help much. Farm advisories need to be customized and given in a method that farmers can understand and execute on their fields.

FUTURE PLANT PROTECTION AND CROP ENHANCEMENT SOLUTIONS



Indian Agriculture needs to ensure food and nutritional security for the nation due to growing population, increasing urbanization at the expense of agricultural resources and loss of agricultural produce due to pest attacks. It therefore becomes imperative to implement measures not only for crop protection but also for enhancing the crop productivity. Integrated Pest Management (IPM) is a sustainable approach to pest management using a combination of techniques like Biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. In this process, Pesticides are used only after ensuring their necessity as per established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment. The most effective, long-term way to manage pests is by using a combination of methods that work better together than separately.

CONCLUSION

With a present size of 1.32 billion, India currently supports nearly 17.84% of the world population, with 2.4% land resources and 4 % of water resources. It is also noted that about 15-25% potential crop production is lost due to pests, weeds and diseases. Continuously shrinking arable land, slow pace of improvement in farm productivity and loss/wastage of crops both during and post-harvest poses a critical challenge to ensuring food and nutritional security for the nation. To add to the complexity, the agricultural workforce in India is expected to reduce by 50% in the coming decade. A combination of Crop protection and Crop enhancement solutions will be critical. Although yield per hectare has doubled in the past years, Indian agriculture is still grappling with challenges like high monsoon dependency, unpredictable weather patterns, reduction in arable land, low per hectare yield, increase in pest attacks, etc. These indeed are challenging times. There are good emerging trends and solutions for sustainable crop protection which include crop protection chemicals, agronomy, fertigation, seed treatment, bio-technology development etc. The next generation agriculture in the country will have to encompass all such possible solutions using the best mode in a given scenario. The sector faces many challenges and solution to same can lead to India becoming a global manufacturing hub of quality crop protection chemicals. Plant protection chemicals or agrochemicals are an important input for facilitating pre-harvest and post-harvest management and thus ensuring national food security. The agrochemicals sector in India has huge unrealized potential for growth, given the present low level of application, as compared to global norms. Besides, agrochemicals are also highly export intensive, with more than 50% of production fully exported. Although, the sector faces many challenges right now, the solution to same can result in India becoming a global manufacturing hub of quality plant protection chemicals. Plant protection continues to play a significant role in achieving targets of crops' production. The major thrust areas of plant protection are promotion of "Integrated Pest Management", ensuring availability of safe and quality pesticides for sustaining crop production from the ravages of pests and diseases; streamlining the quarantine measures for accelerating the introduction of new high yielding crop varieties; besides eliminating the chances of entry of exotic pests; and for human resource development including empowerment of women in plant protection skills. In addition to the use of crop protection chemicals, Indian agriculture needs to focus on specific solutions to enhance crop productivity. It is imperative for us to adopt efficient agronomy practices, fertigation, seed treatment, biotechnology and plasticulture to reduce wastage and attain self-sufficiency in agricultural output. Integrated pest management is one of the most effective and sustainable ways of tackling the issue of pests and diseases in Indian agriculture. Many organizations and start-ups in the agriculture domain are working towards addressing the issues faced by Indian agriculture. Government of India is proactively working towards addressing the unmet needs of the farmers across the agri-value chain through multiple initiatives like Soil Health card scheme, Paramparagat Krishi Vikas Yojana, National e-Governance Plan (NeGP), m-Kisan etc. Given the geographic expanse of India, digital technology based solutions could be one of the efficient routes to



reach the farmers and equip them with information in real time which will help in arriving to better and timely farming related decisions. Indian agriculture ecosystem is realizing this but it will take time for these technologies to be embedded into everyday farming practice.

Control of the registration and proper use of Plant Protection Products (PPP) is key to ensure that fruits and vegetables produced in India comply with the requirements of the countries where they are sold, to minimize exposure of populations to harmful residues. In Plant Quarantine, besides ongoing activities, the thrust area is pertaining to Pest Risk Analysis (PRA) and post entry quarantine surveillance. This has become essential in the light of World Trade Organization (WTO) agreement, which will facilitate more and speedier movement of plants, planting materials globally. Such a situation will expose a linking danger for the introduction of exotic pests/diseases in the country. Considering this fact, Ministry of Agriculture issued a notification entitled "The Plant Quarantine (Regulation of Import into India) order 2003" replacing the "The Plants, Fruits and Seeds (Regulation of Import into India) order 1989". The new regulation was effective from 01.01.2004. The existing Plant Quarantine Stations will be strengthened and there is possibility to establish some more stations with a view to enforce the quarantine regulations more effectively so as to keep the exotic pests and diseases at bay. Major Plant Protection laws in India and relevant international legal instruments include the following:

*The Destructive Insects and Pests Act, (DIP Act) 1914 and amendments (popularly known as Comprehensive Plant Quarantine Act)

*Plants, Fruits and Seeds (Regulation of Import into India) order, 1989 (popularly known as PFS order)

*Protection of Plant Varieties and Farmers' Rights (PPVFR) Act, 2001

*The Plant Quarantine Order 2003 – Amendments

*Pesticides Management Bill, 2008

*The Agricultural Biosecurity Bill, 2013

*International Plant Protection Convention

*WTO-SPS Agreement

*International Standards on Phytosanitary Measures (ISPMs)

*Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs)

There is an urgent need to ensure both domestic and global food security with effective crop protection solutions by assisting the industry experts to understand the new tools for agroecosystem management, projections for seed coating materials market, bio-control market, seed treatments and seed enhancements to extend the crop protection window, and phyto-biomes enabling sustainable and profitable production of crops to meet global demands while minimizing negative impacts on the environment.

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**PARTICIPATION OF WOMEN IN AGRICULTURE - A STUDY****Dr. K. Radhika**

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ABSTRACT :

India is a land of villages and agriculture is the mainstay of her economic life . According to the 2011 census the percentage of total workforce engaged in agriculture and allied activities is 54.6 .Women constitute about one half of India's country's population . Their place in the Indian society has been prominent . They play a pivotal role in agriculture . A profile of woman labour explodes the myth that she belongs to the so called weaker sex . As agriculture is still a major activity in our country , a very high percentage of the female population , as a whole , is directly or indirectly involved in farming as cultivators or labour . Rural Women play the dual role of housewife and mother along with that of primary producer ,processor and seller of products from the family farm . In any farming system , the rural woman is a central part of the human ecosystem in which resources are produced ,brought or gathered and transformed for use or sale by the family . Women are moving slowly from invisibility to visibility and are being recognized as developmental partners all over the world . Rural women play a significant and crucial role in agricultural development by their involvement in crop production .

Keywords : female labour , agriculture , allied activities , cultivators , agricultural Labour**A HISTORICAL BACKGROUND :**

According to Swaminathan(1985), "Some historians believe that it was women who first domesticated crop plants and thereby imitated the art and science of farming , while men went out hunting in search of food ,women started gathering seeds from the native flora and began cultivating those of interest from the point of view of food ,feed ,fodder ,fibre and fuel .

Women have played and continue to play a key role in the conservation of basic life support systems , such as land ,water ,flora and fauna . They have protected the health of the soil through the maintenance of varietal diversity and genetic resistance . Therefore ,without the total intellectual and physical participation of women ,it will not be possible to popularize alternative systems of land management to shift cultivation ,arrest gene and soil erosion ,and promote the care of the soil and the health of economic plants and farm animals .

WOMEN PARTICIPATION IN AGRICULTURE :

In any economy ,women play a prominent role at various levels .They are the backbone of the village economy in rural India . Women take up different works to eke out their livelihood and the majority of the rural women depend on agriculture which is the major ,unorganised sector in India . Many of these labourers are landless ,homeless and belong to the socially depressed classes of the society . Despite the seasonal nature of employment in the field of agriculture ,enormous growth has been witnessed in the size of agricultural labourers since the beginning of this century . Ours is basically an agricultural country . According to the 2011 census the percentage of total workforce engaged in agriculture and allied activities is 54.6 . Agriculture ,therefore has become a family enterprise .The whole family of men ,women and children work on it and earn their livelihood .Men's role in agriculture widely known ,but women's role is not that open ,though they mostly work for more number of hours with less privileges ,tedious activities and with painful postures .It is the only in the recent times that their role being recognised ,though there is a possibility that the women



themselves are not aware of their contributions ,hardships and above all overburden of not only the household jobs but jobs related to agriculture and allied fields . The condition is worse when they work on fields not of their own but of others . In other fields , they work as labourers with no facilities for themselves or for their children . Children are left on the fields under the umbrella of sun , dust , rain and cold . Women do not know their rights , do not know how to fight for their rights .

A profile of woman labour explodes the myth that she belongs to the so called weaker sex . She levels the land ensuring a uniform distribution of seeds and fertilizers and seeks to minimise the surface runoff, a difficult job indeed in the hill regions where the terraces are steeply inclined . Then ,she manures the land ,one of the most labour intensive tasks. Inter -cultivation is also the woman's job , which demands light turning over this soil after the seeds have sprouted . This job is usually done with the aid of a small hoe.

Crops which grow tall like maize and do not have an extensive root system require earthing up twice or more in a season , particularly in the rainy season , when the soil around the roots is washed away by heavy rains. The soil is rigged up around the main stem of the plant to cover the root zone . This job too is done by women . With the help of small hoes , women do regular weeding of the crops in order to ensure better crop growth and yields .

India is a land of villages and agriculture is the mainstay of her economic life . Women constitute about one half of India's country's population . Their place in the Indian society has been prominent . They play a pivotal role in agriculture . They work in the fields alongside men , attend to off-farm activities like processing ,grading and marketing of produce , tend to cattle and run the household . Nevertheless ,certain basic inadequacies in terms of comparatively lower literacy and skills among women ,their inability to engage in work consistently for various reasons , limited avenues for participation etc. have handicapped the desired level of their contribution to rural development . As a result ,participation by women has largely been confined to activities involving low wages and drudgery .

Despite these disadvantages , the economic pressures and the urge to protect their levels of living from getting eroded fast have made them continue in the work stream . Removal of these inadequacies and constraints is crucial to the growth of agriculture in all developing countries ,including India .

As agriculture is still a major activity in our country , a very high percentage of the female population , as a whole , is directly or indirectly involved in farming as cultivators or labour . Majority of women in the villages participate in agriculture as agricultural labour . Women's participation as cultivators is minimal .

Rural Women play the dual role of housewife and mother along with that of primary producer ,processor and seller of products from the family farm . In any farming system , the rural woman is a central part of the human ecosystem in which resources are produced ,brought or gathered and transformed for use or sale by the family . Livestock farms are a part of that ecosystem, and rural women's role extends from her labour contribution to participation in decision -making about the choice of animals and poultry ,their care and feeding ,housing ,breeding ,marketing and the use of animal products . In the absence of adequate quantified baseline data ,however ,precise production responsibilities cannot be identified ,and this makes it difficult to direct inputs appropriately .

Farm women play a significant role in agricultural production . Number of studies revealed that development has had adverse consequences on women in third world countries with accelerated development ,women's workload increased . Status of women's work decreases and poor rural women have increased difficulty in meeting the subsistence needs of their families , with the result , often plagued by malnutrition . The development process has actually made the day-to-day living of women a drudgery and misery by excluding them from access to modern agricultural techniques . It is



disconcerting to note that development experts recognise women as 'reproducers' but ignore them as 'producers'.

According to modelled International Labour organization estimates, out of total female employment 54.7 percent females are employed in agriculture in 2019. Women are engaged in a number of farm operations along with men. Activities such as application of manure, land preparation, seed grading, sowing, dabbling, planting, irrigation, fertilizers application, plant protection, harvesting, threshing, shelling, hulling, winnowing, cleaning and storing grain, feeding cattle, looking after much animals, poultry and kitchen gardening are the main occupations of farm women.

Community wise women's participation in agriculture is highest among the tribals, than among the scheduled castes. However, social science researchers mention that the degree of participation declined with higher position in the social hierarchy.

Women play a significant and crucial role in agricultural development and allied fields including crop production, livestock production, horticulture, post-harvest operations, agro/social forestry, fishing etc. The nature and extent of women's involvement in agriculture vary greatly from region to region and even within a region, their involvement varies widely among different ecological subzones, farming systems, caste, class and socio-economic status of families etc.

Women's work, especially in agriculture, has been made peripheral and women's multiple roles in the rural economy have been ignored in the androcentric environment of planning and policy making.

If development is a process of construction, we have two pillars, man and woman; but, the latter is structurally weak. It is hardly surprising, then, that the super-structure becomes lopsided.

Women contribute directly to almost all agricultural labour without being the direct beneficiaries of agricultural inputs, training or capital. Irrespective of agrarian structures, women's work is buried in the collective of a household or family. Women also perform more agricultural operations than men. In all the three crops, they work for more months in a year than men, and perform all operations except ploughing. During the agricultural season, the working day of the woman is as long as fifteen hours including her household work. Women's wages, however, are generally lower than men's wages and the operations done by men are done with practically no mechanical aids and are time bound. The casualisation of female labour has been because of the limited impact of overall growth in agriculture and the growing displacement of workers in the rural non agricultural sector.

The woman agricultural worker has rarely been recognised as a producer in her own right. Lacking land rights as an individual, the woman worker cannot even cultivate land on behalf of a male member of the family or contribute her labour towards her own betterment. Most land tenure systems exclude women one way or another.

In the context outlined above, the female agricultural worker emerges as one with limited or no access to any productive resources (land, credit, skill upgradation) or basic facilities or amenities and renders her invisibility in the agricultural economy. Her gender compels her to take up the less visible and less remunerative reproductive role and her caste limits her social network and despite the decreased contribution by the man (due to alcoholism, debt etc.,) she has to survive by her ingenuity and adaptation for survival. She is, thus, assetless, underemployed, underpaid, illiterate and undernourished and lacking accessibility to credit and other needed resources.

Women are moving slowly from invisibility to visibility and are being recognized as developmental partners all over the world. Rural women play a significant and crucial role in agricultural development by their involvement in crop production, livestock production, horticulture, sericulture, post harvest operations etc.



Over the past few years ,development of women has been receiving a special emphasis .However ,in practice ,it is staggering due to various factors such as low literacy ,the restrictive social structure ,predominance of patriarchal society ,lack of decision making opportunity and ability ,low exposure to growth opportunities .Apart from all these ,the major factor responsible for the lack of developmental impetus among women is their non involvement in activities that result in income generation .

A large proportion of working women are in rural areas and their principal source of employment is agriculture . Majority of women in agriculture are working on their own account or as unpaid family workers and most of them do not have access to cash income .

The seasonal nature of agriculture and low productivity reduce demand for female labour and as a result forced idleness is higher among women than men . Women's productivity in agriculture also suffers from uneconomic holdings and subsistence nature of agriculture in which the family consumes the produce . Tasks performed by women are labour intensive and mostly done by hand . This has evidently reduced the work efficiency of women . Regardless of these variations ,there is hardly any activity in agricultural production.

WOMEN POPULATION ENGAGED IN AGRICULTURE :

“ In order to awaken the people ,it is the women who have to be awakened .Once she is on the move ,the family moves , the village moves ,the nation moves ”. - Pandit jawaharlal Nehru

Women play a significant role in indian agriculture .According to International Labour Organization estimates for 2019 in India compared to 39.6 percent of men , 54.7 percent of the female working population was actively engaged in agriculture . Women as agricultural labourers participate in several activities such as seeding ,transplanting , weeding , fertilizer application ,selling , looking after animals , kitchen gardening etc. Several of these operations are carried out by women only . Thus by participating in the various agricultural activities ,they directly and indirectly influence the course of agriculture and animal husbandry.

UNRECOGNISED AND UNDER-PAID :

Though women play an important role in agriculture , both as cultivators and as agricultural labourers , women workers are paid less than men . This wage discrimination persists through the occupational segmentation of the labour market where women are confined to certain operations such as seeding ,transplanting and weeding . This is also open discrimination in certain sectors like harvesting where women are paid less for performing the same task .

In the developing countries ,in spite of women being the major producers of food suppliers by undertaking most tiring and time consuming work in the process , their contribution is not recognised through recorded evidence . Statisticians , planners and scholars have problems in defining and quantifying such works . As a result of the prevailing confusion over the definition of 'productive work' or 'household work' , there has been a gross under -enumeration of women in the rural workforce of many of the developing countries . Women's work has been ignored . The 'productive workers' have been defined as those who are paid wages against their work . Such a definition has led the researchers to consider those women ,who work only in the formal sectors.

The real issue , therefore ,is more serious despite their involvement in agriculture work in such a long magnitude . They have not been actively involved in the mainstream of development and there is hardly any appreciation and recognition of their extensive contribution . By and large , they have remained as 'invisible workers' .

The prosperity and growth of a nation depend on the status and development of its women as they not only constitute nearly half of its population . The crucial role of women in agriculture ,allied activities and household activities have ,however ,been under-estimated and under-valued . The multiple roles played and the productive inputs made by women in terms of work hours contributed or equivalent income generated in the family are not recorded .

**CONCLUSION :**

Studies on women in agriculture conducted in India point to the fact that women contribute far more to agricultural production than has generally been acknowledged . Recognition of their crucial role in agriculture should not obscure the fact that farm women continue to be concerned with their primary function as wives , mothers and homemakers . Traditionally , women had no definitive decision making role in a majority of family affairs because of dominance of male members in the joint family system. The situation now seems to be changing considerably owing to the introduction of new home and farm technologies and disintegration of the joint family system . But , despite all this the patriarchal system of family life which has been in vogue since time immemorial has relegated the women to the background .

There is no denying the fact that rural women have been contributing largely to the country's economy which is mainly agriculture based . Their share of labour is particularly significant in the context that they actually perform the agricultural work , household maintenance , child rearing , collection of cooking fuel/wood and fodder , fetching drinking water etc . However unfortunately , this is also the sector where women's role as unpaid labour in productive activities is most prominent .

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Understanding The Status And Role of Women As Farmers In Indian Agri-Culture System.

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Abstract: The fundamental problem has been the non recognition of women as cultivators. The systematic exclusion of women from economic benefits and property rights of entitlement, institutional credit, pensions and policies beneficial to their gender has been deeply rooted into the society in the name of age old traditions, cultures, and customs. Gender discrimination, displacement of married women, the denial of any social status to women under patriarchy, illiteracy and dominance of male gender in various governmental structures are some of the other major reasons for this exclusion. This paper attempts to locate the space women needs to create as farmers for themselves in Indian Agricultural system.

Introduction: Agriculture is a way of life for many Indians. Agriculture has proved to be the backbone of the Indian economy during this world wide Pandemic. It has provided hope in social sector, prevented economic downfall in GDP and supplied the citizens and others with food supplies saving the Governments image in crucial times

The Indian rich soil, suitable geographical conditions provides dual crop system to the farmers. Traditionally Agriculture in India comprised of food grain production coupled with rearing of farm related animals. With the advent of science and technology and introduction of Government policies to extract the benefits from agricultural sector allied sectors like Horticulture, Livestock, Fishery , poultry and forestry started to gain importance.

Women are said to be the first farmers on this land, collecting seeds from nature and cultivating them in form of food grains to suffice their needs. Women have been playing a vital role in food productions, food gathering, and conservation of many traditional techniques useful for household as well as agriculture. The allied agricultural sector absorbs a huge percentage of uncountable women labor. *Agriculture sector engages 80 % of all the economically active women in India of which 33% work as agriculture labor and 49% are self employed farmers.*¹. In rural India even today animal husbandry, poultry farming, cattle management, and gathering of forest products etc are some allied agricultural activities performed by women. These activities are major source of income in the rural household and are additional burden to the daily household chores of the women. Apart from these, the rural women is also involves in the various labor intensive jobs on the farm such as sowing, weeding, cutting grass, collecting cotton, seeds, and other produce and post harvest functions etc. these laborious activities and contribution of women in Indian agricultural system have gone unnoticed , unrecorded from generations till now.

Review of literature:

1. Dr. Mun Mun Ghosh and Dr. Arindam Ghosh (2014)² in their research paper and study on 'Analysis of Women Participation in Indian Agriculture' across diverse Indian States concluded that women participation in agriculture is increasing with time and that women are acknowledged with the status of "agricultural worker". Women face discrimination of wages and status even today but their invisibility as agricultural labor is plummeting due to effective government policies.

2. Women in agriculture: what development can do by Mayra Buvinic and Rekha Mehra 1990³ have analyzed women agriculture squarely within economic development. They presented the first comprehensive, empirically based analysis of women's participation in agriculture and linked the evolution of farming systems to population pressures, technological change in agriculture, and the participation of women in the labor force.

Boserup (1970) ⁴describes the shift in status of women from female farming, where women were economically independent and mobile to male farming system where women were secluded and dependent on men for economic support. In mixed farming despite social norms, where women are drawn into tasks as weeding, transplanting, and harvesting. She considers attributes for this shift to



population pressure, and modern agriculture technique depriving women from farming as well as economic independence.

Bina Agarwal (1994) *A Field of One's Own*⁵, claims that the subjugation and lack of decision making power of Indian rural women is due to their landlessness.

Research question: The fundamental problem has been the non recognition of women as farmers, and agricultural workers. Thus systematic exclusion of women from economic benefits and property rights of entitlement, institutional credit, pensions and policies beneficial to their gender has been deeply rooted into the society in the name of age old traditions, cultures, and customs.

The process of modernization excludes them from agricultural development plans, agrarian reforms, and other trainings whereas the technological advancements further depriving them of their traditional sources of income.

Gender discrimination and other social practices like displacement of married women, the denial of any social status to women under Patriarchy, illiteracy and dominance of male gender in various governmental structures are some of the other major reasons for this exclusion. The author attempts to locate the space women needs to create as farmers for themselves in Indian Agricultural system.

Initiatives towards women concerns : While farm pressure groups and protests have been an integral part of Indian history owing to deep-rooted structural problems of colonial extraction; manipulative cropping patterns; corporatization of agriculture; and low investments; recent farmer protests have seen a historical trend emerging - that of, participation of the female laborer, the woman farmer, the farm widow, and the consequent visibility of the hitherto invisible 'gendered' problem in agriculture.⁶

The concerns of India women farmers started getting highlighted only in the 20th century at National and International level. The Elimination of Discrimination against Women (CEDAW, 2014) declared land rights discrimination as a violation of human rights' and other International organizations also recognized gender discrimination and land right of women as a universal issue. The Sustainable Development Goal proposed for property rights and tenure security of agricultural land to women. At national level *the ninth five-year plan (1997-2002) prescribed land redistribution by taking land from the traditional landowner and allot it to the actual tiller of the soil. In which 40% of agricultural land would be redistributed in the name of women and the rest would be held as joint ownership between husband and wife. The tenth five-year plan (2002-07) recommended concessions to female property buyers when they registered.*⁷

The Hindu Succession Amendment Act (2005) granted coparcenary rights to daughters and equal inheritance rights. M. S Swaminathan committee, proposed the 'Women Farmers Entitlement Bill' in 2011, which proposed many ideas to recognize and empower women as farmers. The draft of the National Women's Policy (2016), prepared by the Union Ministry of Women and Child Development recognized the importance of land rights for women. The Indian Human Development Survey (IHDS, 2018), recorded 83% of agricultural land to be inherited by male members of the family and less than 2 % by their female counterparts.⁸ It is evident that the women and their relative concerns have attracted the attention of both the national and international institutions but have failed to incorporate them into policies.

Recognition of women farmer issues: Economic survey 2017-18 reflects that due to growing rural to urban migration by men, there is 'Feminization' of agricultural sector, increasing number of women are seen in multiple roles as cultivators, entrepreneurs and laborers.⁹

This feminization is the result of the socio- political neglect and economic exploitation of the women farmers. The social patriarchal scheme to control family property ostracizes the women from their legal rights to property. Sisters forfeit their property right in paternal land at the cost to continue their relationships with brothers and relatives. In the same way the in- laws also penalize the female of the house by stating them as outsiders. Widows with son maybe shown some sympathy but widows having daughters are denied their share to avoid the distribution of land. Other social norms and customs are imposed to control their freedom which results into sexual and physical exploitation and harassment of women. The rural women encounter these gender discrimination at a higher level than that of the urban women.



These women farmers form the largest unorganized community comprising of landless labors, small farmers etc in India. They have been historically deprived, their existence denied and their hard labor unrecognized and unaccounted for.

India been an agricultural country has been witnessing farmers protests mainly addressing the interest of the commercially oriented male farmers belonging to the higher caste and class. These movements were male dominated and never integrated women issues and plight in the agrarian sector; consecutively they failed to get addressed in the affirmative actions of government policies and programs. It is evident from the study of past policies that the institutional, and structural changes has forced women farmers more towards the borders making them a marginalized community, e.g. the green revolution focused towards improving the productivity, by facilitating schemes beneficial to the large farm holders, influential by caste, class and power. The opening of international trade in commodities and farm products tends to marginalize women in the formal productive system.¹⁰ Routine crops have been replaced by cash crops by the big farmers where the traditional jobs like weeding, hulling, milling and planting performed by women landless labors is replaced by machines. The introduced policy has drawn a big drift between the large and small land holders.

The commercialization of products has changed the tradition pattern of agriculture which is only affordable to the rich class. Whereas the small farmers still follow the traditional ways which involve the participation of women labor on a high scale. These small farmers, land poor farmers and landless labors cannot survive on their share of land alone. The result of which is flourishing contract farming, contract farm labors, seasonal farm labors, and landless labors which mainly comprise of women community. Women or girls as young as 10 -12 years work as wage laborers during sowing and cutting seasons in fields. They also move along with their families to nearby villages or sometimes to neighboring districts to earn their wages that could provide them for the whole year. All these problems are faced by the women related to small land holdings. Either they have to work as landless labors or have to manage their low productive land. Social and economic exploitation on a very large scale is faced by women working in this uncontrolled and unlawful condition structures by the self obsessive, profit oriented, gender discriminative patriarchal, caste and class based society. In the long run the women dependence on agriculture has increased but their demand as agriculture labor has reduced.

Many serious health issues concerning the very existence of women as human have cropped up during the time of agrarian crises may it be due to natural calamities such as draught or floods etc. The Beed district of Maharashtra has emerged as the hub of hysterectomies with nearly 4,605 uterus removed as a result of the excessive labor exploitation of women during the sugarcane harvest.

Forced labor, no provision of sanitation and work breaks, labor exploitation and harassment by allotting heavy duty jobs to women labor, punishments by cutting of daily wages for absenteeism, and no fixed working hours, are other exploitative practices going against the basic labor laws of the country.

It is also true that certain structural reforms introduced may induce added transformations, such as SHG's in rural areas politically mobilized the rural women and introduced them to new collective entrepreneurs, economic independence and bond of sisterhood beyond the social and traditional setup. Thus women workers in agriculture possess no standard in social hierarchy and the political pull to enforce their demands of recognizing them as stakeholders, or acquiring means of production, control the capital, transport and resources used for production and distribution of produce. Basically the financial policies or rural development programs designed have minimum or no understanding of women's role in Indian agriculture. It has sidelined the nexus of caste, class hierarchy and patriarchy that creates the dominance of male over female labor and ownership. The official credit system does not guarantee any rights to the non owner of the land. Thus even when the women are tillers of non productive or low productive land they are denied any waiver or compensation or financial credit, loan for equipments, seeds or insurances related to their occupation.

Women are central and perform an important role in the rural socio-economic structure. They are vital actors in providing household welfare and nutrition through their income or production. They are responsible for processing, preserving and preparation of food for the whole household. The family members specially the young and the aged depend on them for their maintenance and existence. The Indian woman connected with the agriculture profession has been entangled in the



vicious circle of social responsibility and customs of laborious household chores and as a landless labor in her own field or on others land.

Time for affirmative call: The recent farmer protest in India has witnessed the huge presence of women, landless labors and the other backward classes which depend for their livelihood on the agriculture. This farmer movement has special significance as it has connected itself with the neglected whole. Previously the movements and protests involved the upper castes and class who carried the protests to promote their own causes and benefits. Even the government paid little heed towards the issues and concerns of the others working in the agriculture sector. Thus it can be said that the government and the upper caste and class farmers had developed a nexus to benefit one another. A visible difference was between the high caste and class farmers owning huge land, supported by the government on one side and the small land holders, landless labors, backward classes and women landless labors on the other. With the repressive agrarian policies of the Government, a positive outcome of the protest can be seen as the acknowledgement of the plight and denial of rights to the landless labor, among whom the women is twice, socially and economically exploited. The demand for their recognition by themselves supported by the male counterparts could be heard. Thus it is pertinent to integrate gender perspective while planning the agriculture extension programs, modernization of existing systems and introduction of technological advancements as all these bears influence on the socio-economic ecosystem of women farmers.

Agriculture being a state subject the policy framers needs to cater to the needs of the women not according to social customs and traditions but in relation to the legal framework. A complete knowledge of the status, position and role of women in the agriculture pertaining to their states need to be emphasized. Agriculture as a fulltime occupation among women can only be established when the policies and schemes are women oriented, women centric and women beneficial. Women participation in decision making process must increase to effective frame and implement women affirmative policies. It is important to make agriculture sector more self reliant and economically supportive for women than only job oriented. The rise in agriculture sector dependent on the high productivity which is related to the new technological development in this sector, be it the seeds, fertilizers, machines etc. thus the development of agriculture demands the proper dissemination of knowledge through good and eminent universities. To prevent the labor exploitation of the women, implementation of established laws and the awareness of these laws among employers and the women labors is imperative. Agencies such National Commission for Women should actively participate and influence the policy making agencies. It should highlight the plight and suffering of the women through its initiatives and work towards a better and stable future for women in agriculture.

Conclusion: Self reliance and economical independence of women in agriculture, by breaking the social traditional role and accepting modernization, technological development is the emerging trend in the Indian agrarian system. The government through its policies based on Sustainable development goals and human rights for women and other international guidelines should initiate towards the betterment of women status and position in Indian agriculture.

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ONION PRODUCTION AND MARKETING IN CHITRADURGA DISTRICT: AN ANALYSIS

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Abstract

Agriculture not only contributes to overall growth of the economy but also reduces poverty by providing employment and food security to the majority of the population in the country. Horticulture that is an integral part of agriculture comprises of the cultivation and trade of fruits, vegetables, flowers, nut, coconut, cashew nut, areca nut, tuber crops, spices, mushroom etc. The survey has been conducted during 2018-2019 for collecting the primary data in Chitradurga district of Karnataka with special focus on problems of onion production and marketing in the district. Results of the study have shown that the area, production and productivity of onion has been considerably increasing over the years. However, onion producers have been facing several problems of production and marketing. They include, problem of labour, technical assistance, problem of protecting onion crop against weed, pests and diseases, lack of improved seeds, high cost of seeds, price fluctuation, lack of transport facility, lack of storage facility, problem of perishable nature, lack of chemical nutrients, lack of PPC and lack of adequate credit. Finally, the study also revealed the major marketing problems. The problems are lack of regulated market and co-operative society, problem of market information and intelligence, lack of storage facility, malpractices in sales and high taxes etc.

Key Words: Nutrients, Regulated, Mandies, Diversification and Alliaceae.

Introduction

In India, agriculture not only contributes to overall growth of the economy but also drastically reduces the poverty by providing employment and food security to the majority of the population. The 12th Five Year Plan Approach Paper also indicates that agricultural development is an important component for faster, more inclusive and sustainable growth of the country. Horticulture that is an integral part of agriculture comprises of the cultivation and trade of fruits, vegetables, flowers, nut, coconut, cashew nut, areca nut, tuber crops, spices, mushroom etc. Rapidly growing demand for horticultural products especially burgeoning market for processed fruits and vegetables market is an evidence of the phenomenon that is expected to accelerate horticultural growth in the country. Consequently, the horticulture is set to assume a greater and significant place within the agriculture sector and eventually in the national economy. Growing demand for fruits and vegetables induced by rising incomes and changing consumption patterns coupled with declining farm incomes due to rising costs and stagnating food grain productivity has necessitated diversification towards high-value crops in recent times. Apart from income enhancement, these high-value crops have potential to generate additional employment opportunities in farming due to their labour-intensive character (Weinberger and Lumpkin, 2006). Increase in the area allocation under horticultural crops has often been suggested as a measure for agricultural diversification, increased employment and income (Malik, 1998). Therefore, there is a great scope for the accelerating agricultural development through expansion of horticultural crops.

Thus, in a holistic way, horticulture can be promoted as a means of agro-diversification for the second Green Revolution, providing the much-needed impetus to the



growth of agricultural sector, through increase in trade, income, and employment (Mittal 2006). Moreover, consumer preferences have also shifted away from cereals and moved towards high-value agricultural produce like vegetables. With increase in economic standards, urbanization of growing Indian villages, international market integration and trade liberalization the demand for horticultural products are expected to increase even further. On the production side, if cereal pricing is left to market forces, land will be released from traditional cultivation to meet the growing demand for non-cereal crops such as oilseeds, fruits and vegetables in accordance with the diversification in consumption pattern (Mittal, 2006). Fruits and vegetables typically constitute an essential part of the daily diet in India and they are in great demand round the year from most sections of the population. The commercial value of fruits and vegetables in terms of direct consumption, processing as well as trade has risen substantially in recent years (Sharma 1991). Onion is one of the important crops in fruits and vegetables hence in this background; this study has undertaken to analyze the Production and Marketing of Onion in Chithradurga District of Karnataka.

2. Extent of Fruits and Vegetables Production in India

Onion (*Allium cepa* L.), Alliaceae family and the synonymous are *Earulli*, *Ullagaddi*, *Piyaz*, *Palandu*, *Kanda*. It is one of the most important vegetable crops cultivated extensively throughout the country under a wide range of climatic conditions. It is used both in green and mature stage for salad and spice in a variety of flavored dishes and soups. It is very important in cookery; hence, Germans call it the “Queen of kitchen.” During summer, it reduces the body heat and is useful in dysentery. Bulb juice is very useful in faintness, infantile convulsions headache, epileptic and hysterical (Rao and Purewal, 1954). Presently, India is the second largest producer of vegetables in the world (next to China). The major producers of fruits and vegetables in the country are Maharashtra, Andhra Pradesh, Uttar Pradesh, Karnataka, Gujarat, Orissa, Jammu & Kashmir and Kerala (Business Line, Sept 6, 2011). The per capita consumption of vegetables in the country has also increased from 47 kg per year in 1983-84 to 76 kg per year in 1999-00, with annual growth rate of 2.9 percent (Economic Survey, 2006-07). In Karnataka, onion has been growing in several districts such as Bagalkot, Dharwad, Koppal, Gadag, Chikamagaluru, Chitradurga, Davangere etc and hence district level study was undertaken to examine the onion production and marketing problems.

Chitradurga is one of the 30 districts of Karnataka and it is located on the valley of the Vedavati River and in the heart of the Deccan Plateau at a distance of 202 kms from Bengaluru and spread across 6 taluks – Chitradurga, Hiriya, Hosadurga, Holalkere, Challakere and Molakalmuru. The agriculture is the prominent occupation of the people and it provides employment to more than 60 percent. Therefore, the agriculture and allied activities contributed Rs 1506 crores and 3.5 percent of Gross State Domestic Product (GSDP). Moreover, the total Gross District Domestic Product (GDDP) of the district was estimated during the year 2012-13 was Rs. 5,226 crore and the per capita annual income of the district was Rs.47,534/- (*Chitradurga district at a glance- 2014-15. Government of Karnataka*). Like any other district, horticulture plays a key role in the overall economic and social well being of people of our state in general and farmers of Chitradurga district in particular. Horticulture crops constitute a significant component of agricultural production in the district. Particularly, vegetables have great potential in the domestic and world markets. The recent liberalization policy of the government is to encourage the production and export of onion in the state.

3. Review of Literature

Investigation is designed to study the important aspects like production and marketing of onion. Effort has made to review the available literature having direct or indirect bearing



on present study. For the sake of convenience, the available related reviews are presented as under.

World Trade Organization (WTO) has thrown up challenges as also opened up new visits for growth and diversification of horticulture and exports of horticulture. The trade in horticultural goods can play a significant role in the promoting economic development, especially in developing countries where the majority of the population is engaged in agriculture, where, horticulture is an integral part of it. Many Less Developed Countries have greater comparative advantage as they are capable of producing these goods with competitive export prices and these goods would form the main source of their exchange earnings (Sujata S Neजार, 2008.)

The status of fruits and vegetables production, processing and trade were examined by Navadkar et.al., (2004). The results of the showed that the major area under fruit crops was noticed in Maharashtra, Andhra Pradesh and Karnataka, which was together contributed nearly 35 percent of the national area. In Himachal Pradesh, the area under fruits was increased at the rate of about 6000 to 7000 hectares every year under ninth plan. UAE was the main market for India's dried and preserved vegetables and mango pulp.

Basavaraj et.al., (2019) were examined the dynamics of demand for and supply of onion- in Karnataka, one of the leading onion producing state and their implications on price volatility. Although the supply of onion has increased substantially, its total consumption has remained almost stagnant, which is around 20 per cent of the total supply. About 60 per cent of the onion produced in the state is exported within and outside the country. Measure on price volatility indicates high inter year variability as compared to intra year volatility. Price stabilization fund, supply chain management through institutional arrangements, market information, public-private partnership for post-harvest processing is some of the measures suggested for stabilization.

Farmers of the district are eyeing good prices this season for their onion crop, considered a major commercial crop. As onion is mostly grown in Maharashtra, most of the crop there has been destroyed by torrential rains. Even though onion is usually grown in about 60,000 hectares in the district, due to scarcity of rain and depletion of groundwater, the area was reduced to approximately 8,000 hectares. Onion is also grown in Gadag, Davangere and Chikamagaluru districts, however, the rains have washed away the crop in these parts too. If the central government allows export of onion, the prices will soar above Rs 100 per kg (The New Indian Express 19-08-2019).

Barakade et.al., (2011) were examined Economics of Onion Cultivation and It's Marketing Pattern in Satara District of Maharashtra. The result of the study indicated that six months maintenance cost and returns for various categories of onion cultivation are in with during the year 2010-11. In view of the major cost on labour, there is immediate need to develop the labour saving practices such as use of weedicides, improved tools for planting, harvesting etc. On the other hand, market intermediaries are accruing higher margin by in incurring less cost and services. The major share of consumers' rupees was pocketed by the middlemen. The marketing efficiency was low. Therefore, in order to regulate the expenditure on commission, transportation and packing, efforts should be made to develop the necessary infrastructure for the marketing of onion in the district. The co-operative marketing should be encouraged to increase the producers share in consumers' rupee. Government intervention is also necessary to safeguard the interest of farmers. Finally, the efforts should be made to boost the export trade of tis valued crop by enhancing its production volume.

Sabur (1984) estimated the growth rates in area, production and productivity of potatoes in Bangladesh. The study showed that the production of potatoes in Bangladesh increased by more than 5 percent per annum whereas the growth in area and productivity were over 3 percent and 5 percent per annum respectively during the last two decades. Similarly,



Naik and Mohanty (1991) studied the trends in area, production and productivity of groundnut in different districts of Orissa. The growth rates of area and production of groundnut during the period 1970-71 to 1987-88 were statistically highly significant in all districts except Korapet. Even though groundnut yield in Orissa was the highest in India during 1985-86 to 1987-88, the growth rate of yield over the years was negative and non-significant

Deepak (2000) analyzed the various components of production and marketing cost, marketing channels adopted by farmers, producer's share in consumer's rupee in domestic market. The study showed that a sharp increase in per acre annual gross maintenance cost as well as returns of grape growers during the phase of production rise before leveling off to a constant stage and thereafter these were seen to decline. The per box's (4kgs) total marketing cost was estimated to be the highest when the produce was sold through other marketing channels. The producer's share in consumer's rupee, the average category of grape orchardists had an overall average of 59.49 percent share in the consumer's rupee in the domestic market.

Banumathy and Sita Devi (2004) identified the major problems in marketing of Jasmine in India. In this study, they employed Garret's ranking technique to identify the most important problems in the marketing of Jasmine flowers. The results of study showed in the case of small farmers the lack of finance was ranked first and medium and large farmers ranked price fluctuation and perishable nature of flower as first and second respectively. These problems lead to forced sale. Hence, it is suggested that organizing all the flowers growers for collective action to help themselves would be the best remedy for all these problems.

Singh and Chauhan (2004) conducted the study on marketing of vegetables in Himachal Pradesh to identify the existing marketing channels in the marketing of vegetables and to assess the marketing cost margins, price-spread and, marketing efficiency in different marketing channels. The study revealed that vegetables were main crops grown in both Rabi and Kharif seasons that collectively covered more than 50 percent area of the total cropped area. Regarding disposal of the produce channel-III (producer-whole seller – commission Agent (Local Market) – Retailer Consumer) was the important one being followed more than 70percent vegetables growers who could dispose of 64 to 95percent of the total produce. In another study, Lokesh, et.al., (2005), analyzed the production, marketing and processing of the tomato in Karnataka. In the study, they identified and analyzed various the marketing channels, the reasons for price crash, feasibility of processing and market for the processed tomato and compared economics of long and short duration varieties of tomato production in Karnataka. The study identified that the productivity has been increased through over years and the area under tomato cultivation has remained stagnant.

Agricultural marketing in our state was not received as much attention as that of agricultural production. For the farmers, disposal of their produce has become as important as the adoption of modern production technology for improving yield levels. A good number of studies analyzed the input and output of farms. Thus, the most of the studies emphasized the growth of area, production and productivity of vegetables and several other crops. Several studies concentrated on economics of vegetables production and marketing in general. There is a dearth of studies particularly in analyzing the problems of production and marketing of onion crop because many of the problems are region as well as area specific. However, wide differences in geographical conditions greatly influence on the production practices, production, and marketing of onion across the state. In this context, this study has been undertaken in Chitradurga district with respect to the problems of onion production and marketing.

4. Statement of the Problem



Onion is one of the cash crops and it is perishable in nature. Onion is being used throughout the year it has a constant demand. The medium rainfall, dry healthy weather zones is considered to be one of the ideal zones for onion cultivation in the south India. In Karnataka, the area under onion cultivation is increasing because the state has all the ideal conditions required for the successful onion cultivation. The present study is an effort in the direction of having an integrated study of all economic aspects of production and marketing of onion and to identify the problems faced by the onion cultivators in its cultivation and marketing with an overall view of exploring the possibilities and potentialities for bringing about the required improvement. It is worth noting that the economic studies on onion, conducted so far in state are few and have not analyzed the detailed aspects of trend and its growth rates of area, production and productivity, cost and returns structure, price spread and marketing efficiency of various channels and marketing problems, exportable surplus of onion in the state of Karnataka. In this context, this study has been undertaken to analyze the problems of onion production and marketing in Chitradurga district with the following specific objectives.

4.1 Objectives

The specific objectives of the present study are as follows:

- To analyze the trends in area, production and productivity of onion in Chitradurga District.
- To ascertain the constraints in the production and marketing of onion from Chitradurga district
- To suggest some measures for improvement of production marketing of Onion.

4.2 Methodology

The present study is based on both primary and secondary data. Secondary data pertaining to area, production, yield, etc. collected from the published sources of state government agencies, State government authorities and All India Agencies and Boards of Government of India. The primary data were collected from the selected sample farmers of Chitradurga district by interview method with the help of the pre tested and well structured schedule. From the district, all the tauks were randomly selected and the district consists of six taluks viz., Chitradurga, Hiriyur, Holkere, Hosadurga, Chellakere and Molakalmuru. In the next step, two villages have been randomly selected from each taluks where onion has been widely growing. From each taluk, 30 respondents were randomly selected. In this, process totally 180 farmers were selected distribution of sample respondents across the different size category. Tabular analysis was adopted to compile the opinion of sample respondents regarding the problems of production, marketing etc. Simple statistical tools like averages and percentages were computed results were presented in the tabular forms and results were discussed.

5. Results and Discussion

In this section, results of the study were discussed and presented according to set objectives of the study. Appropriate and suitable inferences have been drawn wherever it is possible.

5.1 Area, Yield and Production of Onion in Chitradurga District

The production of onion is seasonal and concentrated in few areas of the district. In the state of Karnataka, Chitradurga dominates area (20544 ha) and production (427687 Metric tonnes) in 2018-2019 respectively. The table reveals that the area under onion as well as production of onion in Chitradurga districts has been increasing substantially over the period. The production bottlenecks



have been compounded by the still greater difficulties confronted in the marketing of agricultural commodities. The increase in production has led to a surplus in the market pressure. Small farmers have been forced to sell their produce immediately after the harvest generally at low prices. High cost of marketing, lack of adequate storage facilities at the farm level and poor dissemination of market information and intelligence topped the list of problems encountered by the producers-seller in marketing of agricultural commodities.

The medium rainfall, dry and healthy weather zone is considered one of the ideal zones for onion cultivation in South India. In Chitradurga district, the area under onion cultivation is increasing because the district has all ideal conditions required for successful onion cultivation. It was observed from the table that the yield of onion has been increasing from 6 quintal per hectare in 2011-2012 to 20.82 per hectare in 2018-2019. Therefore it was inferred that the favourable climatic condition prevailing the district have largely contributed to substantial increase in yield of onion.

Table: 5.1 Areas, Production and Yield of Onion in Chitradurga District

Sl.No.	Year	Area (Ha)	Production(Tonnes)	Yield (Qt./H)
1	2008-2009	22226	130675	6.00
2	2011-2012	15042	84984	6.00
3	2013-2014	17055	330974	19.41
4	2018-2019	20544	427687	20.82

Source: DEC, Karnataka State at a Glance

5.2 Domestic Onion Market

Most of the onion produced in India comes from the states of Maharashtra, Gujarat, Uttar Pradesh and Karnataka though onion is also grown in Orissa, Tamil Nadu, Madhya Pradesh, Andhra Pradesh and Bihar. Karnataka state accounted for 20 percent area and 13 percent total output of onion in the country. In the state of Karnataka, north Karnataka accounts for the bulk of the total onion production and Hubli and Belgaum are biggest onion markets. The onion produced in North Karnataka is distributed throughout the country. Bulk of the onion exported from India also originates from North Karnataka. However, there is great potential for the state of Karnataka in the cultivation of onion crop; farmers often incur losses due to low prices, lack of market outlet and other infrastructure in the marketing system.

The village merchant plays a very important role in moving the produce from village to the market particularly smaller lots of produce by the farmers. Consequently, considering the role of village merchants especially in handling small lots of small and marginal vegetable growers, it is important to encourage the village merchants in linking production centre with the wholesale markets of vegetables. It is also important to bring the transactions under regulation to proper systems of licensing. Alternatively, farmer's markets may be developed in line with Ryath Bazar/Apni mandi to bring the farmers in direct transactions with the consumer's to benefit both producers and consumers.

5.2. Problems in Onion Production

Farmers require various kinds of inputs and institutional support to increase the crop production. Nevertheless, they do not get all inputs and services at an appropriate time. Overall success of onion production and marketing depends upon various factors such as availability of labour, technical assistance, yield, government support, output price, marketing etc. Through the discussion with progressive farmers, agricultural scientists and agricultural officers twelve major problems have been identified in the study area



with respect to production of onion. The experience gained in the review of literature also supported this problems identification process. The problems identified in this process includes; i) problem of labour, ii) technical assistance, iii) problem of protecting onion crop against weed, pests and diseases, iv) lack of improved seeds, v) high cost of seeds, vi) price fluctuation, vii) lack of transport facility, viii) lack of storage facility, ix) problem of perishable nature, x) lack of chemical nutrients, xi) lack of PPC and xii) lack of adequate credit. Each respondent was asked whether he/she faced these problems? Each farmer might encounter with many of these problems. Data on the problems of onion production faced by the farmers collected and results are presented in the table 5.2.

The frequency given in this table shows how many farmers are facing a particular problem. The problem, which is being faced by majority of the farmers, is considered as a major problem. The top six major problems have been ranked for overall district based on the number of farmers encounter with such problems. For overall category, the top six major problems are as follows; i) problem of perishable nature (92.9%), ii) price fluctuation (89.6%), iii) weeds, pests and diseases (77.9%), iv) lack of storage facility (72.5%) v) problem of labour (70.0%) and vi) lack of improved seeds (67.5%) . In south Karnataka the top six major constraints includes; i) problem of perishable nature (91.7%, ii) price fluctuation (85.8%), iii) weeds, pests and diseases (66.1%), iv) lack of improved seeds (63.3%) v) lack of storage facility (60.0%) and vi) problem of labour (56.8%).

Table 5.2: Onion Production Problems in Chitradurga District

Sl. No	Particulars	North Karnataka (180)
1	Problem of Labour	101(56.8)
2	Technical Assistance	80 (44.4)
3	Weeds, Pests and Diseases	119 (66.1)
4	Lack of Improved Seeds	114 (63.3)
5	High Cost of Seeds	78 (43.3)
6	Price Fluctuation	155 (86.1)
7	Lack of Transport Facility	93 (51.7)
8	Lack of Storage Facility	108 (60.0)
9	Problem of Perishable Nature	165 (91.7)
10	Lack of Chemical Plant Nutrients	87 (48.3)
11	Lack of Chemical Plant Protections	95 (52.8)
12	Lack of Adequate Credit	92 (51.1)

Note: Figures in parenthesis are percentage to the total sample respondents

Source: Field Survey

Majority of the farmers in that onion is perishable product which cannot be stored for longer duration due to the lack of cold storage and warehousing facility. Hence, the large number of farmers sell the onion immediately even after the harvest is over without waiting for better price. As a result, price of onion widely fluctuating in the market this is the major problem for onion grower in Chitradurga district. The improved seeds are not available on time which adversely affect the crop yield hence 63.3 percent of farmers expressed this problem. Efficient and adequate transport is necessary to obtain remunerative price however the higher percent of farmers felt the lack of transportation is main problem to carry the onion to regulated market. Apart from these, unavailability of



labour, technical assistance, lack of chemical fertilizers etc are other important problems found in onion production in the study area.

5.3. Problems in Onion Marketing

Farmers' accessible to organized and regulated market ensures the remunerative price for the agricultural produce which in turn increases the agricultural income. Therefore, the information relating to problems of marketing the onion has been collected and summarized in the table 5.3.

Frequency distribution shows the existence of various problems with respect to the onion marketing. Some of the important problems have been identified in the onion marketing by having a discussion with the help of market intermediaries, agricultural marketing experts and farmers and more importantly the review of literature also helped in this regard. The major problems are i) lack of marketing facility, ii) lack of efficient means of transport and transport infrastructure, iii) lack of regulated market and co-operative society, iv) problem of market information and intelligence, v) lack of storage facility, vi) Malpractices in sales and vii) high taxes. Of these problems, four major problems associated with the marketing of onion have been identified in the districts. The top four problems in marketing of onion crop includes encountered by the farmers of the district are i) malpractices in sales (78.3%), ii) high rate of tax (66.1%), iii) lack of storage facility (61.1%) and iv) lack of market information and market intelligence (51.7%). Market information and intelligence is very important to sale onion at reasonable price but in the overall category majority of farmers encountered with the problem of market information. Apart from these major problems, the onion producers suffer from other problems in the district with respect to marketing of onion however they were not significant. Therefore, it is necessary to arrange the storage facility to ensure the appropriate price for farmers produce.

Table 5.3: Problem of Onion Marketing in Chitradurga District

Sl. No	Particulars	Total (180)
1	Lack of Marketing Facilities	77(42.8)
2	Lack of Transport and Road Infrastructure	87(48.3)
3	Lack of Regulated and Co-operative Societies	90(50.0)
4	Lack of Market Information and Intelligence	93(51.7)
5	Lack of Storage Facility	110(61.1)
6	Malpractice in Sales	141(78.3)
7	High Rate of Taxes	119(66.1)

Note: Figures in parenthesis are percentage to the total sample respondents

Source: Field Survey

5.4. Problem of Financing Onion Production

Finance is life blood of every economic activity. Agriculture is not exception from the financial needs. Farmer requires the finance for various purposes such as purchase of agricultural inputs, payment for labour, fertilizers and pesticides, transport charges, permanent improvement over land, repayment of old debts etc. Therefore, information regarding constraints in borrowing credit has been collected and results are given in the table 5.4.

It was observed from the table that there four problems related to the finance. The 58.3 percent of the respondent expressed the lack of credit at a cheaper whereas 56.7 percent of the farmers reported that inadequate credit for the various activities for production and marketing the onion. Timely and adequate credit is necessary to undertake the farm



activities on time however the 48.3 percent of the sample respondents encountered by this problem.. However, dealing with banks is not a significant problem. Hence, it was inferred that unavailability of adequate credit is an important obstacle to the onion-growing respondents in the district.

Table 5.4: Problems in Financing Onion Production

Sl. No	Particulars	Total (180)
1	Timely and sufficient availability of credit	87(48.3)
2	Lack of credit at low rate of Interest	105(58.3)
3	Inadequate credit as a scale of finance	102(56.7)
4	Problems faced the farmers in dealing with the banks	15(8.3)

Data: Field Survey

Note: Figures in parenthesis are percentage to the total sample respondents

Suggestions

A few important measures for production and marketing of onion can be suggested as follows;

Onion is one of the significant vegetables which comprise the various health benefits and hence it is necessary to establish the Price Stabilization Fund for protecting the farmers from the price fluctuations. It ensures the assured income and encourages the farmers to grow more on the one hand and consumers would get onion at a reasonable price.

Onion is highly perishable vegetable which has been largely growing by small and marginal farmers and hence the majority of them selling the onion immediately after the harvesting is over. Further, these farmers cannot wait for better price due to lack of storage facilities both in rural areas and regulated markets. Therefore, it is necessary not only providing storage facility in urban areas but it is also equally needed in rural areas.

Sources of agricultural credit are few compared to the industry and commerce and hence majority of our farmers not just depend on money lenders and even sell they the produce immediately after the harvest is over. Therefore, the government should arrange the credit facility through institutional sources at reasonable rate and most importantly it should be ensured at timely credit.

Conclusion

Karnataka state occupied second rank in the country with respect to the area and production of onion. Implementation of new economic policy extended the opportunities to enhance the onion production and poses new challenges. The annual compound growth rate in area, production and productivity of onion is found to be relatively more in Karnataka after the new economic policy. Still there is scope for enhancing onion crop yield through the extension of irrigation facility and through the improvement in the extension services. Farmers' accessible to organized and regulated market ensures the attractive price for the agricultural produce that in turn increases the agricultural income. Hence, the farmers can get the better price and timely accessible to credit for onion production certainly improve the condition of farmers in the state.

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EXTENT, DETERMINANTS AND PROFITABILITY ANALYSIS OF SMALLHOLDERS' AGRICULTURAL COMMERCIALIZATION IN ARUNACHAL PRADESH

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Abstract

Using farm level survey data; the paper examines determinants, profitability and degree of commercialization and explore relationship between the socio-economic characteristics of the farmers and degree of commercialization. Data were collected through personal interview from 300 randomly selected respondents from eight villages of Tirap, Changlang, West Kameng and Tawang District during January to April 2018. The results of analysis of cross section primary data suggest that, income, output, farmers' educational attainment; livestock holdings were significant factors influencing degree of commercialization (Volume of output sold in the market). The results reported in the study are quite interesting and useful, and offer important policy suggestions.

Key words: Smallholder, Commercialization, Market Participation.

Introduction

Transforming agriculture from subsistence orientation into a market-oriented production with the aim to increasing the income of small-scale farms has been in the policy attention of many States in India, including Arunachal Pradesh. Government of Arunachal Pradesh, under the Perspective Plan vision 2030 gave a special emphasis on enhancement of off-season vegetables production to a level of 100000 MT marketable surplus by increasing area up to 25000 hectare, transforming the cash crop cultivation into commercial venture to enhance farm income by doubling area under Ginger, Turmeric, Mustard, Large Cardamom, Potato, Chili & King Chili and to increase a marketable surplus of 50 per cent by 2030.

Commercialization is usually thought in terms of a large scale production and the development literature usually tends to ignore the fact that even the small farmers and poor farm households participate in the market either because they produce a little surplus or they sell to earn cash income to meet other family necessities (Rahut et.al, 2010). In fact in Arunachal Pradesh agriculture is practiced by small and marginal farmers with a limited use of new technology. Over time, the improvement in infrastructure such as road connectivity, improved access to market has induced farmers to shift their cultivation towards a variety of crops especially those yielding higher income. Although, economic growth, urbanization and shift in consumption pattern have emboldened the farmers for more commercially oriented, however, agricultural commercialization usually takes a long transformation process from subsistence to semi-commercial and then to a fully commercialized agriculture (Pingali and Rosegrant, 1995). Hence, in the era of globalization, smallholder farmers need to produce for the market as they are competing with farmers around themselves and with those producing the same commodity at regional as well as global level (Berhanu et.al, 2006) but there are apprehensions whether farmers can take advantage of the emerging opportunities. Most of the commercial crops grown in the State, especially fruits and vegetables, are perishable requiring immediate transportation to consumption centres/markets or storage or processing into less perishable forms. But all the facilities are inadequate in the State. Markets for commercial crops are concentrated mainly in urban and semi-urban areas, and transport facilities are inadequate especially for smallholders in remote



rural locations. In other words, lack of access to markets, transport facilities and post-harvest infrastructure inflate the transaction costs of marketing, thereby discouraging farmers for commercial production. With this background, an attempt is made to analyse the level and determinants of commercialization among the farmers, especially the smallholder farmers. The profitability of different crops and cost structure of the study area are studied in depth.

Objectives of the Study

The major objectives of the study have been set as follows:

- 1) To measure the extent of agricultural commercialisation in the study area.
- 2) To examine the profitability of commercial farming in the study area.
- 3) To identify and analyze major determinant market participation.
- 4) To identify the constraints preventing farmers from diversification into higher-value commodities and become more commercially oriented.

Methodology and Data Base of the Study

The present study is carried out in four districts of the Arunachal Pradesh taking two districts from western most part of the state viz. Tawang and West Kameng District, and two from eastern most part of the state viz. Changlang and Tirap District. The present study is mainly empirical in nature and to carry out research both the primary and secondary sources has been used for collection of data. The primary sources includes field survey that has been carried out in the selected villages by using questionnaire-cum-interview and participants' observation as well as focused group discussion.

Analytical Framework

In order to measure the extent of commercialization the proportion of the farm's output marketed, will be taken into consideration. In this study we follow Straberg and Leavy and define the household crops commercialization index (CCI) as

$$CCI = \frac{\text{Gross value of all crops sold in a year}}{\text{Gross value of all crops produced in a year}} \times 100$$

This index measures the extent to which household crops production is oriented towards the market. A value of zero would signify a totally subsistence oriented household and a value close to 100 implies a higher degree of commercialization.

Household commercialisation index (HCI) was used to measure household-specific level of commercialization. It helped to determine to what extent a given farm household is commercialized in its overall production, marketing and consumption decisions (Govereh et.al, 1999) It was computed as follows:

$$HCI = \frac{GVS_{hh \text{ i' year}}}{GVP_{hh \text{ i' year}}} \times 100$$

Where;

GVS = Gross value of crop sales

GVP = Gross value of all crop production

hh i' year = per household per year

The linear multiple regression was used to analyse the impact of different variable like socio-economic characteristics, distance from the main market, quantity of output, etc. on level of commercialization in the study area. The following model was used:

It is proposed to highlight the factors determining the commercialization, and in order to do the following form of regression is specified.

$$Y = f(Ge_i, Ag_i, No_i, Ed_i, Fa_i, D_i, Qu_i, off_i, l_i, e_i)$$

The linear form of production is

$$Y = \beta_0 + \beta_1 Ge_i + \beta_2 Ag_i + \beta_3 No_i + \beta_4 Ed_i + \beta_5 Fa_i + \beta_6 D_i + \beta_7 Qu_i + \beta_8 off_i + \beta_9 l_i + e_i$$

Where Y = Commercialization index

Ge_i = Gender of the head of the household



- Ag_i = Age of the head of the family
- No_i = Magnitude of Family labour engaged
- Ed_i = Educational attainment of household head.
- Fa_i = Farm size
- D_i = Distance to market
- Qu_i = Quantity of Output
- off_i = Off farm income of the household
- l_i = Number of livestock holdings
- e_i = error

The profitability estimates was used to examine market performance of the farmers. The average quantity produce by farmers, average cost and average sales of the farmers were used in order to estimate profit. The following mathematical notation was used to estimate the Gross Margin;

$$GM = P_i Y_i - R_i C_i \dots\dots\dots (1)$$

Where:

- GM = Gross Profit
- $P_i Y_i$ = Total revenue
- $R_i C_i$ = Total cost
- P_i = Farm price of Crop
- Y_i = Total Output Produce
- R_i = Price of input used
- C_i = Quantity of the input used (Kgs)

TC = Total cost

$$TC = X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + \dots\dots\dots (2)$$

Where: (values are in Rs.)

$X_1 + X_2 + \dots$ = Cost involved in the production.

Gross Profit = $TR - TC$

$$\text{Gross profit margin} = \frac{\text{Gross Profit}}{\text{Total Revenue}} \times 100$$

Household Commercialization Index

The HCI is computed on the production trend of two years (2016-17 to 2017-18) of all households surveyed. The study included the food grains, paddy and maize and other crops such as vegetables, fruits, etc. commonly produced by the farmers in the surveyed areas.

Table 1

Value of Household Commercialization Index

Value of HCI	No. of Household	Percentage
(1)	(2)	(3)
< 25	130	40.6
25-50	109	34.1
> 50	81	25.3
Total	320	100

Source: Field Survey, 2018

Table 1 shows that around 25 per cent of the surveyed households' level of commercialization was above 50 per cent. The level of market orientation under this category is known as "Commercial" farming. The farmers are highly specialized; the farming becomes more market oriented in order to maximize profit. The farmers are more likely to use improved seeds, fertilizers and better technology. The household in the 25 to 50 HCI value range constitute about 34 percent. They are categorized as "semi-commercial" farmers. The farmers under this category are moderately specialized, their main



objective is to produce surplus to meet market demand and also to diversify in order to spread market related risk. The last group indicated that 40.6 per cent of households were in the category below HCI 25 per cent. The group is categorized as “Subsistence” farmers. The primary objective of production is self-sufficiency or to meet household demand using family labour and traditional technology.

Degree of Commercialization of the selected Crops

The overall commercialization of the selected crops in the study area is 69.20 per cent. Fruits and vegetables have a high value of CCI with average of 93.92 percent and 80.00 per cent respectively. So, fruits and vegetables clearly show that a high portion of their production is sold for having cash. Foodgrains on the other hand indicate the lowest CCI value: only 30.74 per cent. In the study area farmers produce traditional crops like rice and maize only for home-consumption and not for commercial purpose either because of lack of demand due to change in consumption pattern in case of maize and cheap PDS supplies in case of rice. Hence, their share of marketed output to its total output is negligible.

Table 2
Degree of Commercialization of selected crops, 2017-18

(Value in Rs. 10³)

Crops	Gross value of crops produced	Gross value of crops sold in a year	Percentage of output marketed	Rank
(1)	(2)	(3)	(4)	(5)
Rice	1642.8	525.6	3.20	
Maize	70	0.98	1.40	
A. Food grains	1712.8	526.58	30.74	
Potato	1427	777.7	54.50	III
Tomato	2639.5	2424.7	92.10	
Cabbages	1342.2	1127.4	84.00	
chili	90	69.1	76.70	
B. Vegetables	5498.7	4398.9	80.00	
Apple	122	111.3	91.30	II
Kiwi	141	135.7	96.30	
C. Fruits	263	247	93.92	
Total (A+B+C)	7474.5	51.72.48	69.20	I

Source: Field survey, 2018

Determinants of Commercialization

The farmer's decision to participate in the market (commercialization index) is influenced by factors such as rural infrastructure, market condition, urbanization, per capita income, consumption pattern, technology, etc. However, in the study area not all the farmers operating under same socio-economic environment take part in output market. So the household level degree of commercialization also varies. An attempt is made to analyze the factors determining the extent of market participation and commercialization index.

Data analysis and interpretation of the regression result.

The results of regressions show that among nine variables, some have significant relationship with commercialization index in the study area: Value of farm output marketed, off farm/non-farm income, education attainment of the head of household, value to total output produced during a year, age of the head of the household and higher education status were found to have been significant effect upon market participation.



Table 4

Estimate of the Determinants of the Commercialization in the study Area

Variables	β	t	Significance
(1)	(2)	(3)	(4)
Constant	22.901	4.354	.000***
Gender HHs	1.745	1.053	.293
Age HHs	-2.124	-0.513	.512
Family labour	1.829	2.090	.037**
Education Attainment HHs	2.262	3.138	.002**
Farm Size	.988	1.209	.228
Distance to the market	-.079	-1.240	.216
Value of output	.436	10.259	.000*
Off farm and non-farm income	.301	6.958	.000*
Livestock holding	.268	1.739	.083***
N			300
R-squared			0.517
Adjusted R-squared			0.503

Note: (1) * Significant at 1 percent level. (2) ** Significant at 5 per cent level. (4) *** Significant at 10 percent level. (5) The dependent variable: Commercialization index. S

Data Source: Field survey

Value of Farm output had positive and significant influence on commercialization index – it is significant at 1% level. The regression coefficient shows that an increase in the value of output produced by Rs 1000 results in an increase in volume of farm output marketed by Rs 0.436. The coefficient of educational attainment of household head is found statistically significant at 95% level with a positive sign. The result implies that as the level of education of the family's head increases, the probability of commercialization increases. An educated person is more likely to have better flexibility and entrepreneurial ability and would definitely go for new opportunities. The coefficient of off-farm and non-farm income is positive and also significant at 1 per cent level. It is argued that some high-value agricultural commodities require significant investments, including the use of specific inputs. For example, fruit production typically means that the farmer must plant trees and wait for 3-5 years for them to begin producing, in other words there is a long gestation period. Household income, both farm and non-farm, has the potentials of reducing dependency on the agricultural output and thus commercialization. Family labour is significant at 5 per cent probability level with a positive sign. Since in the study area agriculture is practiced with intensive use of labour, it is argued that given the labour market imperfection a household with higher family labour supply is likely to produce more. Farmers participating in output markets follow more labour-intensive farming, since employing higher man-days per hectare is expected to affect both production and output markets participation. Livestock holding was also significant at 10 per cent probability level with a positive sign. This implies that as stock of livestock increases the probability of farmers' orientation towards commercialization increases.

Analysis of Crop profitability

The profitability analysis provides an insight about market performance of the farmers. In order to estimate profit average quantity produced by the sampled farmers, average costs and sale prices are used. Table 5 shows the average production costs and income of the farmers in the study area. The study reveals that labour cost comprises the largest proportion of total production cost, followed by cost incurred on seed/seeding. It is important to note that labour cost in food crops is higher than the commercial crops whereas cost incurred in fertilizer, pesticides and machinery is higher in food



crops. The labour cost incurred by the sample farmers for the production of food crops such as paddy and Maize is 72 per cent and 75 per cent respectively. The study further shows that total income from the production per acre of tomato is the highest followed by production of potato (Rs. 47,500) and chilly in the study area. This analysis shows a farmer who produces 18 quintal of tomato and insures an average cost of Rs. 29000 and sells at an average price of Rs. 37 would generate a profit of Rs. 37600 per acre. On the other hand a farmer who produces 10 quintal of paddy and insures an average cost Rs. 16660 and sells at an average price of Rs. 32 would generate a profit of Rs. 15340 per acre. The analysis of profitability of the production per acre of the selected crops in the study area shows that gross profit and gross profit margin of commercial crops is much higher than the food crops

Table 5
Analysis of Total costs, Total Revenue and Gross profit of sample Farmers

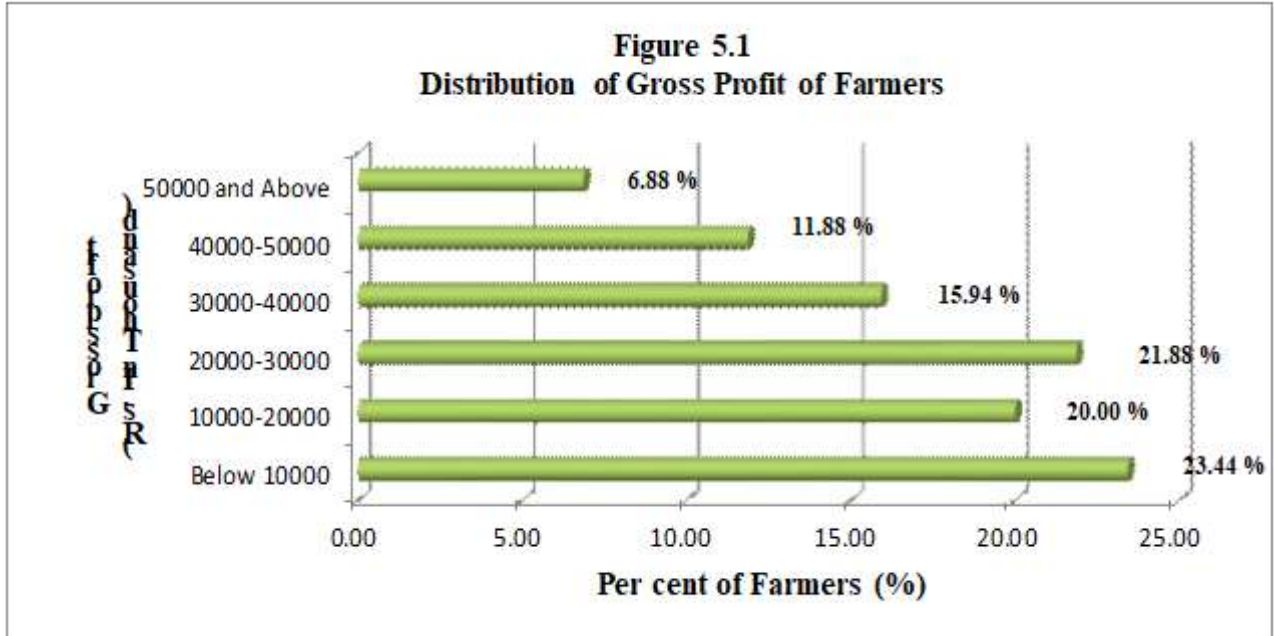
Selected crop	Cost/Rs/Acre						Total Revenue			Profit		
	Seed/Seedling (2)	Fertilizer (3)	Pesticide (4)	Labour (5)	Machinery (6)	Other Cost (7)	Total Cost (8)	Production (Tonnes) (9)	Av. Price (Rs/Kg) (10)	Total Income (Rs) (11)	Gross Profit/Season (Rs) (12)	Gross Profit Margin (%) (13)
Paddy	1572 (8)	983 (5)	NA (00)	14148 (72)	1965 (10)	982 (5)	19650	10	32	32000	12350	38.52
Maize	693 (9)	308 (4)	NA (00)	5775 (75)	NA (00)	924 (12)	7700	7	16	11200	3500	31.25
Cabbage	1650 (10)	1155 (7)	1650 (10)	9050 (55)	NA (00)	2970 (18)	16500	13	25	35000	18500	52.86
Tomato	4350 (15)	2900 (10)	5800 (20)	11,600 (40)	1450 (5)	2900 (10)	29000	18	37	66600	37600	56.46
Potato	4800 (20)	3600 (15)	1200 (5)	12,000 (50)	1200 (5)	1200 (5)	24000	19	25	47500	23500	49.47
Chilly	2000 (10)	1400 (7)	1000 (5)	13,000 (65)	NA (00)	2600 (13)	20000	11	40	44000	24000	54.55
Vegetables	4200 (20)	3150 (15)	2100 (10)	9450 (45)	NA (00)	2100 (10)	21000	9	45	40500	19500	48.15

Source: Field Survey, 2018

Note: Figure within the brackets refers to Percentage



Figure 5.1 shows the distribution of gross profit of sample farmers. The gross profit is calculated by subtracting the total cost of production from the total revenue. As high as 23.44 per cent of the sampled farmers earn less than Rs. 10,000. This is indeed very low, whereas as only 6.88 per cent of sample farmers earn Rs, 50,000 and above.



Source: Computed from the Field Survey, 2018

Conclusion

The estimated household commercialization index (HCI) shows existence of three levels of commercialization in the study area: Subsistence, semi-commercial and commercial. It was also found that the largest chunk is at the subsistence level. Computation of Crop Commercialization Index (CCI) reveals that high value crops such as fruits and vegetables were the best option for commercialization. It is interesting to observe that the degree of commercialization measured by HCI and CCI differs widely across surveyed households which implies a correspondingly wide variation in the potential and constraints for further commercialization, therefore, any strategy for agricultural commercialization should be customized for different groups of farmers. The multiple regression analysis reveals that quantity of output, educational attainment, off-farm income, availability of family labour and livestock holding were the significant factors influencing the transition from subsistence to commercial farming. From the analysis of profitability, it is found that high value crops is generally profitable and has an important implication for the overall agriculture growth and livelihood of the farmers. Though the marketing of high value commodity is profitable and efficient during the peak season and otherwise in the off season.

On the basis of findings summarised above, the present study makes following suggestions for improvement of commercialization in Aruanchal Pradesh as well as in the study area. Commercially oriented, efficient and effective extension service is a prime necessity to eradicate lots of mal-practices in production and marketing, especially in the vegetable cultivation. It will help farmers to apply better and proper cultivation technologies which will reduce the cost of production and enhance the quality of production. Development of infrastructure facilities is a prime requirement. Enhancement of conditions of the roads, supply of electricity and telecommunication and irrigation are inevitable to have a commercial vegetable production system in the area. The transaction costs associated with the flow of resources and products between districts and regions need to be reduced. This is so that gains from the production of surplus can flow to areas producing non-surplus, which in turn are required to support the production of surpluses. Transportation is the serious bottlenecks that



every farmer is facing in the hilly regions like Arunachal Pradesh. Most of the village is situated in the outskirts of the town; a proper road is always needed for carrying the production quickly to the market. But still most of the roads in the interior area are not yet metalled and that cause problems for the farmers during rainy season. Finally, Proper cold storage facilities are needed in order to avoid post-harvest loss to the farmers. Agricultural produce especially High value Crops (HVCs) crops such as fruits and vegetables need a good storage. In the study area there are no proper storage for storing agricultural products, the cold storage available in the town are unusable due to improper installation.

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**OPPORTUNITIES FOR REVERSE MIGRANTS IN RURAL AREA SP.
REF. TO COCONUT PRODUCTION IN SINDHUDURG DISTRICT****Mugdha Atul Kamat**

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Abstract -

This paper enumerates the immense value of coconut production in the development of Sindhudurg District, Sindhudurg district of Maharashtra is one of the districts which produce coconut in major proportion. But in present globalization era, there is crucial need to increase productivity of each crop and competitiveness of each industry by solving producer's problems. Therefore, researcher has selected this subject for study.

The researcher has used stratified sampling technique to collect data from coconut growers. The researcher has randomly collected data from 160 respondents (0.5%) out of 31300 populations. Primary and secondary methods have been used. Data has collected through questionnaire.

Followings are major conclusions and suggestions:-

1. **Uncultivated Area:-**About 7543 hectares of land is still uncultivated, according to the land record of Agriculture department, Sindhudurg which could be used for further plantation. Thus there is a wide scope to increase the plantation in the existing land available for coconut plantation.
2. **Regulated Market:-**In absence of regulated market, local traders taking undue advantages of ignorance of the cultivators and lack of transport facilities or storage facilities.

Key Words: - Coconut, globalization, hectares, plantation.

Introduction

Agriculture has already shown its potential to revive the pandemic-hit economy. The government must spur rural growth with MGNREGA, agri measures such as easier land leasing. Covid-19 and the response to it in India have forced daily wages and low-wages workers in urban slums to return to their villages.

Rural-urban migration can be limited if better income-earning opportunities are created in rural areas. Two avenues can make it happen. Increase in the returns from small farm agriculture and more employment opportunities in the rural non-farm sector. Many returnee migrants are from either in landless or marginal or small holder's farm households. Those choosing to stay back in villages after the ongoing crisis would prefer to work in their farms, irrespective of the landholding size. It is therefore advisable for migrants about coconut industry.

Significance of Coconut Industry in Indian Economy:-

India is a leader in production of various agricultural products and coconut is one of them India is the 3rd largest coconut producing country in the world with an annual production of more than 21500 million tones nuts.

Coconut is important agricultural product and grown in over 70 countries in the world. Coconut trees are tall and can grow up to 30 meters. Coconut is grown in different types of soil and need hot climate with high rainfall to grow. Coconut is grown in a large area in India in an area of more than 21 lakh hectares. India also has a good productivity with a productivity of more than 10,000 nuts per hectare. Coconut is produced in more than 15 states and union territories in India. Among all coconut producing states, Tamilnadu stands on top with a share of more than 31% of the total coconut produced in India.

1. **Tamilnadu:-** 7 billion coconuts
2. **Kerala:-** 6 billion coconuts



3. **Karnataka**:- 5 billion coconuts
4. **Andra Pradesh**:-1.8 billion coconuts
5. **West Bengal**:- 371 million coconuts
6. **Odisha**:- 324.93 million coconuts
7. **Gujarat**:- 295.03 million coconuts
8. **Maharashtra**:- 187.47 million coconuts
9. **Bihar**:- 141.42 million coconuts
10. **Aasam**:- 136.61 million coconuts

Need for Study:-

Coconut is regarded to be an important commercial crop in the country. Coconut industry has occupied an important place in the economy in terms of employment generation, earning foreign exchange reserve and so on. Coconut products are exported to various countries across the world. Achieving higher economic growth and generating adequate amount of foreign reserve has indeed containing to be the prime objective of the nation. Industry is one important sector of the Indian economy, which contributes a major share in the national gross domestic product. The economic survey 2018 has revealed that the industry represented 7.36% of the GDP.

As against this, the coconut industry in the country is spaced with several problems like production, marketing, finance, yield, variety etc. e.g. cultivation on low quality soil, use of low quality plants, lack of modern technology, lack of coconut processing industries, problem of distribution of coconut etc.

Keeping in view the importance of industry in the Indian economy and the problems that are faced by the coconut growers, an attempt is made to understand various problems of coconut growers so that necessary steps may be initiated to overcome those problems.

Objectives:-

1. To assess the overall trend of current coconut production in relation with its productivity in Sindhudurg district.
2. To study the area under coconut production and yield of the district.
3. To know the different problems of coconut growers in the district.

Literature Survey

1. **Markose (1999)** stated that the unrestricted import of coconut products, other cheaper vegetable oils and the reduction in import duty were the results of the present Liberalisation policy. To face the stiff competition in the international market the Indian coconut industry must be competitive. The study also indicated that the price variation of coconut product in the international market required reduction in the cost of production.
2. **Rathiha and Ghanadhas (2002)** studied the strategies for coconut price stabilization. The period of study was from 1984 to 1999. The study found that the factors responsible for the gloomy marketing situation prevailing in India were reduction in demand for coconut oil in the industrial sector especially in soap industry and easy availability of other oils and fats especially imported palm oil at cheaper prices and decline in its use for cooking purpose mainly due to the apprehensions of its relation to coronary heart.
3. **Samarajeewa (2002)** analysed the domestic demand for coconuts in Sri Lanka, using a single equation econometric model. The study found that the domestic coconut consumption accounts for 70 per cent of the total annual nut production in Sri Lanka. Being an essential commodity for household use, the coconuts form a stable domestic market outlet for producers as well. The results of the study revealed that the retail price of coconuts and per capita consumer income are significant variables that determine the quantity of coconut demand in Sri Lanka.



4. **Singh (2012)** considered organic farming as a welcome approach for maintenance of soil health and thereby increasing production. The study revealed that sustainability in coconut farming can be achieved through increasing the farm level income, lowering the cost of production, developing value-added products, promoting farm level processing and finding new uses and extensive markets for coconut products. As per the study, the viable strategy to enhance on farm income was farm level processing and value addition. The study suggested that self-help groups of women can be formed in potential areas and they can discharge the marketing function of coconut products at household/community levels. The study concluded that India can also venture into product diversification

Research Methodology

Profile of Sindhudurg District:-

Location-

The extreme southern pattern of the western coast of Maharashtra is known as Sindhudurg district. Formerly, it was a part of the unbifurcated Ratnagiri district, came into existence as a separate administrative district from 1st May 1981. Geographically, it is one of the smallest but beautiful districts, in the state of Maharashtra. The name 'Sindhudurg' is a derivative of the fort 'Sindhudurg' which was built during the regime of the great king 'Chhatrapati Shivaji'. On island near Malvan coast.

Agriculture and Horticulture:-

Agriculture is the main source of income in the district. But the fertility of land is very low as compared to the land of upper region. At least 70% of the population relies upon agriculture. Heavy rain, sandy soil, rocks and sudden ups and downs of the land are some of the reasons of the low yield.

Horticulture is the main hope of the district. Due to long gestation period, people are reluctant to take up horticulture on a large scale. In the district, main crops are coconut, cashew, mango, betelnut .

Industry:-

Due to coastal and topographical area, there is a lack of various industries in the district as compared to other districts of the state. The district is industrially backward because-

1. There are no basic raw material
2. There is a drain of entrepreneurship to Mumbai, Kolhapur and Pune.
3. Prohibitory cost of transportation
4. Lack of skilled and enthusiastic labour force
5. Frequent power failures

The district offers a good scope for the development cottage industries such as carpentry, bamboo-work.

Data Source:-

The data sources used for this study were both primary and secondary.

Primary Data:-

The primary data was collected from the coconut growers of Sindhudurg district. The data related to profile of the coconut growers, their cropping pattern, selling pattern, interest in the plantation, problems about assembling, selling and financing of coconut etc. was collected through a well structured questionnaire cum interview schedules from the sample coconut growers. The questionnaire was designed by keeping in mind the objectives of study. The primary data was collected from 160 coconut growers from Sindhudurg district.

Secondary data:-



Without secondary data it was difficult to create structure of research work. The secondary data was vital in developing a theoretical framework and to get deep knowledge about coconut production technology. Secondary data has been collected from books, journals, periodicals and web sites.

Selection Procedure:-**Population size:-**

There are 8 talukas in Sindhudurg District. The total number of coconut growers is 31300 in Sindhudurg District.

Sampling unit:-

Coconut growers of Sindhudurg district are selected for analyzing their problems, related with production, finance and marketing etc.

Sample Size:-

There are 31300 coconut growers in the district. In order to seek the opinions of coconut growers with regard to their problems, 0.5% of the sampling unit i.e. 160 coconut growers are randomly selected.

Sampling Technique:-

For the present study, a stratified sampling technique was employed. The data was collected from respondents who were clustered into 8 different segments based on talukas i.e. Sawantwadi, dodamarg, Vengurla, Kudal, Kankavli, Vaibhavwadi, Deogad, Malvan at the first stage.

At the second stage, which were further divided into 2 villages in each taluka namely Banda, Degve from Sawantwadi, Bhedashi and Maneri from Dodamarg, Math and Shiroda from Vengurla, Mangaon and Tersebambarde from Kudal, Achara and Malvan from Malvan, Deogad and Vaghotan from Deogad, Kharepatan and Talere from Kankavli, Vaibhavwadi and Umbarde from Vaibhavwadi. And at the third stage, which are further divided into 10 coconut growers respondents each in those 2 villages. These areas were selected because of having the potential of coconut production.

Analysis and Discussion

The objective of the research is to study overall trend of coconut production in Sindhudurg district, Area under coconut production, problems and prospects of coconut growers in Sindhudurg District. The same has been analyzed and discussed here.



Table No.-1

Cropping Pattern Analysis of Sindhudurg of 2018-19

No.	Crops	Total Area (ha)	%	Productive Area (ha)	%	Productivity MT/ (ha)	%	Production (MT)	%
1	Mango	31647	22.07	22566	22.65	2.74	0.03	61774	0.08
2	Cashew	60420	42.15	42275	42.43	9.36	0.10	57600	0.08
3	Coconut	17976	12.54	10433	10.47	9018.75	97.61	9,40,92,619	99.84
4	Betelnut	1073	0.75	690	0.69	9.50	0.10	1035	0.00
5	Kokum	349	0.24	201	0.20	37.44	0.41	7524.9	0.00
6	Jackfruits	264	0.18	195	0.20	14.28	0.15	2764	0.00
7	Chiku	243	0.17	174	0.17	1.43	0.01	249	0.00
8	Aawala	86	0.07	40	0.04	1.74	0.02	69.5	0.00
9	Papaya	146	0.10	146	0.16	8.01	0.09	1170	0.00
10	Pinapple	237	0.17	237	0.24	22.06	0.24	5228.8	0.00
11	Jamun	17	0.01	20	0.03	2.69	0.03	26.88	0.00
12	Chinch	5	0.00	5	0.00	0.00	0	0	0.00
13	Guava (Peru)	10	0.00	7	0.00	0.37	0.00	2.58	0.00
14	Banana	500	0.36	500	0.50	17.49	0	8743.8	0.00
15	Lemon	16	0.01	15	0.02	94.06	1.03	210.10	0.00
	Others	30351	21.18	22119	22.20				
	Total	143340	100.00	99623	100.00	9239.92	100.00	94239017.56	100.00

Source:- Agriculture Department, Sindhudurg.

Table No-1 indicates that in Sindhudurg district out of 143340 hectares of land, 31647 ha of land i.e. 22.07% is occupied by mango cultivation, about 60420 ha of land i.e. 42.15% is occupied by cashew cultivation, about 17976 ha of land i.e. 12.54% is occupied by coconut cultivation and remaining is occupied by miscellaneous crops i.e. Betelnut, kokum, jackfruits, chiku, pinapple, banana etc.

According to primary survey, in the district about 65% of the plantation is old; giving the present production and about 35% of the plantation is recent during the last 3-4 years and not yet matured for production.

Table No.-2



Tehasilwise Area of Cultivation of Coconut in Sindhudurg

(in Ha)

Sr . No	Name of Tehasil	2014 -15	%	2015 -16	%	2016 -17	%	2017 -18	%	2018 -19	%
1	Kankavli	1029	5.94	1080	6.15	1100	6.14	1101	6.14	1101	6.12
2	Deogad	585	3.38	595	3.39	650	3.62	652	3.63	660	3.67
3	Malvan	3330	19.22	3390	19.32	3500	19.55	3510	19.57	3520	19.58
4	Vaibhavwadi	310	1.79	315	1.79	330	1.94	332	1.85	335	1.86
5	Sawantwadi	3310	19.11	3330	18.97	3400	19.00	3402	18.97	3405	18.94
6	Kudal	4135	23.88	4140	23.59	4200	23.46	4220	23.54	4230	23.53
7	Vengurla	2910	16.80	2990	17.05	3000	16.74	3002	16.75	3010	16.74
8	Dodamarg	1710	9.88	1710	9.74	1710	9.55	1710	9.55	1715	9.56
	Total Area	17319	100.00	17550	100.00	17890	100.00	17929	100.00	17976	100.00

Source :- Agriculture Department, Sindhudurg

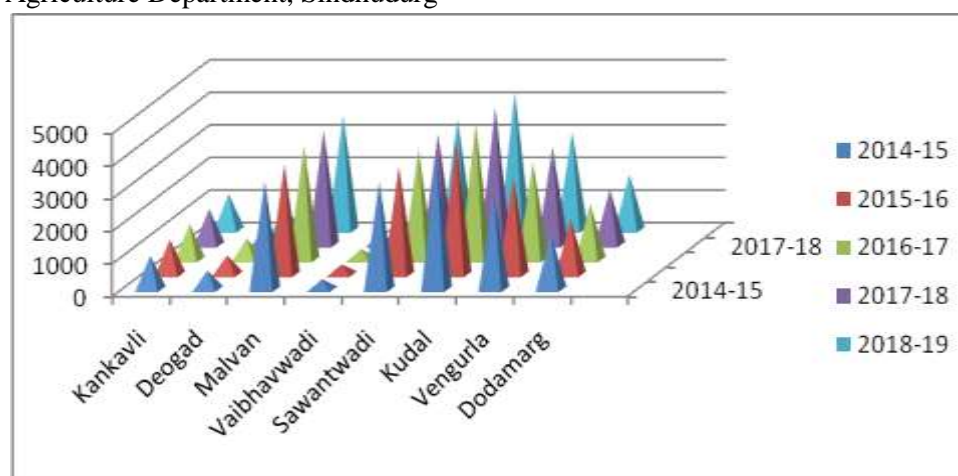


Table-2 & 3 indicates that up to 2018-19 in Sindhudurg District, total area is 17976 hectares, of this area, about 10433 hectares are under coconut production. It means that about 7543 hectares of land is still uncultivated, according to the land record of Agriculture department, Sindhudurg. If this land is brought under coconut plantation, further 905160 trees (120 plants per hectare) can be planted which could produce about 9,05,16000 (minimum 100 coconuts per tree) coconuts and will fetch Rs. 1,81,03,20,000 per year at the minimum current market rate Rs. 20/- per kg.



Table No-3

Analysis of Tehasilwise Productive Area, Productivity and Production of Coconut in Sindhudurg District

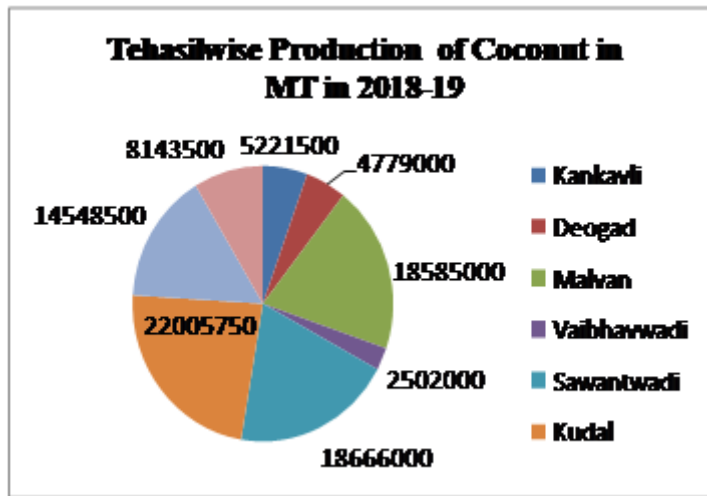
S r. No	2014-15							2015-16					
	Name of Tehasil	Productive Area (ha)	%	Productivity (MT)/ha	%	Production (MT)	%	Productive Area (ha)	%	Productivity (MT)/ha	%	Production (MT)	%
1	Kankavli	545	5.34	870	12	4741500	5.2	550	5.36	8050	11.9	4427500	4.97
2	Deogad	527	5.16	920	12.7	4848400	5.31	530	5.16	8850	13	4690500	5.26
3	Malvan	2065	20.2	920	12.7	18198000	19.9	2080	20.3	8850	13	18408000	20.7
4	Vaibhavwadi	260	2.55	890	12.3	2314000	2.54	260	2.53	8250	12.2	2145000	2.41
5	Sawantwadi	2025	19.8	820	11.3	16605000	18.2	2030	19.8	8550	12.6	17356500	19.5
6	Kudal	2385	23.4	940	13	22419000	24.6	2390	23.3	9150	13.5	21868500	24.5
7	Vengurla	1535	15	960	13.2	13950000	15.3	1555	15.1	9000	13.3	13995000	15.7
8	Dodamarg	870	8.52	940	13	8178000	8.95	875	8.52	7150	10.6	6256250	7.01
	Total	10212	100	72600	100	91253900	100	10270	100	67850	100	89147250	100

S r. No	2016-17							2017-18					
	Name of Tehasil	Productive Area (ha)	%	Productivity (MT)/ha	%	Production (MT)	%	Productive Area (ha)	%	Productivity (MT)/ha	%	Production (MT)	%
1	Kanka	570	5.5	885	12	504450	5.5	575	5.5	8550	12	49262	5.5



	vli		52	0	.6	0	5		55		.2	50	44
2	Deogad	534	5.17	8850	12.6	4725900	5.15	538	5.19	8400	12	4519200	4.99
3	Malvan	2090	20.2	8700	12.3	18183000	19.8	2095	20.2	8400	12	17598000	19.4
4	Vaibhavadwadi	275	2.66	8700	12.3	2392500	2.61	275	2.65	9000	12.8	2475000	2.73
5	Sawantwadi	2035	19.7	8700	12.3	17704500	19.3	2038	19.7	9300	13.3	18153400	20.1
6	Kudal	2395	23.2	9300	13.2	22273500	24.3	2400	23.2	8850	12.6	21240000	23.5
7	Vengurla	1555	15	9000	12.8	13995000	15.3	1560	15.1	8850	12.6	13806000	15.3
8	Dodamarg	880	8.52	8400	11.9	7392000	8.06	880	8.5	8850	12.6	7788000	8.61
	Total	10334	10	70500	10	91710900	10	10361	10	70200	10	90505850	10

S r. N o.	Name of Tehasil	2018-19					
		Productive Area (ha)	%	Productivity (MT)/ ha	%	Production (in m. ton)	%
1	Kankavli	590	5.65	8850	12.3	5221500	5.53
2	Deogad	540	5.17	8850	12.3	4779000	5.05
3	Malvan	2100	20.1	8850	12.3	18585000	19.7
4	Vaibhavadwadi	278	2.66	9000	12.5	2502000	2.65
5	Sawantwadi	2040	19.6	9150	12.7	18666000	19.8
6	Kudal	2405	23.1	9150	12.7	22005750	23.3
7	Vengurla	1590	15.3	9150	12.7	14548500	15.4
8	Dodamarg	890	8.55	9150	12.7	8143500	8.63
	Total	10433	10	72150	10	94451250	10



Source :- Agriculture Department, Sindhudurg

The Table No.-3 shows Productive area, Productivity and Production in Sindhudurg district, Maharashtra State. This table enumerates that Kudal Tehsil is biggest one in productive area and production of coconut, Sawantwadi and Malvan tehsils are following that. Vaibhavwadi Tehsil is lowest one in coconut production. As per consideration of Soil, Weather and Water Kudal, Sawantwadi and Malvan tehsils are suitable for coconut production. In 2018-19, production of Sindhudurg district is 9,44,51,250 mt. It increased by 39,45,400 mt (4.18%) as compared to 2017-18. If uncultivated land is brought under coconut plantation, the coconut production will be increased.

Table No.-4

Analysis of Problems of Coconut Growers

Sr. No.	Problems	No. of Respondents(out of 160)	%
1	Production Problems- Pest Diseases	155	96.87
2	Natural Calamities	140	87.5
3	Indiscriminate cutting of coconut trees	85	53.12
4	Decreasing coconut plantation due to urbanization	90	56.25
5	Labour Problem- scarcity of skilled labour	155	96.88
6	Low and fluctuating price of coconut	160	100
7	Marketing Problems	150	93.75
8	Low Yield	158	98.75

Source:-Primary Survey

Table No.-4 indicates the problems of coconut growers. The problems are about plantation i.e. Pest and Diseases, Natural Calamities, Indiscriminate cutting of coconut trees, Decreasing coconut plantation due to urbanization, Labour Problem i.e. scarcity of skilled Labour, Low and fluctuating prices of coconut, Marketing problems, Low yields due to maintenance cost, High Labour Charges etc.



As per primary survey, pests and disease problems are dominant problems. About 96.87% respondents faced these problems. Small coconut farmers are generally low yielding due to genetically inferior, ageing palms and poor management practices especially on crop nutrition and population density.

About 93.75% respondents have faced the problem of selling the product because there is no regulated market in Sindhudurg district. The cultivators have directly sell their product to local market or they have to depend upon the local traders, who are taking an undue advantage of ignorance of cultivators and inadequate transport and market facilities, inadequate information system of market and inferior area of plantation.

About 98.75% respondents have faced the problem of Low yield. High Labour Charges, Current marketing practices, Low and fluctuating prices of product these are the main constraints for yield. Therefore, average farmer get a very small margin of profit.

Conclusions and Suggestions

The need of present era is to increase the productivity of each and every field crop, which will help to feeding the ever-increasing population of our country. This ever increasing population has been creating many problems. Our country faces the very critical problem of earning the foreign exchange. The foreign exchange is needed to balance the trade with our countries. Thus, it is essential to produce the commodities having potential of marketing abroad. Coconut is one such commodity. Konkan Region is one of the major areas that grow coconut in larger areas. The per unit area production of coconut in Konkan is low. So, the present investigation was designed and conducted to find out the causes of low productivity in general, and of the technological gap, in particular.

The following conclusions have been emerged under the study and some recommendations to grab a prominent position to market.

1. **Utilization of Uncultivated Area** :-About 7543 hectares of land is still uncultivated, according to the land record of Agriculture department, Sindhudurg which could be used for further plantation. Thus there is a wide scope to increase the plantation in the existing land available for coconut plantation.
2. **Use of Scientific Technology**:- Existing output per tree, per year is very low i.e. 100. Low yield due to old age and absence of upkeep. The new technology should be encouraged. The program should be set up for transfer of scientific technology to farming community by way of farmer's training.
3. **Maintaining appropriate spacing**:-Many of the coconut growers were found not maintain appropriate spacing in the coconut plantations possibly because of the topography of the region and their non-conviction about the utility of the recommended spacing. The extension agencies should guide the farmers about layout of coconut crop on hilly and sloppy lands.
4. **Training To Farmers** In this study, it was also found that the lack of knowledge about the practices like plantation method, fertilizers dose, identification of pests and diseases and Government schemes was the major constraints. The cultivators are satisfied with whatever they get and not aware of the efforts to be made for increasing the productivity of plants, improve the market relations. The extension organization in the area needs to organize practical oriented training to the needy farmers about the improved technologies of coconut cultivation.
5. **Regulated Market** :-In absence of regulated market, local traders are taking undue advantages of ignorance of the cultivators and lack of transport facilities or storage facilities. Sometimes, the coconuts are purchased even at Rs. 15/- to 20/- from the cultivators. This is due to lack of transport facilities. These are sold at Rs. 25/- to 30/- to customers.
6. **Processing Unit** :-In present era of globalization, establishment of coconut based processing units not only useful for consumption of coconut but also it will useful for increase competitiveness of the industry. The government should start-up processing unit by providing



infrastructure facilities, easy financial assistance, and tax concessions being a labour intensive industry. By developing this industry, the backwardness of this region can be removed. According to Ohler (2015) in Sri Lanka, there are many houses and buildings with roof structures built of coconut wood that is still in use after 100 years. This means that the coconut wood can be a potential business to farmers for increasing income

7. **By-product Utilization:-** The coconut is a 'no-waste tree' because with help of its waste products farmers can increase their income. Coir dust, the major by-product of coir production and considered a pollutant, is now being sought to conserve the environment. It is now used as substitute for peat as a potting medium for plants. Coir peat or dust is now being exported and is becoming a significant foreign exchange earner in Sri Lanka
8. **Establishment of Farmer's Organizations:-** Coconut is essentially a smallholder crop. The coconut farmers are poor as well as illiterate or less educated therefore, they are not organized. Being in such condition, most often coconut growers are subjected to unfair tactics of private traders. Farmer's organizations likewise serve as an organizational framework for the efficient delivery of credit and extension services to alleviate economic poverty through increased farm productivity and income. The Coconut Development Board should try to strengthen their organization for safeguard their interest.
9. **Establishment of Hotels :-** The farmers can start-up road sided small hotels in which they can serve coconut water to tourists instead of soft drinks besides this, they can sell coconut barfi, coconut laddu, (sweets) coconut oil through their hotels. They can decorate their hotels by numerous products which are made from husk, shell, leaves, dry flowers etc. By use of these material, they can produce attractive mats, carpets etc. which can helpful to get additional income. It will create healthy atmosphere to Tourism Industry.

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COMPARING THE PROFITABILITY OF ORGANIC AND CONVENTIONAL FARMING IN PALGHAR DISTRICT, MAHARASHTRA

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Abstract:

After launching National Programme for Organic Production (NPOP) in India the area under organic farming has been increasing steadily. The study was conducted to find out the comparing profitability of organic and inorganic farmers in Palghar district. Out of 70 farmers comprising 53 farmers used the sample for the study of organic and inorganic farming drawn randomly from five talukas in Palghar district. The study is on Organic Farming and Conventional Farming, showing certain pie charts, diagrams and bar graphs representing the pie charts showing with the details on Land under cultivation, Years of farming along with the farmers holding land under Organic and Conventional farming measuring in acres. The main highlight is to study the Annual Expenditure, comparing the Cost of Income of a farmer between Organic farming and conventional farming and a bar graph presenting last three years comparison for organic farming and conventional farming.

Key words: Comparing profitability, annual income, organic farming, conventional farming

Introduction:

The main aim of the study is to compare the current situation of economic and environmental sustainability of conventional farming activities with organic farming activities. In the Palghar region, agriculture is a main occupation, optimum availability of natural resources, good soil quality and optimum availability of livestock number of people engaged in agriculture sector. Traditionally, numbers of farmers cultivate their land naturally i.e. organically. Hence, the trend of organic farming in that region has been continuously increased. In each village, Non-Government Organization (NGO) was performing important role for provide better training and guiding the farmers in the process of converting from conventional to organic farming.

Organic farming is one of the important agriculture system which is depend on organic manure, organic compost like vermin compost, biological pest control and adopting multiple cropping and crop rotation method in the farming. The various benefits of organic farming for small farmers all over the country include high premium, low investment, low risk, traditional knowledge, natural technique of farming and less dependence of money lenders.

In Palghar district number of organic farms, the extend of organically farmed land, the amount of funding devoted to organic farming and the market size of organic food have steadily increased. Sales of organic foods are rapidly growing. Organic agriculture can expand its financial performance compared with conventional agriculture. The main factor that determined the profitability of organic agriculture include crop yields, labour and total cost, price premiums for organic products, potential saving and investments and purchased inputs. The organic products produce by the farmers were distributed through various marketing channels. In Palghar district there are various channels were found producers to consumer's number of farmers mainly used this marketing channel for rice, mango, fruits, and vegetables. Agriculture plays a vital role in the Palghar region economy. Paddy is the major seasonal crop cultivated in this region. Thus, Paddy occupies largest area of cultivation. Due to increasing the demand of organic food, the Palghar district numbers of farmers cultivated their



land organically and earn good income. And few farmers also cultivate their land conventionally and increase the quantity of Paddy production.

Economically evaluate the performance of organic farms shows that the availability of agricultural land assets per hector is significantly higher in conventional farms. (Brozova, M. Beranova 2017). Based on the income velocity an observed the financial differences of organic and conventional farmers, organic farmer's asset turnover and profitability more than conventional farmers. Finally, increasing the trend of organic farms in Prague, Czech (Josef Krause 2018)

Productivity levels were found with the help of standard stochastic production frontier model and a meta frontier model. The small holder farmers analyzed the productivity level practicing different farming system like 'clean and safe' or conventional vegetable production. Clean and safe farmers make three groups according to their synthetic chemical uses i.e. organic, pesticide free and safe-use (Pranthanthip Kramol et.al. 2013).

Observed the comparison between organic and chemical farming, cultivation procedures of organic farming protect the natural properties of plants, protect the natural nutritional values of food, and increase the soil fertility etc. Hence, the price and quality of organic food products is better than chemical farming (Giuseppina P.P. Lima and Fabio Vianello 2011). From the financial point of view, organic lemon producers earn higher profitability due to low cost of inputs factor and minor labour requirement, premium price of product and greater demand. (Fillipo Sgroi et.al 2015) Two different methods of using in agriculture sector i.e. organic animal-based cropping, organic legume-based cropping and other one is conventional farming. (Devid Pimentel et.al 2014)

From the farmers perspective in Karnataka region organic farming improve the sustainability in agriculture sector. In that region various farmers using the model Techno Gin to assess the stability in conventional as well as organic farming. Finally, they found the organic farmers get better profitability compare to conventional farming. A financially socially and environmentally organic farmer seems to be more beneficial in this region. (Sheetal Patil et.al 2015)

Objectives:

- To analyze the profitable comparison between organic and conventional farming.
- To shows the annual production of organic and conventional farming.
- To bring out the revenue generated for last 3 years of organic and conventional farmers.

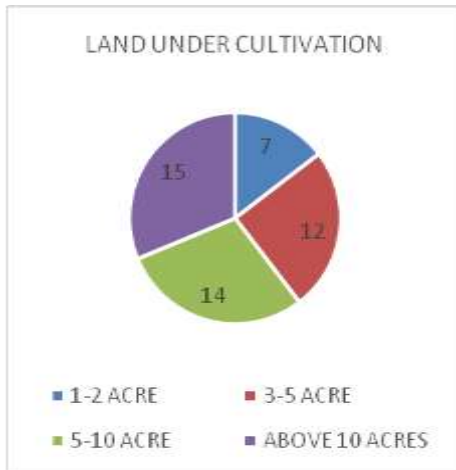
Research Methodology:

A survey was conducted among the farmers of Wada, Vikramgad, Zadpoli, Vasuli, Mharoli and Dahanu in Palghar district. The tool used for data collection is an interview form as well as the questionnaire method. The population is 70 and the sample size being taken to be 53, as the survey of rest population was not up to mark with all the answers answered. A Pie-chart, Bar diagram, Line chart are used in order to express the data's collected from the survey

Results and Discussion

Diag.1

Diag. 2

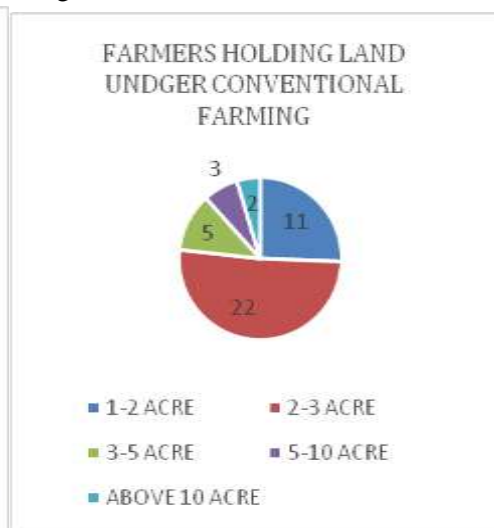
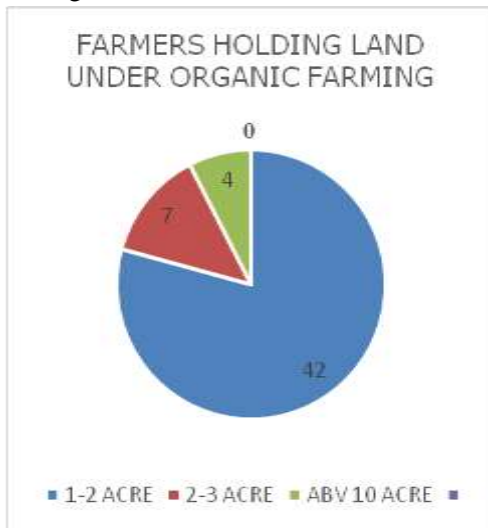


The above pie chart shows a detail study on

- 1) Land under cultivation which says that the most of the farmers using land under cultivation are 5-10 acres of land whereas less of the farmers are using 1-2 acres of land for their cultivation purpose. Due to suitable climatic condition, good quality of soil fertility and available irrigation sources farmers are adopt mix farming method and large number of agricultural area cultivate under farming.
- 2) The experience of the farmers is expressed in the chart itself that maximum farmers are with 1-5 years of experience in their organic farming work. And 10 farmers are with 5-10 years of experience in their organic farming. Due to profitability purpose many farmers converted their land conventional farming to organic farming.

Diag.3

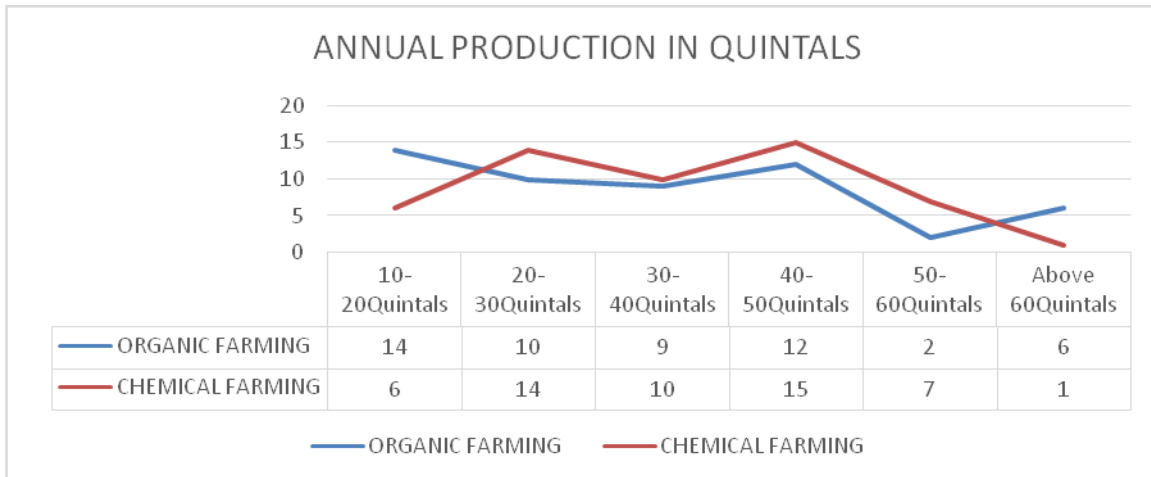
Diag.4



A clear difference shown in the pie chart showing Farmer holding land under Organic farming and Conventional Farming, which describes majority of the land holding are by the Organic Farming. As per the collected data majority of farmers prefer organic farming because of low input cost, less availability of labour cost and used only organic fertilizers and pesticides like green manures and animal waste (mainly cow dung and cow urine). Hence, the overall expenditure is very low in organic farming.

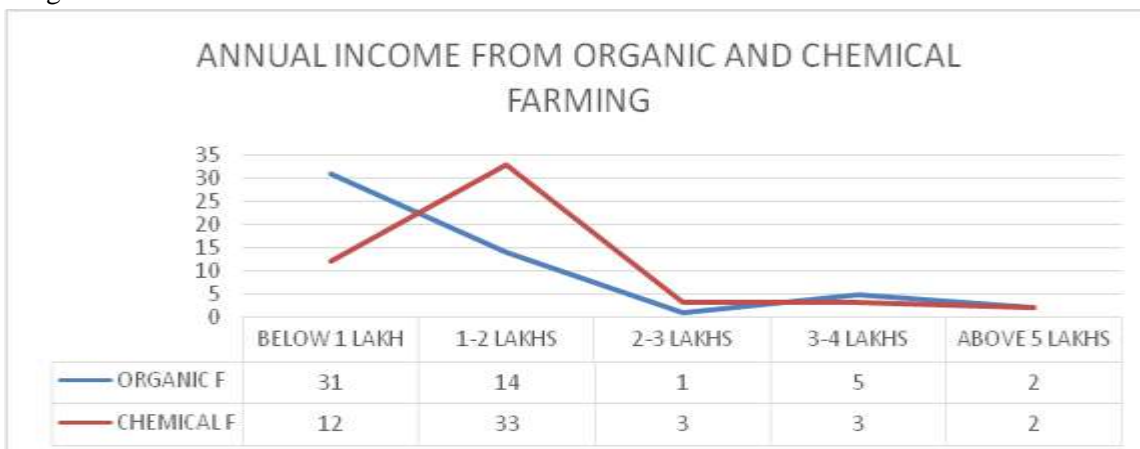
On the other side, 22 farmers cultivate their land conventionally because they want to increase the large quantity of production and earn good profit. Therefore, they used the chemical fertilizers and pesticides.

Diag. 5



In this region, large numbers of farmers are small and marginal, so they can't use any advance technology in their farm, they cultivated land organically and used traditional method of cultivation. Small land holdings, limited capital and technical barriers are the main cause of low productivity. Hence, the organically produce production is not much high as compare as chemical farming. Mentioned above graph, 14 organic farmers are marginal and small farmers are produced only 10 to 20 quintal of paddy production. 12 farmers are produced only 40 to 50 quintals of production and very few but large scale farmers they produced above 60 quintal of production.

Diag. 6

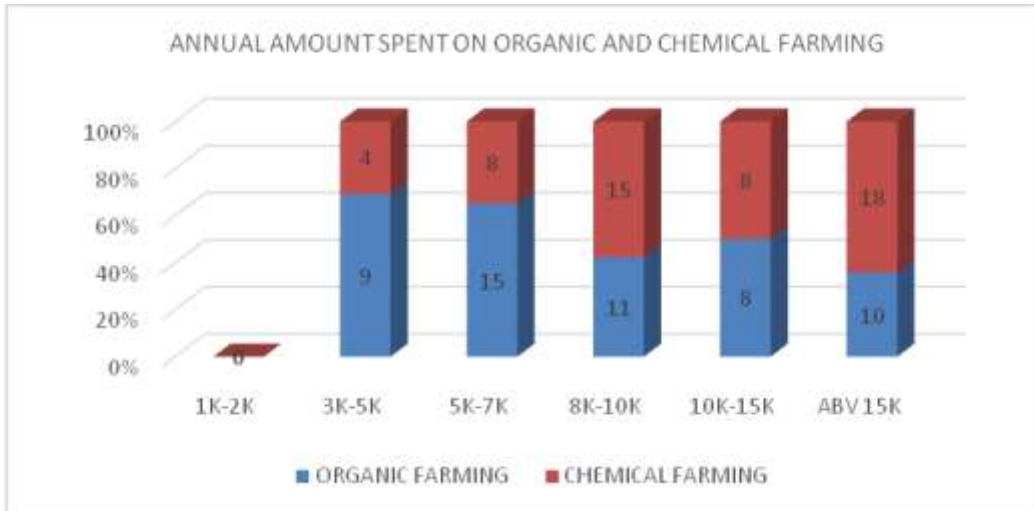


The above Line graph diagram 5 & 6 expresses the production and the annual income and the farmer. It shows that the production in chemical farming with a range of 40-50 Quintals is more, thus the annual income from chemical farming shows a high peak with 1-2 lakhs to its maximum.

Mentions above graph organic farmers are earning their income from organic farming. Because last few years demand of organic food products is increase in urban areas due to this reason in Palghar district large numbers of farmers have been adopted organic farming. An implementation or organic farming farmers has getting number of benefits like improve soil fertility, increase nutritional value of crops, uses only organic inputs and this inputs are easily available and less expenditure, protect environment and increase the income of farmers etc. Another important reason is Palghar is connect nearby city areas then the easily markets are available as well as malls are highly demanding organic vegetables and fruits. So, farmers are easy to way capture the market and earn profit.

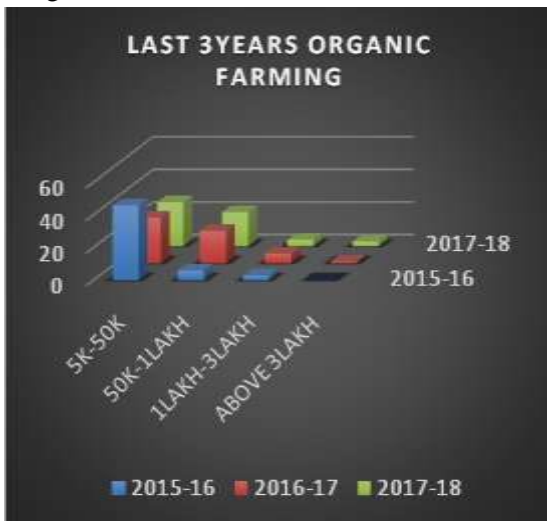


Diag.7

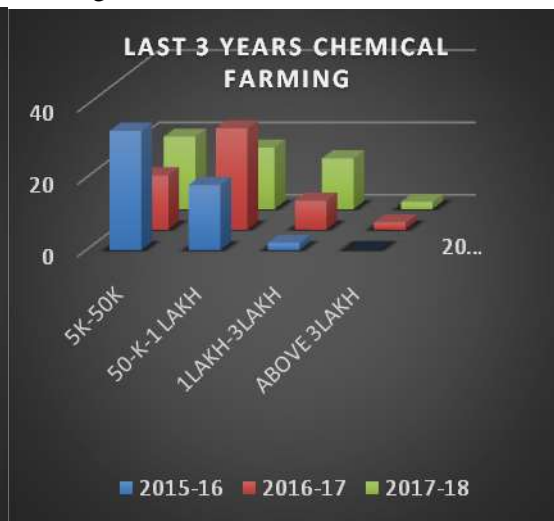


As from the above diagram showing the production and income of chemical farming the utmost, the above diagram too shows more expenditure in chemical farming too which expresses to be above 15,000 Rupees annually. Mainly farmers spend on excessive uses of insecticides, chemical fertilizers, pesticides and excess spending on labour wages because in this type of farming labour are used in mulching and weed management. Number of farmers spends on uses of threshers, tilling machines and tractors, and different types of advance technologies. Hence, the large numbers of annual amount spend on chemical farming compare to organic farming.

Diag. 8



Diag. 9



Above graphs shows the three years revenue generating in organic and conventional farming. During the year 2015-16 large numbers of farmers had earn their good income from conventional farming. Which is clearly indicate that more than 40 farmers had received revenue Rs.5000-Rs.50000 from “conventional farming” in the study area and above 35 of the farmers had received revenue Rs.5000-Rs.100000 from organic farming of 2016-17 in the study area.

More than 25 farmers selected for the survey in the farm size groups of more than 10 acres of land, the farmers had revenue above Rs.200000 from organic farming of 2017-18 in the study area.

Conclusion

Based on above discussion, farming holding land of 1-2 acres are found to be maximum with maximum 40% of land are hold by the farmers in Organic farming. In Palghar region, small and



middle scale farmers are practices organic farming because organic farm achieve higher profitability compare to conventional farming. Therefore, it is essential to develop adequate policies to promote farmers as well as economic activities in this region. Hence, the government should take initiatives to promote organic farming and provides financial support, agricultural equipment, irrigation facilities, crop insurance, subsidies as well as support local government and NGO's.

The results of the estimations showed that organic producer's profits were moderate than conventional farmers. After the harmful effects of excessive uses of chemical fertilizers and pesticides in conventional farming farmers turn to organic farming. This is turn change the attitude of the consumers and created awareness on organic farming. This increasing awareness has shifted the consumer tastes and preferences which raise the demand for organic farm products domestically and globally. In Palghar region a notable number of farmers have followed the path for organic food production, but the share of organic farm product market is slowly increased. Another important point found in this region to develop the organic certification process on priority based. It will be beneficiary for farmers in marketing of organic produce.

Last few years demand of organic food products is increase in urban areas due to this reason in Palghar district large numbers of farmers have been adopted organic farming. An implementation of organic farming has getting number of benefits like improve soil fertility, increase nutritional value of crops, uses only organic inputs and this inputs are easily available and less expenditure, protect environment and increase the income of farmers etc.

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PROBLEMS OF ORGANIC PRODUCTION AND MARKETING IN SHIMOGA DISTRICT: A STUDY IN HILLY REGION

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Abstract

Though the Karnataka is the hub of software industries, the agriculture is the major occupation for a majority of the rural population where agriculture employs more than 60 per cent of Karnataka's workforce. In this study, an attempt was made to examine the problems of organic production and marketing with reference to hilly region of Shimoga district. The study was based on both primary and secondary data and the primary data were collected from the randomly selected 120 sample organic farmers. The filed survey was conducted with pre tested schedule and personally visited to farmers' field for collection of information during 2019-2020. The results of the study indicated that organic farmers are educated, well aware of problems associated with inorganic farming and more importantly resource rich farmers. It was also observed that the caste is arranged hierarchical order, the higher community people are more inclination towards organic farming compared to the backward people like SC&ST. Organic farming requires the different types of inputs such as suitable seeds, FYM, bio fertilizers, bio pesticides, jeevambrutha, panchagavyam etc however the farmers are not getting the adequate quantity of inputs at right time. Farmers express the view that they do not have the suitable seed for organic farming. Nearly 45 percent of organic farmers of in hilly zone are complaining that crop yield is low in organic farming compared to crop yield obtained under inorganic farming practices. Finally, lack of awareness about organic products was the greatest impediment for promotion of organic farming in the study area.

Key Words: Organic, reckless, niche, jeevamrutha and sustainable

Introduction

In Karnataka, agriculture is the major occupation for a majority of the rural population. As per the population Census 2011, agriculture supports 13.74 million workers, of which 23.61 percent are cultivators and 25.67 per cent agricultural workers and hence the agriculture employs more than 60 per cent of Karnataka's workforce. Thus, a large portion of agricultural land in the state is exposed to the vagaries of monsoon with severe agro-climatic and resource constraints. Modern farming practices, along with irrational use of chemical inputs over the past four decades have resulted in not only loss of natural habitat balance and soil health but have also caused many hazards like soil erosion, decreased groundwater level, soil salinization, pollution due to fertilizers and pesticides, genetic erosion, ill effects on environment, reduced food quality and increased the cost of cultivation, rendering the farmer poorer year by year (Ram, 2003). Therefore, farmers do not find agriculture a viable proposition anymore and in fact, a large number of farmers have committed suicides (Deshpande, 2002). Considering all these aspects, the Government of India and many State Governments have felt that it is necessary to promote organic farming in a big way. Promoting organic farming is one of the important agriculture thrust policies not only in India even all over the world. Organic agriculture is developing rapidly; its share in agricultural land has been increasing. In this backdrop, the Government of India under 10th Five-Year Plan encouraged organic farming using organic wastes, and Integrated Pest Management (IPM) and Integrated Nutrient Management (INM)



practices (GoI, 2001). Even the 9th Five-Year Plan had emphasized the promotion of organic produce in plantation crops, spices and condiments using organic and bio-inputs for the protection of environment and promotion of sustainable agriculture. However, the Karnataka is no exception in promotion of organic farming. Thus, the organic farming is being promoted with the twin objectives viz providing safe agricultural products to consumers and for protecting the natural environment. In this context, the study has been undertaken to analyze the problems of production and marketing of organic products in hilly region in Shimoga district of Karnataka. The rest of this paper is organized as follows: Section 2 reviews of the Literature and relevant empirical studies. Section 3 describes data and methodology as well as objectives of the study. Next section presents the empirical results. Finally, the paper concludes.

2. Review of Literature

Some of the important studies, which deal with the problems, associated with the organic production and marketing are reviewed and their findings are mentioned in this section.

Organic agriculture is expanding in all countries to meet increasing consumer demand, although it accounts for a relatively small share of agricultural production and food consumption (OECD, 2003). The demand for organic food is steadily increasing both in the developed and developing countries, with an annual average growth rate of 20-25 percent. World over 130 countries produce certified organic products in commercial quantities. Twarog (2006) reported that, the developed-country market for certified OA products have been growing much faster than overall food markets over the past two decades. This presents some promising export opportunities for producers and exporters of organic products in developing countries.

'Organic' in organic agriculture is a labeling term that denotes products that have been produced in accordance with certain standards during food production, handling, processing and marketing stages and certified by a duly constituted certification authority (Ramesh, et. al., 2005) Organic label is therefore a 'process claim' rather than a 'product claim'. Hence, organic products could not get their due price premium unless they are labeled by the competent authority. It is the case with most of the rain-fed agriculture products in India that are 'organic by default'. Though it has tremendous potentiality to emerge as major supplier of organic products in the world market, it could not be exploited due to lack of awareness of price premium for certified organic produce, cumbersome certification producers and high cost of certification (Eximbank, 2002). Farmers face financial and other obstacles in the initial phase of a switchover from IFS to OFS. This rather difficult phase is called 'conversion period'. The conversion period is the time taken for neutralization of the chemical residues, if any, left in the soil by hitherto practiced agriculture techniques (Kasturi Das, 2007).

Rao (2003) examined the marketing of organic wheat and problems faced by the farmers in Rajasthan. It was found that the producers' selling price for organic wheat was lower than that for inorganic wheat as there was no separate market and storage facility for organic wheat. Further, the marketing cost for both types of wheat was found to be similar. Consumers and buyers of wheat were least interested in organic wheat as they had preconceived ideas about the quality of organic wheat which was less irrigated. The production and marketing of organic cotton in Maharashtra (Ramsundaram et al., 2003) showed that the organic cotton was concentrated in low productivity and high uncertainty



areas. The farmers preferred organic cotton for risk aversion, lower cost of production (30%) and cash payment in that order. The yield was lower by 20 percent though the price was higher by Rs 130-700 per qtl. as compared to inorganic cotton. However, the major problems were non-availability of suitable vaccines and certification agencies and delayed procurement and payment by the buyers.

Subrahmanya and Nagasree (2005) reviewed the present status and future scope of organic products, steps adopted to increase production and exports, and Government of India's measures to increase the export of organic products. The study found that India has vast potential in food grains, vegetables and spices of organic products export and marketing. The government has taken some steps like, establishment of National Institute of Organic Farming (NIOF) for development of national standards, identifying accreditation and certifying agencies. The model farmers set up to overcome some constraints like higher cost of certification, non-availability of permitted organic inputs, lack of awareness and information. Further, recognition of more Indian Certification Agencies, development of International Control System (ICS), tax concession and subsidies for organic inputs, market influence about price premium, creation of organic boards, organic export zones and conducting awareness and training programme are some of the boosting measures.

Saravanakumar and Jain (2003) have examined the present status of export and market potential of organic products in India together with the problems and possible solutions. The study revealed that the products available for the export market are rice, wheat, tea, spices, coffee, pulses, fruits and vegetables, cashew nuts, cotton, oilseeds and medicinal herbs etc highly demanded products in developed countries. However, price expectation are too low, lack of national certification and accreditation, restriction for importing Indian organic products, lack of information on availability and quality, poor marketing are some of the problems identified. Besides, a few possible solutions are suggested that the training programmes for small farmers, local certification bodies accredited by national and international organizations, organic commercial mission, organic small farmers, promote organic products in national and international market.

Despite of organic products market is still niche all over; the demand for products produced under organic labels has been increasing both in developed and in developing countries. Under right circumstances, the market return from organic agriculture can potentially contribute to local food security by increasing the family income. The above studies have been mentioned various constraints in production and marketing of organic products in different countries. Several countries have followed different set of rules and regulations as for as production, processing, packing, labeling and marketing of organic products are concerned. Hence, developing countries could not fulfill these conditions immediately without proper institutional arrangement as a result; countries like India and others have not easily entered into developed countries organic market to explore the export opportunities.

3. Objectives of the study

The study is based on the following specific objectives

- To know the socio-economic conditions of the organic farmers.
- To identify the problems of production and marketing of organic products

4. Methodology

As organic farming was being practiced by a fairly large number of farmers in Shimoga district of Karnataka purposively selected for the study. A total of 120 organic farming respondents were randomly selected from the four taluks viz. Thirthally, Hosanagar, Sagar and Sorab lies in the hilly region of the district. This study depends on both primary and secondary data. The secondary data have been collected mainly from the District Statistical Office and Department of Agriculture, Government of Karnataka. List of farmers



practicing the organic farming in different taluks have been collected from the organic associations affiliated to the Karnataka Savayava Krushi Mission (KSKM). In addition, a good number of NGOs are also involved in the district to promote the organic farming. These NGO are motivating the farmers to adopt the organic farming in the district. Primary data were collected from the sample organic farmers for the crop season, kharif 2019-2020. In this study, the farmers who are applying only organic or natural inputs in the process of crop production are considered as organic farmers. Further, this study was confined to hilly region of Shimoga district where large number of farmers are being practicing organic farming..

5. Results and Discussion

In this section, the results of the research were discussed and presented based on the objective set for this study and also inferences were drawn wherever necessary. There are as follows;

5.1. Socio-economic conditions of the organic farmers

Socio-economic features of the farm families in general and heads of the families in particular influence their farming practices in growing a crop and the level of their crop yield. Hence, socio-economic features that are relevant to crop production and adoption of organic farming decision were chosen for the analysis.

Age is one of the important demographic features of the respondents which will influence on the decision making style in farming practices. The age of the respondents ranges from 22 to 82 years and thus respondents have been categorized under three groups viz young farmers (<35 years), middle aged farmers (35-60years) and old age farmers (>60years). Frequency distribution of the farmers across the different age groups is given in table 5.1. Majority of the farmers in the hilly zone are belonging to the middle age followed by the young age. Middle age farmers accounts for the 75.8 percent of the total respondents whereas it was 13.4 and 10.8 percent of the farmers are young and old age farmers' respectively. Hence, the results of the study indicate the fact that the majority of the farmers who adopted the organic farming are belonging to middle age group.

Education is a key indicator of the knowledge level of the respondents which in turn will influence on the decision making process in the adoption of farming practices. Respondents with higher level of education will be the pioneers in the adoption of innovative farming practices. Therefore, data on the education level of the respondents has been collected and the results are given in the table 5.1. The education level of the respondents has been mainly classified into three categories viz. the respondents with primary, secondary and college education.

The highest percentage of the respondents were having the education up to the college level (42.5) and it was followed by the secondary (35.0) and then primary education (22.5). Organic farming respondents found to be having relatively higher level of education in the district. Thus, it could be inferred that the education level of the respondents influence the adoption of organic farming system. Organic farming is more attractive among educated respondents than the uneducated. It is evident that the educated respondents are more conscious about food and agro ecosystem thereby farmers with higher level of knowledge adopt the resource conserving and environmental friendly organic farming.

In rural economy, land is one of the important socio-economic indicators. Size of land holding influences the cropping pattern, farming practices and adoption of modern technology. Data relating to the size of land holdings has been collected from the



respondents. On the basis of the size of land holdings the sample respondents have been broadly categorized into small farmers (< 2 hectares), Medium farmers (3 to 5 hectares) and large farmers (>5 hectare). The frequency distribution of respondents across the different land holding category is presented in the table 5.1. It is found that the 38.5 percent of the farmers belonging to the medium farmers followed by small (31.7%) and large farmers (30.0%).

Size and composition of family is one of the important demographic features that could influence on the farming practices. Data relating to number of members in the family has been collected from the respondents. The size of respondents family has been classified into three categories viz. small family (<4 members), medium family (between 5 to 8 members) and big family (>9 members). The frequency distribution of respondents' families across the different size of families' is given in the table 5.1. In the study area, the majority of the respondents are belonging to small (50) followed by medium families (62) and large families (8).

Caste is one of the indicators of social status of an individual. It influences on decision-making status of an individual. Therefore, data has been collected from the respondents about the caste status of their family and given in table 5.1. The caste of the respondents has been mainly categorized into three groups SC&ST, OBC and General category. SC&ST are clubbed due to few numbers of respondents among ST category and SC category mainly comprises Adi Karnataka, Bhovi, Lambani and Others. ST comprises of only Nayaka community people. OBC it includes Lingayath, Okkaligas, Edigas Kuruba, Bhants, Maratas mainly these community peoples and General mainly comprises of Brahmins community people. The distribution of organic and inorganic respondents across the different categories is given separately for STZ and also HZ and pooling of these two indicate overall zone category. In the overall zone category out of 420 total respondents 300 are found to be belonging to OBC followed by 74 are belonging to General and 46 are belonging to SC&ST category. The significant feature of results is that general category respondents accounts for higher share among the organic farmers (30.9%) compare to their share is relatively less in inorganic farming group (4.3%) whereas SC&ST category people accounts for higher percentage in the inorganic farming (17.1%) group compare to the organic farming (4.3%) group. It indicates that the caste is arranged hierarchical order the higher community people more inclination towards organic farming compared to the backward people like SC&ST.

Table 5.1: Socio-Economic Conditions of the Organic Farming Respondents

Particulars	Socio-Economic Features of Organic Farmers			
	Young Farmers (<35 Years)	Middle Age Farmers (35-60 Years)	Old Age Farmers (60> Years)	Total
Age Group	16(13.4)	91(75.8)	13(10.8)	120(100.0)
Education Level	Primary	Secondary	College	Total
	27 (22.5)	42 (35.0)	51 (42.5)	120 (100.0)
Size of Land Holdings	Small	Medium	Large	Total
	38(31.7)	46(38.3)	36(30.0)	120(100.0)
Size of Family	Small	Medium	Large	Total
	62(51.7)	50(41.6)	8(6.7)	120(100.0)
Caste	SC & ST	OBC	General	Total
	10(0.8)	47(46.7)	63(52.5)	120(100.0)

Source: Field Survey 2019-202



Note: Figures in parenthesis are percentage to total.

Assets of the family facilitate the better farming practices by the respondents. The farmer with adequate capital assets can perform the agricultural operations timely and efficiently. The information about the capital asset has been collected from the respondents. The mean value of capital asset has been calculated under the different headings and results are summarized in the table 5.2. The arithmetic mean value of total capital assets is found to be considerably more among the large organic respondents (Rs.1487451) compared to the small organic respondents (Rs.727803) of the overall size category. It is interesting to note that relatively more number of organic farmers are having close accessibility to the natural sources of water like streams, ponds and rivers and hence they spend relatively less on the wells and tube wells. Further, the mean value of water lifting devices is significantly more among the large organic farmers compared to the small organic respondents.

Table 5.2: Capital Asset Value of Sample Respondents' households in HZ

Particulars	Organic Farmers		
	Small	Large	Overall
House Building	440093	749773	610417
Farm Building	65907	154849	114825
Machinery	31406	91309	64353
Irrigation Sources	15648	55811	37738
Water Lifting Devices	22056	115326	73354
Livestock	81400	102651	93088
Implements	6354	12124	9527
Others	49291	149947	104652
Total	727803	1487451	1145610

Source: Field Survey 2019-2020

Note: Mean values of organic farmers capital Assets.

5.2. Production and Marketing Problems of Organic Farmers

The aim of surviving or thriving as an organic farmer can be accomplished in many ways. One component of survival is the financial viability of the farm. Farm returns are influenced by input use, total production, product prices and market access, that is, production and marketing issues (ElsWynen 2002). Overall success of organic farming depends upon various factors such as availability of organic inputs, cost, yield, government support, consumer awareness, output price, marketing etc. Through the discussion with progressive organic farmers, agricultural scientists and agricultural officers thirteen major problems have been identified in the study area with respect to production and marketing of organic products. The experience gained in the review of literature also supported this problems identification process. The problems identified in this process includes; i) lack of availability of organic inputs, ii) lower paddy yield, iii) higher cost of production, iv) lack of price premium, v) lack of separate market for organic products, vi) inadequate government subsidy, vii) difficulty of marketing the organic products, viii) lack of consumer awareness, ix) difficulty of nutrient management under organic farming, x) lack of knowledge about certification, xi) high cost of certification, xii) problem of protecting the crops against the pests and diseases and xiii) lack of availability of improved traditional variety seeds. Each respondent has been asked whether he or she faced these problems? Each farmer might encounter with many of these problems. Data on the



production and marketing problems faced by the farmers has been collected results are presented in the table 5.2.1.

The frequency given in this table shows how many farmers are facing a particular problem. The problem, which is being faced by majority of the farmers, is considered as a major problem. The top five major problems have been ranked in HZ based on the number of farmers encounter with such problems. For HZ the top five major problems includes; i) inadequate government subsidy (95.8%), ii) lack of improved variety of seeds (91.7%), iii) lack of consumer awareness (83.3%), iv) lack of separate market for organic produce (79.2%) and v) difficulty of marketing the organic products (70.8%). Majority of the respondents are blaming that they don't have adequate government support and they feel it is one of the problems in growing the organic products. This problem is in first rank in HZ. It indicates the fact that majority of the respondents expecting the support from the Government. Majority of the organic farming respondents are growing the food products mainly for their self consumption and little bit of marketable surplus is being marketed in the same way as they are marketing the inorganically produced products. Therefore, farmers are not able to get the expected and reported price premium. Consumers are not having the awareness about the superiority of organic food products over the inorganic food products. In this background majority of the farmers are of the opinion that they have the marketing problem. Organic farming requires the different types of inputs such as suitable seeds, FYM, bio fertilizers, bio pesticides, jeevambrutha, panchagavyam etc however the farmers are not getting the adequate quantity of inputs at right time. Farmers express the view that they do not have the suitable seed for organic farming. Nearly 45 percent of organic farmers of in hilly zone are complaining that crop yield is low in organic farming compared to crop yield obtained under inorganic farming practices. The cost incurred on producing crops under organic farming is higher than the crops producing under inorganic farming hence 25 respondents opined in hilly region.

Table 5.2.1: Production and Marketing Problems of Organic Farmers

Sl. No	Particulars	HZ (120)
1	Lack of Availability of Organic Inputs	55 (45.8)
2	Low Paddy Yield under Organic Farming	30 (25.0)
3	High Cost of Production	25 (20.8)
4	Lack of attractive Price Premium	70 (58.3)
5	Lack of Separate Market for Organic Products	95 (79.2)
6	Inadequate Subsidy	115 (95.8)
7	Difficulty of Marketing the Organic Products	85 (70.8)
8	Lack of Consumer Awareness	100 (83.3)
9	Difficult to nutrient management	76 (63.3)
10	Lack of Knowledge of Certification Agencies	60 (50.0)
11	High Cost of Certification	68 (56.7)
12	Difficulty of Management of Pests and Diseases under organic methods	80 (66.7)
13	Lack of improved traditional seeds	110 (91.7)

Source: Field Survey

Note: Figures in parenthesis are percentage to the total sample respondents



Conclusion

In India, agriculture has been transforming very rapidly from highly chemical intensive based farming to moderate and even in some cases chemical fertilizers as well as pesticides free farming sector. Supporting to this, the many states have already declared themselves as organic farming states however Karnataka is no exception. It was observed from the study that there are regions which are naturally or by default suitable for organic farming and hence the state government has to promote the organic farming in a large scale rather than promotion of organic farming in areas where they are not suitable or uniform manner. The government should take appropriate measures to identifying the farmers and ensure the certification of organic production at lower cost. Moreover, the majority of our farmers are constantly engaged in organic production and marketing of them in smaller way because lack of awareness about the organic products and quality of them with respect domestic as well as international consumers. Therefore, the government has to come forward with suitable policy for ensuring the constant supply of organic inputs which helps to increase the production and also organizing sales exhibitions in urban and rural areas which will further helpful to boost the demand in turn create the awareness about organic products.

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**ORGANIC FARMING: THE NEED OF HOUR****Dr. Kusum Chandrakar ,**

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Increasing consciousness about conservation of environment as well as health hazards associated with agrochemicals and consumers' preference to safe and hazard-free food are the major factors that lead to the growing interest in alternate forms of agriculture in the world. Organic agriculture is one among the broad spectrum of production methods that are supportive of the environment. However, there are certain issues that should be clarified before we go for a large-scale conversion to organic agriculture. Can organic farming produce enough food for everybody? Is it possible to meet the nutrient requirements of crops entirely from organic sources? Are there any significant environmental benefits that accrue from organic farming? Is the food produced by organic farming superior in quality? Is it economically feasible? In this paper, we review these aspects of organic farming. In India, vast stretches of arable land, which are mainly rain-fed and found in the Northeastern region where negligible amount of fertilizers and pesticides are being used and have low productivity, could be exploited as potential areas for organic agriculture. Considering the potential environmental benefits of organic production and its compatibility with integrated agricultural approaches to rural development, organic agriculture may be considered as a development vehicle for developing countries like India, in particular.

Introduction

Except few agricultural produces we have achieved surplus produces through the discriminate use of off farm inputs during green revolution. Production has reached at a plateau while the human population is increasing continuously. In the present era, the agro-chemicals are used vastly which have ill effects on soil, plants, animals, environment & water resources. Today whole of the world is facing ill effects of agro-chemicals on the plants, animals and human beings. Most of the farmers & agro-based industries are racing for highest net profit by ignoring ill effects of these agro-chemicals. The WHO is trying to improve the quality of agricultural products through organic farming. In India too, many state governments have felt essential to promote organic farming in a big way.

There are a number of challenges in promotion of organic agriculture:

1. Can organic farming produce enough food for present and future population?
2. Is it possible to meet the nutrient requirement of crops entirely from organic sources?
3. Are there any significant environmental benefits of organic farming?
4. Is food produced by organic farming superior in quality?
5. Is organic agriculture economically feasible?
6. Is it possible to manage pests and diseases in organic farming?
7. Have farmers sufficient knowledge (principles) of organic farming?
8. Is there any quick organic certificate facility nearby the farmer?
9. Where farmer will sell the organic produce?
10. Who will purchase organic produces due to high prices?
11. How farmer will acclimatize his field for organic production?
12. How quality of ground water/irrigation water will improve?

**Problems at the Farmer's Field**

Except few progressive farmers most farmers have only heard the name organic farming & inputs used in the farming but they do not know many things as-

1. Importance of livestock.
2. Important role of poultry & their droppings.
3. Importance of bee keeping.
4. Role of predators & parasites.
5. When what, where & how much he should apply bio pesticides.
6. Life cycle of the pests.
7. Method of preparation of high-quality manures.
8. Availability of resources in time.
9. Quick result expectations.
10. Less labour more benefit.
11. High yield expectations.

There are many components of organic farming like -

1. Crop & soil management
2. Organic manures
3. Non-chemical weed control
4. Biological pest control
5. Vermicompost
6. Bio-fertilizers
7. Green manuring

Limitations of Organic Farming

Although all needful inputs for organic farming are available on the farm level or in the market still there are many limitations in organic farming.

1. Lack of knowledge about working principles & application of organic inputs.
2. Lack of patience
3. Lack of security in result due to change of environmental conditions.
4. Social customs & religion.
5. Preexisting phobia of low production in organic farming.
6. Problems in certification & marketing.
7. Complexity of exporting rules.
8. Failure of the government to provide organic inputs at right time.
9. Short shelf life of the organic inputs.
10. Natural enemies & predators of pests are entirely absent in an ecosystem.
11. Long & troublesome subsidy rules.
12. Small land holdings & reduced yield.
13. Lack of efficient & sufficient man power.
14. Least cost & highest profit concept of the farmer.
15. No provision of future, and insurance security.
16. Lack of awareness in the farmers about soil & human health and also about environmental pollution as well as ecological balance.
17. There is not desire of innovation.
18. Quantity based research concept.
19. There are no uniform practices of organic farming for all cropping systems & for all crops.
20. Most high yielding varieties/hybrids of cultivated crops have high responsiveness to fertilizers. Their nutrient demand is so high that, their requirement cannot be met by organic sources alone.



21. The main argument against the adoption of organic farming is its relative inefficiency in resulting into sustainable & adequate crop yields immediately.

Organic agriculture: Its relevance to Indian farming

Only 30% of India's total cultivable area is covered with fertilizers where irrigation facilities are available and in the remaining 70% of arable land, which is mainly rain-fed, negligible amount of fertilizers is being used. Farmers in these areas often use organic manure as a source of nutrients that are readily available either in their own farm or in their locality. The northeastern region of India provides considerable opportunity for organic farming due to least utilization of chemical inputs. It is estimated that 18 million hectare of such land is available in the NE, which can be exploited for organic production. With the sizable acreage under naturally organic/default organic cultivation, India has tremendous potential to grow crops organically and emerge as a major supplier of organic products in the world's organic market. The report of the Task Force on Organic Farming appointed by the Government of India also observed that in vast areas of the country, where limited amount of chemicals is

used and have low productivity, could be exploited as potential areas for organic agriculture. Arresting the decline of soil organic matter is the most potent weapon in fighting against unabated soil degradation and imperilled sustainability of agriculture in tropical regions of India, particularly those under the influence of arid, semiarid and subhumid climate. Application of organic manure is the only option to improve the soil organic carbon for sustenance of soil quality and future agricultural productivity.

It is estimated that around 700 mt of agricultural waste is available in the country every year, but most of it is not properly used. This implies a theoretical availability of 5 tonnes of organic manure/hectare arable land/year, which is equivalent to about 100 kg NPK. However, in reality, only a fraction of this is available for actual field application. Various projections place the tapable potential at around 30% of the total availability. There are several alternatives for supply of soil nutrients from organic sources like vermicompost, biofertilizers, etc. Technologies have been developed to produce large quantities of nutrient-rich manure/compost. There are specific biofertilizers for cereals, millets, pulses and oilseeds that offer a great scope to further reduce the gap between nutrient demand and supply. There is no doubt that organic agriculture is in many ways a preferable pattern for developing agriculture, especially in countries like India.

Conclusion

India is best known as agriculture oriented country since ancient times. Demand of organic agricultural methods is growing, especially in areas where the present farming system has degraded resources essential to agricultural production particularly land, soil and environment. Factors, such as the farmer's health, consumer's health are also mentioned as

reasons for shifting to organic methods. As conventional farming results in various health and environmental hazards and also socio economic problems, awareness of the environmental costs of agriculture such as the declining quality of drinking water and soil, and the impact of agriculture on landscape and wildlife have shifted consumer's interest towards organic agriculture. The entire agricultural community is trying to find a solution

to overcome the short comings of conventional farming, which can socially, economically, and ecologically benefit mankind. Organic farming is only solution to these problems.

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**TRENDS IN INDIA'S BALANCE OF PAYMENT****A. B. Thakare and N. V. Shende**

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Introduction:

The balance of payments, also known as the balance of international payments and abbreviated BoP., of account is there cordon fall economic transaction between the residents of the country and the rest of the world in a particular period (Over a quarter of a year or more commonly over a year). These transactions are made by individuals, firms and government bodies. Thus, the balance of payments includes all external visible and non-visible transactions of a country.

Foreign trade refers to a country's trade with other countries. It consists of exports and imports. A country receives payment from other countries for its exports and makes payments to other countries for its imports. The difference between total receipts on account of exports of goods and total payments on account of imports of goods is called Balance of Trade. However, these receipts and payments are not necessarily in a country's own currency. Besides, receipts and payments on account' of trade of goods, some other receipts and payments also take place between countries.

The sources of funds are the surplus such as receipt of export payments, investments. The uses of fund are negative things the such as payment for import in foreign countries.

Balance of payments is considered as a summarized statement which shows the transactions of a nation with the world. The balance of payments is regarded as the balance of international payments that includes all transactions between a nation and foreign consisting the various claims, product, income, services, transfers and liabilities.

The balance of payments represents these transactions in current accounts and capital account. The current account contains the transactions in transfers, gain, product and services. The capital account takes the transactions basically in cash instruments. The current account shows the net amount which a nation is earning.

The present paper intends to analyze the status of India's balance of payment. This has been done through the analysis of indicators of balance of payments. These are as: invisible items, current account items, capital account items and balance of payment account. Therefore, the present study was taken to examine balance of payment position and trade balance of Indian economy.

RESEARCH METHODOLOGY

The present study is based on descriptive research. Secondary data has been collected from various sources such as online publications, magazine, Economic Survey, Books and Journals. The data were taken for the period from 2010-11 to 2019-20 for examine the balance of trend and for further calculation data taken for the period of six years 2014-2020. The result has been analyzed using the graphs and charts predicting the status of balance of payments of Indian economy.

**DATA ANALYSIS****I) Trade Balance:****Table-1- Year wise India's Balance of trade.**

Table-1 shows the balance of trade position of India since 2010-11 to 2019-20. India has generally been having a deficit balance of trade. This is because during this period India's imports have been continuously rising at a faster rate than growth of exports. Growth in imports has been caused by many factors such as growing population, increasing consumption requirements, need for imports of capital goods for development of the economy etc. India's exports tm has grown but their rate of growth has been lower than that of imports. Reasons for slow growth of exports are many, the important ones being, low quality and high cost of productions which makes them uncompetitive in the world market and our increasing domestics requirement which leaves lesser surplus for exports.

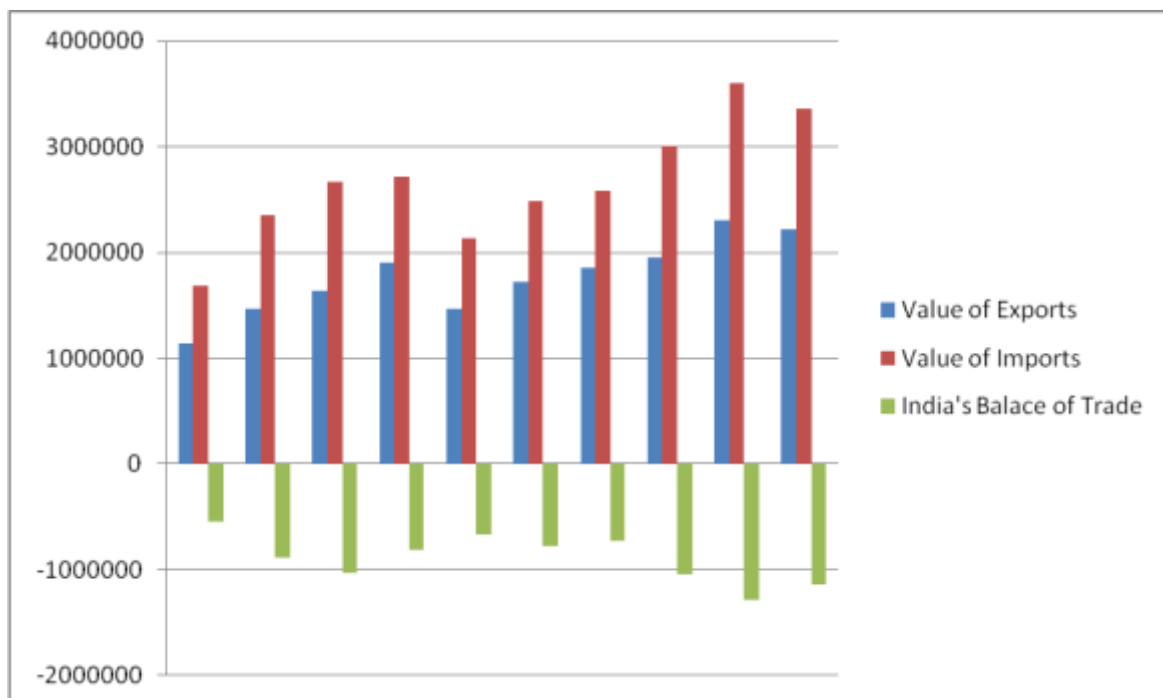
[Rs. crores]

YEAR	VALUE OF EXPORT	VALUE OF IMPORTS	BALANCE OF TRADE (-)
2010-2011	1136964	1683467	546503
2011-2012	1465959	2345463	879504
2012-2013	1634318	2669162	1034844
2013-2014	1905011	2715434	810423
2014-2015	1465171	2134283	669112
2015-2016	1716384	2490306	773922
2016-2017	1849434	2577675	728241
2017-2018	1956515	3001033	1044518
2018-2019	2307726	3594675	1286949
2019-2020	2219854	3360954	1141100
TOTAL	17657336	26572452	8915116
MEAN	1765734	2657245	891512
STDEV	358708	562617	230535
C.V.%	20.31	21.17	25.86
CGR	6.36	6.12	



Trade of Balance

Fig.No. 1:- India's Exports and Imports.



The above graph shows the exports, imports and trade balance for the period of ten years. There was a sharp increase in exports and imports after 2010 but little but down for the year 2014-15 to 2016-17. Imports were higher than exports throughout the period of study. The highest value of export and import was seen in 2018-19, which has been observed that 2307726 crores and 3594675 crores, respectively. But in 2014-15 to 2016-17, there was a decrease in exports, imports and trade balance. Trade balance was found negative during the study period. The coefficient of variation of value of export, value of import and balance of trade was calculated that 20.31, 21.17 and -25.86 per cents, respectively.

II) Balance on account of invisibles :

Table-2: Balance on account of invisibles.

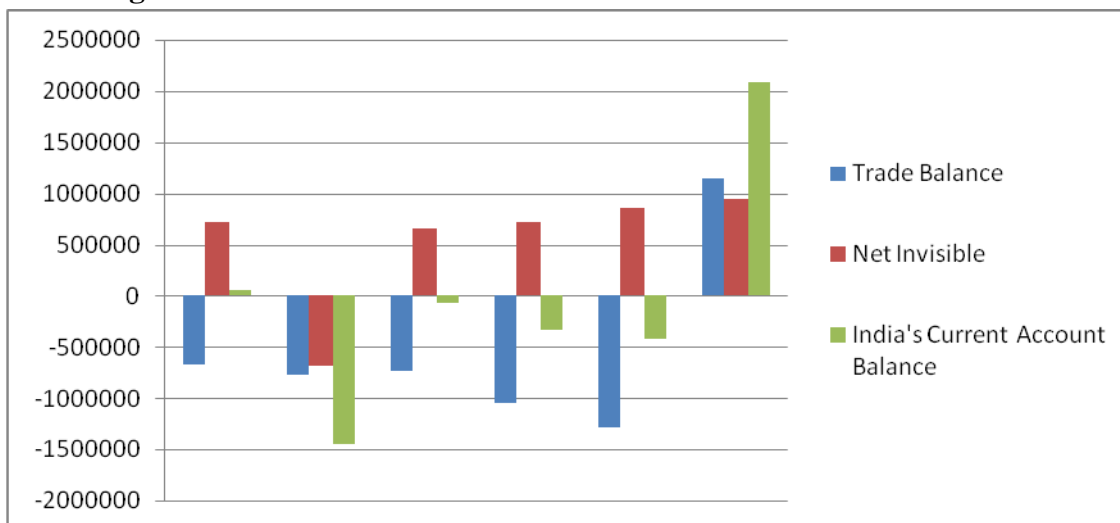
[Rs. crores]

Years	Invisible receipts	Invisible payments	Net invisibles
2014-15	1478048	755499	722549
2015-16	153869	832924	705769
2016-17	1623552	966016	657536
2017-18	1826720	1109119	717601
2018-19	2144996	1284363	860633
2019-20	2281179	1338706	942473
TOTAL	9508364	6286627	4606561
MEAN	1584727	1047771	767760
STDEV	763904	237760	109272
C.V.%	48.20	22.69	14.23
CGR	33.80	13.07	5.91



Table-2 shows the receipts, payment and net balance on account of invisibles for India since 2014-15. The difference between total receipts and total payments of foreign currencies on account of invisibles is called balance on account of invisibles. If the receipts on account of invisibles are greater than payments on account of invisibles then there will be a surplus balance on invisibles. On the other hand, if the foreign exchange receipts on account of invisibles are less than foreign exchange payments on this account, then there will be a deficit balance on invisibles. The coefficient of variation of invisible receipt, invisible payment and net invisibles was considered that 48.20, 22.69 and -14.23 per cents, respectively.

Fig.No. 2:- Balance on account of invisibles.



The above graph shows the invisible receipts, invisible payment and net invisibles for the period of six year. India's position with regard to invisibles has not been as bad in case of visible i.e. balance of trade. On the invisible account, receipt have been greater on invisibles than the payment receipts have been greater than the payment (except 2016-17) giving a positive set balance on surplus balance on invisibles. In India's receipts of foreign exchange from invisibles have been more than our payments on invisible. The coefficient of variation of trade balance, net invisible and current account balance was calculated that -154.43, 112.65 and -4981.35 per cents, respectively.

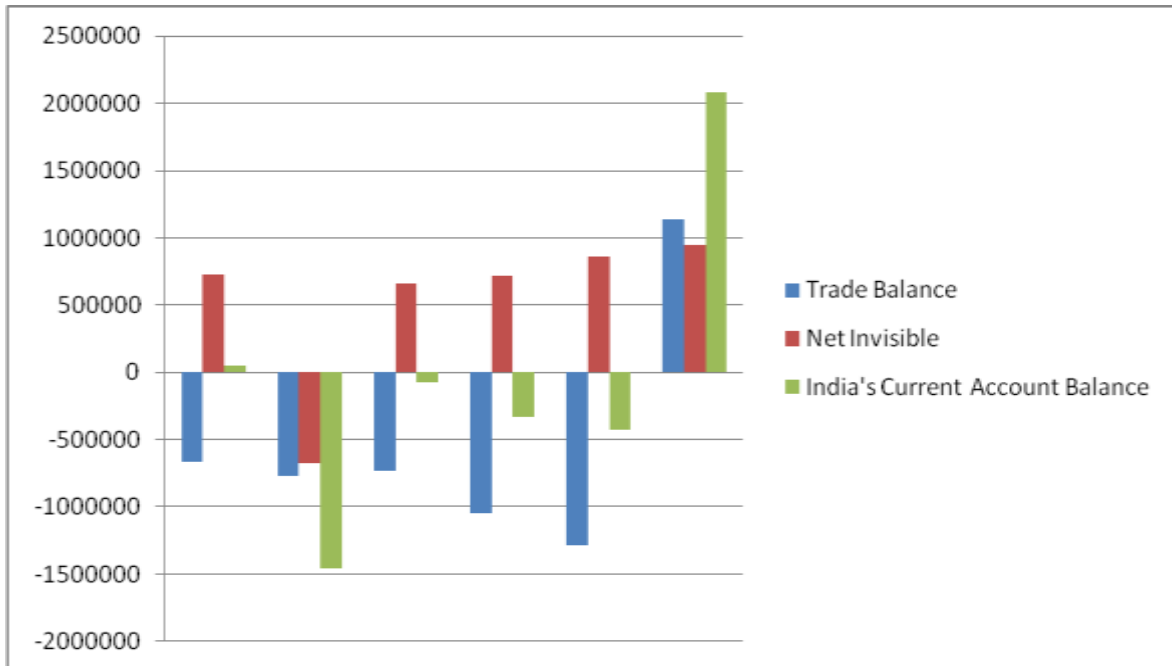
III) Current account of balance of payments account:

Table-3:-Current account of balance of payments account.

[Rs. crores]

Year	Trade Balance	Net Invisible	Current Account Balance
A	B	C	B+C
2014-15	-669111	722549	53438
2015-16	-773921	-679055	-1452976
2016-17	-728242	657536	-70706
2017-18	-1044519	717601	-326918
2018-19	-1286948	860633	-426315
2019-20	1141100	942473	2083573
C.V. %	-154.43	112.65	-4981.35

Fig. No.3 :- Current account of balance of payments account.



Trade account and invisible account together constitute the current account. In other words, by adding the balance of trade and balance of invisible we get the balance of current account.

So current account of balance of payments account records all transactions relating to sale and purchase of all visible items as well as all transactions relating to invisible items. India's current account of balance of payments account is given table-3. It can be seen from the table that where as India's balance of trade has always been negative (Except 2019-20), In the year 2019-20 it is seen that, values of trade balance, net invisible and current account balance shows positive position i.e.,1141100, 942473 and 2083573, respectively, its balance on invisibles account has been positive for most of the years. The balance on current account has been arrived at by adding the trade balance and net invisibles.

IV) Balance payment account :

To under hand the balance of payment account let us take India's balance of payment accounts for the year 2014-15 and 2019-20. Table-4 shows India's balance of payments position for the year 2014-15 and 2019-20.

Table-4: Balance of payment account.

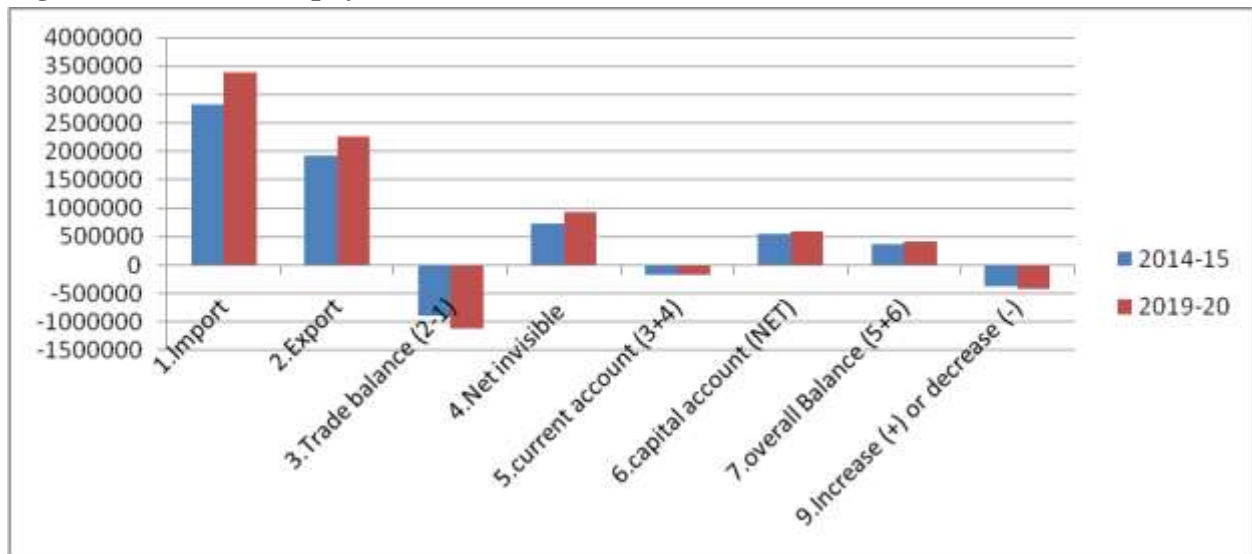
[Rs. crores]

		2014-15 (Base Yr.)	2019-20 (Current Yr.)
1	Import	2820072	3385822
2	Export	1934210	2270919
3	Trade balance (2-1)	-885862	-1114902
4	Net invisible	722549	942474
5	current account (3+4)	-163313	-172429



6	capital account (NET)	541238	595634
7	overall Balance (5+6)	377925	423206
8	Increase (-) or decrease (+) in foreign exchange reserve	-377925	-423206

Fig. No. 4;-Balance of payment account.



The above table in item shows that in 2014-15 there was an overall deficit of Rs.377925 crores in balance of payments. Actually, there was a deficit of Rs.163313 crores on current account shows as item 5 and there was a net inflow of capital of Rs.541238 crores shown in as item 6. The uncovered deficit of Rs.377925 crores as shown under the item 8 resulted in a decrease in countries foreign exchange reserves.

The balance of payment position in 2019-20 was different from the position in 2014-15. There was a deficit of Rs.172429 crores on current account and the surplus of Rs.595634 crores on capital account. The surplus on capital account exceeds the deficit on current account and the overall balance of payment shows Rs.423206 crores. Thus, the net result was in increase in foreign exchange reserves of Rs.423206 crores.

However, in both the years there was a deficit on current account. A countries balance of payment position is assessed by its balance of current account. A country which adverse balance on current account always tries to take care of its through current account transaction.in other words it will try to increase its export and reduce its import.

Conclusion :-

The present study concludes that various items of balance of payment namely current and capital items, net invisible and overall balance are moving in positive direction. Trade account of balance of payment shows the receipts from export of goods and payment for import of good of a country. If the foreign receipts are greater than foreign exchange payment, then the country is said to have a surplus on trade account. Conversely, if the foreign exchange receipts are less than foreign exchange payment, then a country is said to have deficit on tread account.



Trade balance was negative through out the period of study. The Indian economy need to focus on the negative trade balance. The right decision should be taken to resolve the negative trade balance. The government should strengthen the policy of trade to increase the level of export so that the problem of may be solved.

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Institutional agricultural credit flow in India **Ravikumara D.A**

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Abstract

Agriculture in India is one of the most important sectors of its economy. The present study tries to analyse the trends in agriculture credit flow in India and evaluate the institution-wise agriculture credit flows. The paper is based on secondary data. Secondary data collected from the Indian stat website, NABARD annual report, Ministry of Agriculture, RBI reports, Economic Survey, RRBs reports, and SSBs reports. The ANOVA, Unit root tests, Johnson co-integration test, VEC Granger causality test, Breusch-Godfrey serial correlation, Breusch-Pagan-Godfrey test of heteroskedasticity, and Jarque-Bera tests has been used to analyse the collected data. The study found that the annual growth rates of the Loan issued and loan outstanding show that there is a fluctuation in the growth rate of both. Some years AGR of the loan outstanding was higher than the loan issued, NPAs is one of the major hurdles in the agriculture flows in India. The very less amount of loan issued to north-eastern states such as Manipur, Mizoram, Nagaland, Arunachal Pradesh, and Sikkim and Union Territories (Andaman and Nicobar Islands, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep). The study shows that there is a huge gap in the agriculture credit target and disbursement.

Keywords: agriculture credit, disbursement, NABARD, socio-economic

Introduction

Agriculture in India is one of the most important sectors of its economy. Agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India. It provides employment to nearly 61% of the total population and it contributes 25% to national income. Agriculture credits provide exposure to the extension worker about the structure and functioning of lending institutions which in turn helps him to guide the borrower to choose the cheap lender in the acquisition of a credit.

Rural indebtedness coupled with agrarian distress is leading the agriculturists to commit suicide which is rampant in Karnataka. Ill quality seeds, unreliable information about the crop, lack of better marketing facilities, and lack of timely availability of credit are some of the main reasons for the agrarian distress and farmer's suicides. One of the first steps taken by the Government of India towards addressing the problem was the establishment of cooperative credit societies. The cooperative credit Act was passed in 1904 with an intention of providing loans at cheaper rates of interest. Though Maclagan Committee (1915) and Royal Commission on Agriculture in India (1928) focused on the expansion of cooperatives there was a slowdown in the cooperative movement and innumerable cooperative societies were suffered on account of heavy overdue in repayment. All India Rural Credit survey in 1951 was constituted by RBI to understand the genuine problems faced by agriculture in India and financing the rural sector.



After the establishment of SBI in 1955 and during 1969, 'lead bank' was introduced by RBI with an intention of specific identification of area and to increase credit flow, and to promote overall development in the rural area. Another landmark in the part of agricultural credit delivery was the establishment RRBs in 1975 and NABARD in 1982 and these two providing agricultural needs

Agricultural credit

Agriculture credit is the key factor to accelerate agricultural development in India the credit needs of the farmers are of three kinds. Firstly short-term credit –to finance agricultural operations like the purchase of seeds, pesticides, and fertilizers. Secondly- medium-term credit – for purchase of ploughs, agricultural equipment, tractors, and other implements to cultivate their lands with the help of modern implements. Thirdly, long-term credit for agricultural development such as improvement of land, construction of boundaries, and horticulture. And the main source of agri-credit to the farmer were the moneylenders, traders, and commission agents who charged a higher rate of interest and purchased the agricultural product at a low price. So, it was necessary to provide institutional credit to the farmers. It was in 1935 that the Reserve Bank was founded: The Reserve Bank of India act is unusual among central to have specific provision for attention and to agricultural credit.

Sources of Agriculture Credit:

There are mainly two sources of credit to agriculture

- (a) Non-Institutional/informal sources. (money lends traders, commission agents, relatives, and landlords)
- (b) Institutional/ Formal sources (Cooperative credit Societies, Co-operative Agriculture and Rural Development Banks commercial banks, RRBs, NABARD, and microfinance institutions)

Importance of agriculture credit in India

Agriculture credit is necessary for the following reasons

The gestation period in agriculture is significant, which means that the period from sowing the crop to selling the produce is vast. Therefore, agriculture credit helps farmers with their livelihood until the crops are ready for sale in the market. The agriculture credit can help farmers acquire tools, seeds, fertilizers, and more, which are essential parts of their trade. Another valid reason for availing agriculture credit is to mitigate personal expenses, such as religious functions, marriage, death, and more. Additionally, such financial assistance can also aid in repaying outstanding debts.

The objective of the study

The study has the following objectives:

1. To analyses the trends in agriculture credit flow in India.
2. To evaluate the institution-wise agriculture credit flows.

The methodology of the study

The study is based on secondary data. The secondary data collected from the Indian stat website, NABARD annual reports, Ministry of Agriculture, RBI reports, Economic Survey, RRBs reports, and SSBs reports. The annual growth rate has been used to analyze the year-wise credit flows from 1970-71 to 2019-2020. The ANOVA technique has been used to find the differences in the region-wise agriculture credit flows from 2011-2019. The tables and graphs have been used in the collected time series data. Unit root tests have been used to stationarity of the data. The Johnson co-integration test has been used to check the long-run association between Agriculture GDP and agriculture Credit. Long-run causality test has been used to the existence of long-run causality. VEC Granger causality test has been used to check the causality between agriculture GDP and agriculture credit and finally, Breusch-Godfrey serial correlation, Breusch-Pagan-Godfrey test of heteroskedasticity, and Jarque-Bera test for normality has been used to check serial correlation, Heteroscedasticity, and normality of the data.

Table-1 Direct Institutional Credit for Agriculture and Allied Activities Total (Short Term and Long Term) in India (1970-1971 to 2019-2020)



(In crores)

Year	Loan Issued					Loan Outstanding				
	Coope rative s	SCBs	RRB s	Total	AGR	Coope rative s	SCBs	RR Bs	Total	AGR
1970-71	744	-	-	818		-	-	-	-	
1971-72	769	15	-	883	7.95	1598	268	-	1865	
1972-73	958	21	-	1156	30.92	1837	342	-	2179	16.84
1973-74	877	219	-	1187	2.68	1970	436	-	2405	10.37
1974-75	1039	274	-	1391	17.19	2165	564	-	2724	13.26
1975-76	1187	405	2	1675	20.42	2357	790	-	3147	15.53
1976-77	1431	508	16	2037	21.61	2796	1031	-	3827	21.61
1977-78	1444	569	44	2155	5.79	3074	1340	-	4414	15.34
1978-79	1621	800	101	2641	22.55	3383	1825	-	5208	17.99
1979-80	1821	975	-	2928	10.87	3850	2364	168	6382	22.54
1980-81	2029	1263	-	3436	17.35	4315	3043	180	7539	18.13
1981-82	2479	1496	168	4296	25.03	4821	3541	273	8635	14.54
1982-83	2717	1225	222	4352	1.30	5155	4143	382	9680	12.10
1983-84	2938	1858	263	5244	20.50	5735	5280	509	11524	19.05
1984-85	3154	2461	310	6167	17.60	6367	6613	696	13676	18.67
1985-86	3674	2729	402	7159	16.09	6947	8416	871	16234	18.70
1986-87	3701	3332	477	7720	7.84	7465	9355	1061	17881	10.15
1987-88	4710	3526	483	9198	19.15	8347	11424	1313	21084	17.91
1988-89	4873	3813	420	9381	1.99	9408	12840	1552	23800	12.88
1989-90	5407	4282	647	10628	13.29	10566	15283	1838	27687	16.33
1990-91	4819	4676	335	10188	-4.14	10531	17032	1753	29316	5.88
1991-92	5797	4806	596	11538	13.25	12176	16981	1984	31142	6.23
1992-93	6484	4960	698	12530	8.60	13769	18288	2206	34263	10.02
1993-94	8484	5400	752	15013	19.82	15316	19113	2560	36988	7.95
1994-95	9876	7408	1083	18773	25.04	16810	20920	3009	40738	10.14
1995-96	12483	9274	1381	23692	26.20	19126	23427	3467	46020	12.97
1996-97	13254	10675	1748	26345	11.20	20556	26327	4038	50921	10.65
1997-98	14159	11537	2103	28656	8.77	21390	28445	4683	54518	7.06
1998-99	15099	14663	2515	32697	14.10	22199	29819	5389	57408	5.30
1999-00	25678	16350	2985	45534	39.26	41950	33442	5991	81383	41.76
2000-01	27295	16440	3966	48187	5.83	46135	38270	7249	91654	12.62
2001-02	30569	18638	4546	54195	12.47	52110	45106	8286	10550	15.11
2002-03	34040	25256	5879	65175	20.26	59064	53804	1026	12312	16.71
2003-04	40049	36203	7175	83427	28.00	71403	68103	1172	15122	22.82
2004-05	45009	48367	1192	10530	26.22	78822	95519	1670	19105	26.33
2005-06	48123	80599	1530	14402	36.77	82327	13560	2151	23943	25.33



2006-07	54019	11526 6	2022 8	18951 3	31.59	89443	16901 8	2745 2	28591 3	19.41
2007-08	57643	11347 2	2383 8	19495 3	2.87	65666	20279 6	3321 6	30167 8	5.51
2008-09	58787	16069 0	2649 9	24597 6	26.17	64045	25611 9	3736 7	35753 1	18.51
2009-10	63497	18825 3	3464 0	28639 0	16.43	59791	31543 6	4628 2	42150 9	17.89
2010-11	78121	22279 2	4396 5	34487 8	20.42	76674	35758 4	5506 7	48932 5	16.09
2011-12	87963	31287 7	5445 0	45529 0	32.01	72545	44329 8	7038 4	58622 7	19.80
2012-13	11120 3	48449 9	6368 1	65938 3	44.83	11977 5	52247 8	7949 9	72175 2	23.12
2013-14	11996 4	-	8265 2	-		13524 5	50353 2	9820 6	73698 3	2.11
2014-15	13846 9	-	1024 82	-		15428 6	68396 9	1126 03	95085 8	29.02
2015-16	15329 4	-	1192 60	-		15612 0	81484 1	1334 01	11043 62	16.14
2016-17	14275 8	-	1232 16	-		22669 7	66810 9	1534 16	10482 22	-5.08
2017-18	15032 1	-	1412 16	-		18439 6	92408 4	1713 01	12797 81	22.09
2018-19	15234 0	-	1496 67	-		17882 0	99511 4	1974 32	44579	-96.52
2019-20	14969 4	-	1628 57	-		15117 6	-	5089 85	-	

Source: Reserve Bank of India. (ON2120)

Table-1 presents the direct institutional credit for agriculture and allied activities total (Short Term and Long Term) in India from 1970-71 to 2019-20. The table clearly shows that the cooperatives are issued more amount of loans-issued compared to SCBs and RRBs in all the mentioned years. The cooperatives issued loan was 744 crores in 1970-71, it increases to 4819 crores in 1990-91, it further increased to 78121 and 149694 crores in 2010-11 and 2019-2020. The RRBs issued loan was 335 crores in 1990-91, it increases to 43965 crores and further increased to 162857 crores in 2019-2020. The SCBs issued loan amount also increased from 1263 in 1980-81 to 16440 crores in 2000-01 to 484499 crores in 2012-13. The loan outstanding increases year by year in cooperatives, RRBs, SCBs, and state government credit to agriculture. The total loan outstanding was 1865 crores in 1971-72, it increases to 29316 crores in 1990-91, and 91654 in 2000-21 and it further increased to 1279781 crores in 2018-19. It is observed from the above table that the loan outstanding is higher than the loan issued in all mentioned years. The annual growth rates of the Loan issued and loan outstanding show that there is a fluctuation in the growth rate of both. Some years AGR of the loan outstanding was higher than the loan issued, NPAs is one of the major hurdles in the agriculture flows in India.

Table-2 Region wise Credit to Agriculture by Scheduled Commercial Banks in India

Regions/States/UTs	2011	2012	2013	2014	2015	2016	2017	2018	2019
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Northern Region	10320 0	11600 0	13100 0	17380 0	18120 0	20600 0	21970 0	25120 0	26577 1
North-Eastern Region	4100	5500	7500	8700	9900	13000	14400	15900	17631
Eastern Region	40500	47500	57600	71600	75300	83800	86800	94900	10602 1
Central Region	75700	91600	10880 0	13730 0	15700 0	17630 0	19880 0	20860 0	23303 3
Western Region	58700	71100	93200	10700 0	11390 0	13250 0	14940 0	15060 0	19020 9
Southern Region	17880 0	23020 0	27790 0	34340 0	36700 0	33940 0	40910 0	47830 0	53696 1
India	46100 0	56190 0	67610 0	84180 0	90430 0	95100 0	10783 00	11995 00	13496 26

(As on 31st March 2011 to 2019) Source: Reserve Bank of India. (ON2122)

Table-2 shows the region/state-wise credit to agriculture by scheduled commercial banks in India from 2011-2019. The highest loan received by the southern region, in 2011 southern region received 461000 crores and it increases to 367000 crores in 2015, it further increased to 536961 crores in 2019. Thenorthern region received the second-highest amount of loans from 2011 to 2019, the loan issued to the region in 2011 was 103200 crores, which increases to 206000 crores and 265771 crores in 2019. The lowest loan was issued to the North-Eastern Region in the mentioned year. The northern region received 4100 crores in 2011 and it increases to 17631 crores in 2019. The big states such as Tamil Nadu (163840 crores), Uttar Pradesh (139491 crores), Maharashtra (128432 crores), Andhra Pradesh (123985 crores), and Karnataka (101310 crores) received the highest amount of loans in 2019. The very less amount of loan issued to north-eastern states such as Manipur, Mizoram, Nagaland, Arunachal Pradesh, and Sikkim and Union Territories (Andaman and Nicobar Islands, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep).

Table-3 ANOVA results for Region wise Agriculture Credit by Scheduled Commercial Banks in India

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	597230612387.556	4	149307653096.889	40.842	.000
Within Groups	146228209238.222	40	3655705230.956		
Total	743458821625.778	44			

Table-3 presents the ANOVA results for region credit to agriculture by scheduled commercial banks in India from 2011-2019. The test results show that the F value is 40.842, which is greater than the table value and the significance value is 0.000, it is statistically significant at a 1 percent level. It implies that there is a difference in the region-wise agriculture loan issued from 2011 to 2019. The major reason for the difference in the loan issued is the geographical area, agricultural land, and the number of financial institutions in the states.

Table -4 Target and Achievement of Agricultural Credit Flow in India (2004-2005 to 2019-2020) (Rs. in Crore)

Year	Target	Achievement	No. of Accounts (In Lakh)	% achievement of Target
2004-2005	105000	125309	-	-



2005-2006	141000	180486	-	-
2006-2007	175000	229400	-	-
2007-2008	225000	254657	-	-
2008-2009	280000	301908	-	-
2009-2010	325000	384514	-	-
2010-2011	375000	468291	-	-
2011-2012	475000	511029	-	-
2012-2013	575000	607376	-	105.63
2013-2014	700000	730122.6	-	104.3
2014-2015	800000	845328.2	-	105.67
2015-2016	850000	915510	899.06	107.71
2016-2017	900000	1065756	1070.68	118.42
2017-2018	1000000	1168503	1139.13	116.26
2018-2019	1100000	1256830	-	114.06
2019-2020	1350000	696925.16#	-	-

Note: # : Up to 30.09.2019. Source: Ministry of Finance, Govt. of India. (16441) & Lok Sabha Unstarred Question No. 1030, dated on 04.12.2015, Lok Sabha Unstarred Question No. 508, dated on 26.02.2016, Lok Sabha Unstarred Question No. 2669, dated on 01.08.2017, Lok Sabha Unstarred Question No. 4480, dated on 08.01.2019, Lok Sabha Unstarred Question No. 1584, dated on 12.02.2019, Lok Sabha Unstarred Question No. 1497, dated on 01.07.2019, Lok Sabha Unstarred Question No. 133, dated on 18.11.2019 & Rajya Sabha Starred Question No. 131, dated on 29.11.2019.

Table-4 presents the target and achievement of agricultural credit flow in India from 2004-2005 to 2019-2020. The available data shows that the achievement in all mentioned years is more than the target agricultural credit flow in India. The target of agriculture flow is 280000 crores and achievement are 301908 crores in 2008-09, it increases to loan target is 575000 crores and achievement is 607376 crores. The target amount is 1100000 crores and achievement is 1256830 crores in 2018-2019. The percentage of target achievement ranges from 104 % to 116 % between 2012-13 to 2019-2020.

Table-5 Targets and Achievements of Flow of Agricultural Credit by Commercial, Cooperative and Regional Rural Banks in India (2011-2012 to 2019-2020) (Rs. in Crore)

Year	Commercial Banks		Cooperative Banks		Regional Rural Banks	
	Target	Achievement	Target	Achievement	Target	Achievement
2011-2012	355000	368616	69500	87963	50500	54450
2012-2013	420000	432491	84000	111203	71000	63681
2013-2014	475000	119964	125000	509005	100000	82652
2014-2015	540000	604376	140000	138470	120000	102483
2015-2016	590000	604971	140000	153295	120000	119261
2016-2017	625000	799781	150000	142758	125000	123216
2017-2018*	7040	8711	1560	1503	1400	1412
2018-2019	792000	954823	165000	152340	143000	149667
2019-2020 (Provisional)	972000	1061215	202500	149694	175500	162857

Source: Ministry of Agriculture & Farmers Welfare, Govt. of India.



With regard to the targets and achievements of the flow of agricultural credit by commercial, cooperative, and regional rural banks in India from 2011-2012 to 2019-2020 presented in Table 5. The flow of agricultural credit achievement by commercial banks is greater than the target in all mentioned years except 2013-2014. The cooperative bank's achievement is higher than the target in all years except 2014-2015, 2017-2018, and 2018-2019. The RRBs also achieved the target agriculture loan amount except 2012-2016.

Table-6 State-wise Agriculture Credit Disbursement by Cooperative Banks in India (2018-2019)
(Rs. in Lakhs)

States/UTs	Target*	Disbursement*	States/UTs	Target*	Disbursement*
A and N Islands	7000	1222.59	Madhya Pradesh	1405800	1321469
Andhra Pradesh	1002600	1157166	Maharashtra	1750700	1292799
Arunachal Pradesh	12600	479.17	Manipur	2600	4074.24
Assam	14400	2111.77	Meghalaya	7800	2127.93
Bihar	98800	85694	Mizoram	4200	1454.5
Chandigarh	0	0	Nagaland	7400	4031.63
Chhattisgarh	250600	370078.9	Odisha	1029700	1297161
Dadra and Nagar Haveli	700	0	Puducherry	1800	795.12
Daman and Diu	800	0	Punjab	1741800	955150.4
Delhi	1000	380.08	Rajasthan	1931900	1324529
Goa	15100	3302.47	Sikkim	3400	475.61
Gujarat	1430600	1422616	Tamil Nadu	688700	1457720
Haryana	850900	1049089	Telangana	667400	560829.7
Himachal Pradesh	135200	381538.8	Tripura	31400	23662.87
Jammu and Kashmir	25800	2587.74	Uttar Pradesh	1307000	557290.1
Jharkhand	22600	671.91	Uttarakhand	100600	128925.3
Karnataka	849600	1128066	West Bengal	595400	451963.3
Kerala	504100	398734	India	16500000	15388196

Note: *: Figures are Provisional. Source: Lok Sabha Unstarred Question No. 1539, dated 01.07.2019.

Table 6 reveals the state-wise agriculture credit target and disbursement by cooperative banks in India 2018-2019. The data clearly shows there is a huge gap in the agriculture credit target and disbursement. Some states achieve well, and some states are performing poorly in the agriculture credit disbursement. Some states namely Manipur, Chhattisgarh, Tamil Nadu, Uttarakhand, Karnataka, and Kerala are achieving the targeted credit disbursement. The remaining states are failed to achieve the targeted credit disbursement. Some poor-performing states such as Arunachal Pradesh, Jharkhand, Himachal Pradesh, Goa, Dadra and Nagar Haveli, Daman and Diu, Arunachal Pradesh, Assam, Meghalaya, Mizoram, and Nagaland.

Table- 7 State-wise Disbursement of Term Loan by Commercial/Regional Rural/Cooperative Banks in India (2018-2019)

(Rs. in Crore)

States/UTs	Disbursement	States/UTs	Disbursement
Andaman and Nicobar Islands	98.29	Lakshadweep	1.52



Andhra Pradesh	40384.14	Madhya Pradesh	17298.81
Arunachal Pradesh	30.6	Maharashtra	54354.52
Assam	6021.17	Manipur	209.97
Bihar	16225.96	Meghalaya	60.81
Chandigarh	1582.82	Mizoram	345.53
Chhattisgarh	3972.96	Nagaland	126.19
Dadra and Nagar Haveli	51.15	Odisha	9990.83
Daman and Diu	33.99	Puducherry	624.4
Delhi	22541.14	Punjab	23295.66
Goa	990	Rajasthan	21572.36
Gujarat	26141.51	Sikkim	99.4
Haryana	21973.27	Tamil Nadu	62835.33
Himachal Pradesh	2324.37	Telangana	30226.08
Jammu and Kashmir	2584.54	Tripura	2233.29
Jharkhand	2217.17	Uttar Pradesh	27936.73
Karnataka	35092.86	Uttarakhand	4973.85
Kerala	32257.16	West Bengal	33677.7
Lakshadweep	1.52	India	504386.1

Source: Lok Sabha Unstarred Question No. 7, dated 03.02.2020.

With regard to the state-wise disbursement of term loans by commercial/regional rural/cooperative banks in India in 2018-2019 presented in Table 7. The total loan disbursement in 2018-19 is 504386.11 lakhs. The highest loan disbursement in south states namely Tamil Nadu, Maharashtra, Andhra Pradesh, Karnataka, West Bengal, Kerala and Telangana, and other states likely Uttar Pradesh, Gujarat, Punjab, Delhi, Haryana, Rajasthan, and Madhya Pradesh. The lowest loan disbursement in Sikkim, Andaman and Nicobar Islands, Meghalaya, Dadra and Nagar Haveli, Daman and Diu, Arunachal Pradesh, and Lakshadweep.

Table- 8 Results of Unit Root Tests

Phillips-Perron test statistic				
	lnGDP		lnAC	
	T Statistics	Prob.*	T Statistics	Prob.*
At Level	-1.596177	0.4768	0.736158	0.8703
At 1 st difference	-7.005718	0.0000*	-1.856398	0.0609***

Note: *and *** denotes statistically significant at 1 and 10% level.

Table-8 presents the unit root test results for Agriculture GDP and agriculture credit. Phillips-Perron statistic test has been used to check the stationarity of the Agriculture GDP and agriculture credit from 1970-71 to 2019-2020. At level, both agriculture GDP and Agriculture credit has non-stationarity. The Agriculture GDP T statistics is -7.005718 and the p-value is 0.0000, it is statistically significant at a 1% level. It indicates that Agriculture GDP has stationarity at first difference. The agriculture credit T statistics is -1.856398 and the p-value is 0.0609 which is statistically significant at 10% in the first difference. It implies that agriculture credit data has stationarity in the mentioned period. Based on the unit root results cointegration test has been conducted to check the long-run cointegration between agriculture GDP and agriculture credit.

Table- 9 Results of Johanson test of Co-integration

Hypothesized No. of CE(s)	Trace Statistic	0.05 Critical Value	Prob.**	Max-Eigen Statistic	0.05 Critical Value	Prob.**



None *	27.39930	25.87211	0.0321**	18.47132	19.38704	0.0675***
At most 1	8.9279	12.51798	0.1848	8.927982	12.51798	0.1848

Note: ** and *** denotes statistically significant at 5% and 10% level.

Table-9 shows the results of the Johanson test of co-integration for agriculture GDP and credit. The trace statistic is 27.39930 and P-value is 0.0321, it is statistically significant at a 5% level. Max-Eigen Statistic is 18.47132 and p-value is 0.0675, it is statistically significant at 10% level. Thus, the null hypothesis ($r=0$) is rejected. It implies that there is co-integration between the agriculture GDP and agriculture credit.

Table -10 Results of Long-Run Causality and Error Correction Term

	β	SE	T- statistics	P- Value
EC	-0.004138	0.001479	-2.798043	0.0064
C(2)	-0.309332	0.124237	-2.489856	0.0149
C(3)	-0.263284	0.128896	-2.042603	0.0444
C(4)	0.705748	1.620992	0.435380	0.6645
C(5)	-1.640216	1.553486	-1.055829	0.2942
C(6)	-0.679688	0.398323	-1.706374	0.0918
C(7)	-0.001700	0.000765	-2.222121	0.0291

Table-10 presents the results of long-run causality and error correction terms. It is found that the error correction term is negative which indicates that there is an existence of long-run causality. It implies that if there is any deviation in the long-run relationship among variables then there is an error correction mechanism and a negative sign express that the system will go back to the long-run equilibrium with 0.4% speed.

Table- 11 VEC Granger Causality/Block Exogeneity Wald tests

Null hypothesis	Wald test/ χ^2	P-value	Conclusion
D(LCR) does not Granger cause of D(laGDP)	6.517061	0.0107***	Causality
D(LAGDP) does not Granger cause of D(IACR)	9.260090	0.0027**	Causality

Note: ** and *** denotes statistically significant at 5% and 10% level.

Table-11 shows the results of the VEC Granger causality/block exogeneity Wald tests. Granger causality test has been conducted for the short run. The results reveal that agriculture credit (Chi-square =6.517061, $P < 0.10$) is Granger cause of agriculture GDP. It is significant at a 10% level. Agriculture Gross Domestic Product (Chi-square = 9.26009, p -value = 0.0027) is Granger cause on agriculture credit. It is statistically significant at a 5% level. Therefore, it can be concluded that bidirectional causality running from agriculture GDP and agriculture credit is found.

Table- 12 Results of VEC Residual Serial Correlation LM Tests

Null hypothesis: No serial correlation at lag h

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	2.665123	4	0.6153	0.669217	(4, 74.0)	0.6154
2	7.210779	4	0.1252	1.866970	(4, 74.0)	0.1252
3	2.271133	4	0.6860	0.568781	(4, 74.0)	0.6861
4	1.133503	4	0.8889	0.281721	(4, 74.0)	0.8889
5	2.219538	4	0.6955	0.555668	(4, 74.0)	0.6955
6	2.459033	4	0.6520	0.616615	(4, 74.0)	0.6520
7	2.419338	4	0.6591	0.606500	(4, 74.0)	0.6592
8	0.560466	4	0.9674	0.138766	(4, 74.0)	0.9674
9	5.660137	4	0.2260	1.450201	(4, 74.0)	0.2261
10	1.752210	4	0.7812	0.437300	(4, 74.0)	0.7812



Table-12 presents the results of the VEC residual serial correlation LM test. The LRE* stat is 2.665123 and P-value is 0.6153 and F stat is 0.669217 and the p-value is 0.6154. based on the test results do not reject the null hypothesis any serial correlation at lag h. it implies that there is no correlation, and the model has normally distributed.

Table-13 results VEC Residual Heteroskedasticity Tests (Levels and Squares)

Chi-sq	df	Prob.
3.28987	30	0.1107

Table-13 presents the results of VEC residual heteroskedasticity Test statistics, as in the table chi-square vale is 3.28987 and p-value is 0.1107, it statistically insignificant, based on the test statistics cannot reject the null hypothesis of Homoscedasticity. It implies that there is no heteroskedasticity and the model has normally distributed.

Table-14 results Jarque - Bera test for normality

Jarque-Bera	df	Prob.
0.125574	2	0.9391

Table-14 shows the results of the Jarque - Bera test for normality. As in the table, the chi-square value is 0.125574, and the p-value is 0.9391, it is statistically insignificant. Based on the test results do not reject the null hypothesis of normal distribution, it implies that the model has normally distributed.

Conclusion

Agriculture in India is one of the most important sectors of its economy. Agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India. It provides employment to nearly 61% persons of the total population and it contributes 25% to national income. Agriculture credits provide exposure to the extension worker about the structure and functioning of lending institutions which in turn helps him to guide the borrower to choose the cheap lender in the acquisition of a credit.

Rural indebtedness coupled with agrarian distress is leading the agriculturists to commit suicide which is rampant in Karnataka. Ill quality seeds, unreliable information about the crop, lack of better marketing facilities, and lack of timely availability of credit are some of the main reasons for the agrarian distress and farmer’s suicides. the loan outstanding is higher than the loan issued. The annual growth rates of the Loan issued and loan outstanding show that there is a fluctuation in the growth rate of both. Some years AGR of the loan outstanding higher than the loan issued, NPAs is one of the major hurdles in the agriculture flows in India. The major reason for the difference in the loan issued is the geographical area, agricultural land, and the number of financial institutions in the states. The RRBs achieved the target agriculture loan amount except for some years. Agriculture credit and agriculture GDP are stationary at 1st difference, based on the unit root results cointegration test has been conducted to check the long-run cointegration between agriculture GDP and agriculture credit. there is co-integration between the agriculture GDP and agriculture credit. there is any deviation in the long-run relationship among variables then there is an error correction mechanism and a negative sign express that the system will go back to the long-run equilibrium with 0.4% speed. The study found that there is a bidirectional causality running from agriculture GDP and agriculture credit. there is no correlation and heteroskedasticity between the ag, and the model has normally distributed.

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**SITUATION OF DOMESTIC WORKERS IN INDIA****Dr. Shrikrishna P. Raut**

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Abstract:

The Domestic Workers come from the vulnerable communities and the backward areas. Majority of them are poor, illiterate, unskilled and do not understand urban labour market. The work done by the Domestic Workers is undervalued, underpaid and poorly regulated. Lack of decent wages, work conditions and defined work time, violence, abuse, sexual harassment at the workplace, victimization at the hands of traffickers or the placement agencies, forced migration, lack of welfare measures and the lack of skill development avenues resulting in the stagnation are major issues that they face.

Keywords: Domestic Workers, illiterate, unskilled, underpaid, wages, sexual harassment, workplace, victimization, traffickers, forced migration.

Introduction:

The statistical, academic and activist communities in India and internationally have defined paid domestic work in various ways. There is need to reflect, on these definitions and varied conceptualisation of domestic workers. Appropriate technical definitions shall also facilitate better targeting of programmes and legislative entitlements to workers. Such reflection shall also allow the potential laws and programmes to be tailored to suit the specific sources of vulnerabilities, insecurities and risks faced by workers. Finally, defining domestic work in a way which acknowledges the heterogeneities within the paid domestic Workforce shall allow differentiated design of social protection Initialisms for different types of domestic workers.

EXTENT OF PROBLEM FACED BY THE DOMESTIC WORKERS

In 1931, Census classified 2.7 million people as the "servants." By 1971, Census found just around 67,000 people doing that work. But between the years 1991 and 2001 there was a 120% increase in numbers of domestic help. Census shows numbers of female workers aged 15-59 went up 17% between the years 2001 and 2011. In the Cities, it went up over 70% from around 14.7 million in 2001 to 25 million in 2011.

Domestic Workers are highly exploited and denied just wages and humane working conditions. They are paid well below Minimum Wages for unskilled or semi-skilled workers.

Vast majority of the live-in domestic workers work a minimum of 15 hours a day, seven days a week. The Part-Time workers often work in 3-4 different houses for nearly 8-10 hours every day. Working hours of the domestic workers can go from 8 to over 18 hours a day.

SITUATION GOING OUT OF HAND

Moreover, they are often victims of suspicion. If anything goes missing in house, they are the first to be accused with threats, physical violence, police interrogation, conviction, and even dismissal. A great number of live-in domestic workers are recruited from the rural or tribal areas. They have to adapt to alien environment, culture, and the language. They are often not allowed to use telephone and are prohibited from socializing with the friends and the relatives who are living and working in same city.

Most recent incidents that shocked the nation was in Mahagun Moderne in Noida sector 78 burst into the news on July 12, 2017 when the hidden world of invisible workers and insensitive employers came into view. There was a riot-like situation in the society located in National Capital Region after Zohra



Bibi, a domestic worker was found in basement of the society in unconscious condition. She alleged that she was beaten up by her employers for stealing money, but somehow, she managed to escape the torture and reached the basement.

What happened in Noida is not the first time a domestic worker has complained of mistreatment. There are innumerable incidents, one of such horrific incident is of Ten-year-old Sonu from Bhopal who was employed by an affluent family in Lokhandwala, Mumbai. In June 2006, was found Sonu trying out a lipstick that belonged to the employer. For this supposed crime, the child was tortured, beaten and left to bleed to death. The family tried to portray the incident as a suicide but their ill deeds were caught and all four members of the family were sentenced to life two years later.

CURRENT LEGISLATIONS ARE INEFFECTIVE

Whenever such incidents come to light, there is some discussion about conditions of the domestic workers. But little changes. There are some imminent questions that are required to answered such: Why does this happen? Why does Indian society turn a blind eye to such crass exploitation? How do the generations of the Indians grow up accepting that there are some people whose life's mission is to serve and clean up? How do we accept concept of a "servant"?

In August 2016, Congress MP Shashi Tharoor introduced the The Domestic Workers' Welfare Bill, 2016 in the Lok Sabha.

Here is a look at the some of its important features, which are as follows:

1. Private Household and a Workplace

Bill defines 'Domestic Work' as *work performed in or for a private household(s) and includes cooking, cleaning, housekeeping, driving, gardening, child care and old-age care, but does not include work related to businesses run from private households.*

Specifying households as a workplace and not treating it as a 'private space', would, in itself be a significant step in securing the rights of domestic workers.

2. Includes Migrant Workers

In the recent confrontation between domestic workers and residents of Mahagan Moderne in Noida, migrant workers were identified and banned. Proposed Bill defines 'Domestic Worker' as *a person employed to do domestic work for a remuneration, whether in cash or in kind, for one or more employers by staying at the household premises or otherwise and includes casual, temporary, contractual or migrant workers.*

3. Provision for Children under 18 employed as the Domestic Workers

In the 2010 Bill proposed by National Commission for Women, there was a zero-tolerance towards employing domestic workers under age of 18. While the 2016 Private Member's Bill defines a 'Minor Domestic Worker' as *one who is above the age of sixteen years, but below the age of eighteen and has completed compulsory elementary education.*

4. Enhanced Definition of Wages

Under Proposed Bill, 'Wages' means *all remuneration expressed in terms of money, but does not include the value of any accommodation (rent), supply of light, water, medical attendance etc. The employer would also be liable to extend his/her contribution towards any social security scheme or insurance, give travel allowances or concessions and any other compensation on discharge.*

5. Contract Registration

Employer or Placement Agency would have to, within two months of the commencement of the employment of a domestic worker, register the employment agreement and get it verified by either the local Panchayati Raj institution or the local urban body, the resident welfare association, or a non-profit organisation working among domestic workers.

While the intent of the Bill cannot be disputed, it is least likely to be a priority and most likely to be met with resistance on practical aspects of implementation. And while the legislation alone won't



solve bias and discrimination that the Domestic Workers in our country face, a healthy debate could go a long way in influencing attitudes among employers.

Draft of National Policy for Domestic Workers is under consideration of the Government. The salient features of the Policy are as under:

1. Inclusion of Domestic Workers in the existing legislations
2. Domestic workers will have the right to register as workers with the State Labour Department. Such registration will facilitate their access to rights & benefits accruing to them as workers.
- iii. Right to form their own associations, trade unions
 1. Right to have minimum wages, access to social security, protection from abuse, harassment, violence
 2. Right to enhance their professional skills
 3. Protection of Domestic Workers from abuse and exploitation who are recruited to work abroad
- vii. Domestic Workers to have access to courts, tribunals, etc.
- viii. Establishment of a mechanism for regulation of placement agencies.

INTERNATIONAL RESOLUTION

According to the estimates by the International Labour Organisation (ILO), there are at least four million domestic servants in India. Most of them are the migrants, women, many are minors, and belong to lowest end of Economic Spectrum.

India is a signatory to ILO's 189th convention, known as Convention on the Domestic Workers; but has not ratified it yet.

Convention mandates that the domestic workers be given daily and weekly rest hours, their payment must meet minimum wage requirement, and that they should be allowed to choose place where they live and spend their leave.

Ratifying States are required to take the protective measures against violence against such workers and are required to enforce the minimum age for the employment purposes. However, since these provisions are not binding on those countries that have not ratified the convention, India is not obliged to enforce these recommendations.

A major victory for recognition of domestic workers' rights was achieved on June 16, 2011 when the Domestic Workers Convention was adopted at the 100th International Labour Organisation (ILO) Conference in Geneva which sought to bring in an estimated 53 to 100 million workers worldwide under the realm of labour standards. The Convention recognizes the "significant contribution of domestic workers to the global economy" and says this work is "undervalued and invisible, and mainly carried out by women and girls, many of whom are migrants or members of disadvantaged communities."

WAY FORWARD

Only an integrated law can regulate Placement Agencies and conditions of Domestic Work and provide Social Security to them. Mere extension of the Shops & Establishments Act, to register the Placement Agencies as has been done in Delhi and which is proposed nationally, is not the real solution.

According to National Human Rights Commission (2002-2003), about 90 per cent of the trafficking in India is internal.

Non-availability of the jobs in rural or tribal areas, such as Jharkhand, facilitates continuous supply of the women workers to Delhi and the other cities. India is also a source and transit route for the trafficking women and girls to Middle East for the domestic work. In this process of migration there are risks, particularly because of the deceptive recruitment practices or abuses at hands of the workers' employers.



Only Central Law can meet requirements of regulating the Domestic Workers sector since workers also frequently cross the inter-state boundaries. The Domestic Workers are also caught in trap of the agents who supply them to the placement agencies or even harass or traffic them for other forms of forced labour is a reality.

There is also a need to develop a separate piece of legislation dealing exclusively with Crimes committed against the Domestic Workers like Murder, Rape, Sexual Assault, Sexual harassment etc. Such piece of legislation should be brought into effect on the lines of Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 and the Dowry Prohibition Act, 1961 which exclusively deal with crimes committed against a particular section of the society. Thus, similarly Parliament should enact a law in relation to provide crime committed against the Domestic Workers where the workers are provided time bound and effective justice.

Government of India has developed an Integrated National Plan of Action against the Trafficking and is taking steps to put some remedial measures in place in form of Integrated Anti-Trafficking Units and Anti-Trafficking Nodal cells, but still there is a need for a more comprehensive legislation on the labour trafficking.

At the same time, Law regulating Interstate Migration, Inter-State Migrant Workmen Act, 1979, will also require major amendments.

Conclusion: -

With the growing significance of domestic work within the urban labour market, there is concomitant need for providing minimum legal protection and social security for workers generating important household and care services. There are several issues raised in this paper that need to guide discussions on the possible legal and welfare interventions. Reconceptualising the legal framework so as enable effective implementation is imperative. This requires national labour laws to extend recognition to domestic work as 'work' through inclusion of the sector within the ambit of minimum wage and dispute settlement laws.

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Crop Insurance: A tool for Agricultural Risk Management

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Abstract:

In India, Agricultural crop production always affected by natural calamities and disasters like cyclone, flood, Drought, storm, landslide, earthquake etc. and also affected by the manmade disasters like fire, price crashes, effect of Chemical fertilizers and pesticide, spurious seeds etc. the 75% agriculture is still dependent on monsoon. All these events are unfavorable for farmer and there might be chances of heavy losses, and due to commercialization of agriculture, so it is crucial time to apply advance techniques and applications of crop insurance system so that the farmers can protect themselves from financial losses.

The aim of this article is to identify the role of crop insurance in agriculture risk management and the challenges in implementation of insurance schemes.

Key Words: Agriculture sector, Crop Insurance, natural disaster, commercialization of agriculture sectors, farm produce.

Introduction:

One of the oldest occupations in India is farming, it is to a large extent still depends on monsoon. The natural calamities like floods, drought, cyclone etc. always affect the agriculture and the north part of country is under flood from July to September almost every year, it results in major losses which is borne by the farmers. The agricultural sector contributes only 24 % of GDP yet huge population is directly and indirectly depending on agriculture and if there is any disturbance in agriculture production it causes a multiplier effect on the economy of the country. Thus, crop insurance helps farmers moderate their losses. It protects the farmers from unforeseen conditions. The Indian Government has been worried about the increasing risk in agriculture. In the aspect of uncertainty and risk in agriculture, various schemes of crop insurance have been designed to protect farmers; along with other schemes like guaranteed prices, subsidized credit, loan facility which are of direct concern in the short-run. Crop insurance offers income stability to farmer against uncertainty. It helps in the use of advanced technology, encouraging investments, and credit facilities in farming. Crop insurance creates confidence amongst the farmers for doing farming. As everyone knows that Farming is a risky business due to unforeseen contingencies it affects the output of farming due to which many times the losses are borne by the farmer. Insurance provides the opportunity to claim compensation if the farmer has suffered loss due to natural calamities. Thus, the insurance provides support to bear the crop loss by protection against natural hazards. Central and state government have taken initiative for insurance schemes as safety measures. Therefore, this study observed the farmers' perception and awareness about crop insurance and risk involved in farming and try to identify the problems involved in disbursement of crop insurance claim.

**Objectives of Study:**

1. To know and understand the significance of Crop insurance.
2. To assess the awareness about crop insurance schemes amongst the farmers.
3. To identify issues/problems in disbursement of Crop insurance claims
4. To evaluate PMFBY (Pradhan Mantri Fasal Bima Yojana) scheme.

Limitations of Study: The study is purely related with crop insurance and the information has been collected from the secondary data sources.

Problem Statement: Due to pollution, use of synthetic fertilizers, insecticides, soil erosion and climate change, the farmers face major problem of natural calamity and bear loss in agriculture production. To minimize these losses and to face the various problems arise in agriculture sector specially for marginal farmers, it is necessary to develop a support system in the form of insurance. so that the farmer can manage the future expenses and perform his responsibilities and thus it required to create awareness among farmers and to find out the problems arise in implementation of crop insurance schemes.

Research Methodology: This is a descriptive study and conceptual research paper and the data collected is the secondary data from various published newspapers, journals, books and various websites on different viewpoints

The method of data collection of this article totally depends on secondary sources. It includes subject related information, statistical data and relevant information utilized to draw conclusions. The relevant literature including past and recent were reviewed and organized thematically and understand how the crop insurance works as a tool for risk management.

Literature Review: On the crop insurance topic, there are number of articles are published in various journal by various authors or researchers from which some articles are reviewed by the author to know the various schemes available for crop insurances, status of crop insurance and the writers view about the crop insurance.

- ❖ **Paul Mansingh, J, Nisha A, “Crop Insurance in India: Evolution, Issues and Way Forward”** In this article, the writers are discussed about the various issues related with crop insurance, they evaluate the status of crop insurance in India and discuss about the future of crop insurance in India. In this article, as per the ministry of agriculture and farmers welfare only 37% farmers are well aware about the various insurance schemes and the risk cover under these schemes remaining 63% farmers are unaware about the insurance schemes.
- ❖ **Crop Insurance in India, A policy document prepared by Loksabha secretariate for Parliament library and members reference, year 2014,** In this document, they discuss about the various crop insurance available in India, issues related with the scheme and recommendations and suggestion for the improvement of status.

Need for Crop Insurance:

The natural calamities and change in environment cause a decline in the crop yield and also affects the quality crop production during both Kharif and Rabi seasons and farmers bear losses. When studied from a broader perspective it can be observed that there are some common types of risks in Indian agriculture – yield risk (uncertainty of crop yield) due to weather variability and price risk, these include both risk i.e. natural and manmade risks.



Even though farmers seem to implement traditional risk management methods to reduce risk and take less profitable crops even then the desired returns are not met with hence crop insurance is a no substitute option. The resources available with small or marginal farmers and landless agricultural laborers are extremely limited and such individuals are vulnerable in the absenteeism of insurance mechanisms and agricultural protection schemes. The compensations or relief packages provided by the government during natural calamities are characterized by several limitations. Therefore, crop insurance along with other subsidiary protection schemes are needed to handle the issue of yield risks and other inherent risks prominently observed in the agricultural sector.

The Advantages of Agriculture Insurance for Farmers

The earlier generations of farmers grew up in a stable risk environment but the current and next generations are challenged with number of risks. Because of that, the role of public policy in the provision of agricultural insurance in the future is very important which definitely helps to farmers to face various problems arise in agriculture. .

The crop insurance is definitely help in reduce poverty. A natural disaster is unpredictable and it affect total agriculture sector e.g. kills crops, animals and other farm inputs. Farmers invested their funds in agriculture and try to gets the returns on investment but due to natural disaster the investment destroyed. If the farmer take insurance for his crop of farm, the companies compensate loss through insurance. The farmer will get peace of mind for his investment.

In many countries, the development of agricultural insurance programs started since 1998. The governments of various countries tried to help farmers for more food production so that they are self-reliant. To encourage the farmers to take more production of risky agriculture products and help them to manage their exposure to yield, many governments develop a new agreement on Common Agricultural Policy (CAP) that reforms highlighting agricultural insurance or mutual fund schemes and make lower the price for insurance by subsidizing.

What is Crop Insurance?

Crop insurance is an arrangement of pooling risk based on the principle of “large number”. The insurance company collects premiums from all policyholders and compensates for the persons who incurred loss.

Thus, the risk is managed in two ways. One the losses of farmers in one area is compensated by the farmers in other areas. Second, distributing across time by compensating with the reserves of the insurance company that are accumulated through premiums collected in normal years. The corpus fund is created by the government and is supplemented by the insurer through the interest income accrued by investing the resources gainfully.

Significance of Crop insurance:

When Agriculture face disaster and risk beyond the control, it is essential to take protective actions to control damage. A crop insurance plan definitely supports to stabilize crop production and reduces the harmful impact. In view of the current situation, crop insurance has become a requirement for agricultural sector. Every year, the new machineries are developed to help farmers to take more production from the available resources and investments. As the new investment in agriculture is consider risky but insurance scheme helps the farmer to apply new technology. The insurance companies help farmers for



insurance covers for new technology, in that case if farmer fails then they will not bear losses as insurance company compensate it.

Those farmers who take crop insurance to protect the crop from unexpected setbacks. As the majority farmers living is dependent on the quantity of the crop they produce, so crop insurance helps in fighting poverty.

The advantages of crop insurance are as follows:

1. Income Stability: The crop insurance protects farmers against loss due to crop failure. It works as a tool which helps farmers to manage the yield and adjust price risks. In other words, the crop insurance cover the risk of farmer and minimise the losses.

2. Minimize Debts: With the help of crop insurance, farmers are able to refund the loans even at the time of crop failure. As the insurance company recover the risk.

3. Awareness: Insurance companies also conduct awareness programmes to help farmers and explain the effects of natural disasters and also explain them how to protect their farms and what type of precautions they have to take while doing the farming.

4. Yield Protection: Crop Insurance make secure farmers against production loss for crops due any problem. It also helps in preventive planting and replant safety.

5 Technological Development: Insurance companies work along with Agri platforms who use IOT to improve agriculture practices and to reduce the losses of farmers. Due to this farmer are able to know and understand the availability of latest technology advancement and recover their losses in crop production.

As everybody knows that a natural disaster is challengeable and unpredictable, The Indian farmers are still use traditional method for weather forecasting, to understand the climate change to protect the crops etc. Therefore, the most important benefit of crop insurance is the peace of mind. As major effect of any adversities is on poor farmers due to limited means and non-availability of research and advance technology in all developing countries, therefore it is essential to utilise information, data, technology and financial services to find out the solution on climate related challenges.

Table No. 1.
Summary of Crop Insurance Schemes Introduced in India

S. N.	Crop Insurance Name	Year	Salient Feature	Reason for Discontinuance/Issues noticed
1	Pilot Scheme on Seed Crop Insurance	1999 - 2000	To cover the risks involved in seed production	-----
2	National Agricultural Insurance Scheme (NAIS)	1999 - 2007	Both area-approach for widespread calamities & individual-approach for localized calamities were adopted	Financially not viable. Issues of adverse selection and area discrepancy were noticed
3	Weather Based Crop Insurance Scheme (WBCIS)	2007 to till date of weather stations	Insurance covered weather triggers	High premium rate. Complex computational exercise. A low density of weather stations
4	Insurance	2010 - 16	The unit area was shrunk to the	High premium rate.



	Scheme (MNAIS)		village panchayat level. Private sector participation encouraged. The immediate partial 5payment system was introduced	Capping on premium rate and amount assured
5	National Crop Insurance Program	2013	Compulsory for loanee farmers. Three components viz., WBCIS, MNAIS, and Coconut Palm Insurance Scheme were included. Lack of scientific evidence to relate weather to crop productivity. Overburden of India Meteorological Department.	Lack of scientific evidence to relate weather to crop productivity. Overburden of India Meteorological Department. Lack of proper maintenance of rain gauges
6	Farm Income Insurance	2003 - 2004	Crop income protection to farmers by combining the system of insuring the crop yield and market risks	Discontinued on the recommendations of joint-group
7	KBS Pilot Scheme for Soya	2003	Farmers Linked insurance to bank loans. Interest payment relief based on rainfall index deficit	Farmers have to pay high-interest rate on crop loans
8	Rajasthan Government Insurance for Orange Crop	2004	Rainfall-indexed insurance. Only for orange tree planters	-----
9	Drought Risk Insurance (Sookha Smaksha Kavack)	2005	Threshold deficiency percentage of the weighted actual rainfall index was used against normal rainfall index	
10	Wheat Insurance (Weather and Biomass)	2005	Combined crop vigor/biomass and weather parameter	Huge costs incurred on the procurement of historical satellite images and their processing. Lack of clear guidelines in the computation of NDVI
11	Potato Crop Insurance	2005	Insured against the cost of input	
12	Poppy Insurance	2005	Only for poppy growers	
13	AIC Coffee Rainfall Index and Area Yield Insurance	2005	Rainfall index and yield parameters are blended during critical stages of crop growth	
14	BioFuel Tree or Plant Insurance	2005	Insured in respect of the cost of inputs	
15	Coconut Insurance -		To help small and medium coconut growers	



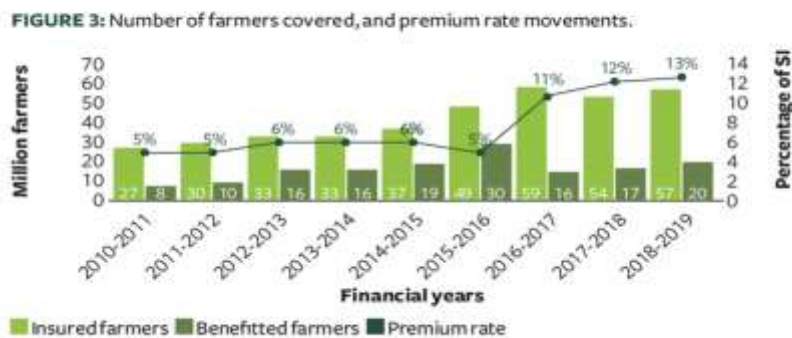
16	Rubber Plantation Insurance -		Compensation is estimated considering the replacement cost of the plant and the present value of the future returns
17	Mango Insurance -		Insured against excessive and unseasonal rain, temperature and high wind during the critical period
18	Pulp Wood Tree Insurance	2013	Cost of inputs per unit area was considered in determining the amount of insurance
19	Rabi Weather Insurance	2015	Provided protection against adverse weather parameters during a particular period. The insured was compensated against the diminished crop output/yield due to adverse weather parameters
20	Pradhan Mantri Fasal Bima Yojana	2016 to date –	Reduction in the cost of the premium (Government contribution is five times that of the farmer

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From the above table, it is clear that the number of schemes are introduced for the various types of crops for insurance purpose but due to some lacunas specially high premium maximum schemes are closed. As the huge diversification in crops pattern some specific schemes are introduced for some crops due to unawareness among farmers, the schemes are not performed properly and still 67% farmers are not aware about the availability of insurance schemes for crops.

Graph for farmers covered under crop insurance scheme

Fig. 1



Source:

<https://www.google.com/url?sa=i&url=https%3A%2F%2Fagritimes.co.in%2Fweather%2Findia-allocates-808-million-for-crop-insurance->



scheme&psig=AOvVaw0qynJ_Ae_unElSn_-

<https://www.agrotechnomarket.com/2017/01/agriculture-insurance-for-farmers.html>

From the above graph, it is clearly understand that the awareness about crop insurance improve among the farmers and they take the crop insurance to cover the loss. Within 10 years the number of insured farmers is increase from 5% to 10% and thus the premium collection also.

Table 2

State-wise details of coverage under National Agricultural Insurance Scheme (NAIS) from Rabi 1999-2000 to Rabi 2012-13							
(Rs.in lakh)							
Sl. NO.	State / UTs	Farmers Insured (no.)	Area Insured (h.)	Sum Insured	Premium Collected	Claims Paid	Farmers Benefitted (no.)
1.	Andhra Pradesh	2,85,78,464	4,37,62,477	56,06,783	1,60,398	4,41,990	65,81,020
2.	A&N Island	2,532	4,049	734	17	8	438
3.	Assam	3,38,936	2,52,864	62,238	1,756	1,329	61,056
4.	Bihar	60,36,983	73,77,698	11,90,402	30,383	2,11,347	24,31,008
5.	Chhattisgarh	97,74,546	1,97,81,274	10,22,157	26,108	38,240	16,71,623
6.	Goa	7,893	12,973	279	5	2	702
7.	Gujarat	1,32,98,937	3,05,76,316	35,52,734	1,37,461	4,54,035	48,85,981
8.	Haryana	6,35,688	7,68,865	83,459	2,413	4,024	1,29,217
9.	Himachal Pradesh	3,02,530	2,24,894	47,603,995	995	1,669	1,06,683
10.	J&K	44,520	63,165	9,044	167	123	4,292
11.	Jharkhand	60,88,264	35,92,539	3,25,861	8,078	52,166	21,78,175
12.	Karnataka	1,29,11,992	2,05,74,232	1,58,22,723	46,848	1,77,698	51,33,480
13.	Kerala	4,37,915	3,89,798	76,878	1,646	2,500	75,684
14.	M.P.	2,80,38,512	6,86,84,709	43,68,005	1,24,207	1,72,917	46,77,299
15.	Maharashtra	3,27,51,138	2,84,01,545	20,54,414	81,370	2,25,068	95,33,989
16.	Manipur	19,629	24,372	6,478	160	668	18,946
17.	Meghalaya	29,619	30,925	5,019	245	47	2,668
18.	Mizoram	121	134	23	1	11	119
19.	Odisha	1,44,47,590	1,44,78,255	19,37,570	48,386	1,36,558	26,61,382
20.	Puducherry	37,402	53,434	9,246	176	293	7,037
21.	Rajasthan	15,58,674	3,13,79,980	16,20,309	45,754	2,62,166	52,00,566
22.	Sikkim	1,893	1,324	254	4	1	86
23.	Tamil Nadu	59,61,793	77,82,617	16,11,269	41,164	1,54,814	25,01,663
24.	Tripura	19,573	12,671	2,927	81	58	3,432
25.	UP	2,21,37,563	2,95,55,100	29,76,571	60,756	1,00,973	42,27,898
26.	Uttarakhand	3,86,068	3,62,836	84,106	1,903	4,145	1,18,698
27.	West Bengal	1,11,29,748	56,10,472	11,15,589	46,638	94,707	23,36,616
	Total	20,84,78,523	31,37,69,515	2,93,52,675	8,67,121	25,37,558	5,45,49,758

Source: India. Department of Agriculture & Cooperation, Annual Report, 2013-14, pp.89-90

(Source: Crop Insurance in India, A policy document prepared by Lok Sabha secretariate for Parliament library and members reference, year 2014)

The above table shows the statistical information of state wise coverage under national agricultural insurance scheme. It shows the awareness among farmer in maximum state is good but the number of beneficiaries are quite low so there is chances to improve the disbursement system of crop insurance.



Pradhan Mantri Fasal Bima Yojana (PMFBY), 2016:

Fig. 2



https://www.google.com/url?sa=i&url=https%3A%2F%2Fagritimes.co.in%2Fweather%2Findia-allocates-808-million-for-crop-insurance-scheme&psig=AOvVaw0qynJ_Ae_unElSn_-0jqUk&ust=1624262388932000&source=images&cd=vfe&ved=0CAoQjRxqFwoTCJC-pqDkpfECFQAAAAAdAAAAABAJ

The National Agricultural Insurance Scheme and Modified National Agricultural Insurance Scheme were succeeded with a new multi-hazard crop insurance scheme by the Government of India on 13 January 2016 to achieve 50% coverage by 2018. In this scheme provisions are desired by the farmers and considered as farmer-friendly such as a decrease in the share of insurance premiums to be paid by farmers, claims for prevented sowing, and losses in the mid-season or post-harvest have been introduced to address additional risks faced by cultivators. The number of crops covered in the scheme and the types of hazards also expanded. The premium rates are different for Kharif and Rabi seasons. It is 2 percent of the amount insured for food crops and oilseeds in the Kharif season and 1.5 percent in Rabi season. For cash/horticultural crops the premium is declared as 5%. The premium subsidy is shared by central and state governments equally. The insured amount of a farmer is decided by multiplying cost of cultivation by an area under cultivation of the crop. The feature of this scheme is there is no upper limit for government subsidy. The advantage of this scheme over the previous schemes are: the condition on the number of crop cutting experiments is fixed as 4 for major crops and 8 for other crops at the village level, connecting the advantage of mobile technology and Global Positioning System for developing the quality of crop and faster estimation of loss if occur able; participation of other public and private insurance companies along with Agriculture Insurance Corporation; widespread coverage of risks at different stages of crop growth and post-harvest losses incurred due to natural calamities. The achievement of 41% attachment of farmers in few years after the commencement of PMFBY seems remarkable, North-eastern states have hardly detected any cropping area under the plan. From the above information, it is observed that the scheme fell short to achieved the target of 50% coverage of the gross cultivation area as it covered only 30% area despite numerous benefits and have more coverage than previous plans. Rajeev and Nagendran reported that the damage assessment process is not farmer-friendly and the require documentation indirectly affected the crop insurance scheme. The process of registration for the non-loanee farmers is complicated and need few more steps for the process of registration which consume more time. According to Rajeev and Nagendran, some insured farmers were dissatisfied with the scheme because if losses are even 74% in the case of prevented sowing (approved 75%) or 49% in the case of mid-



season losses (approved 50%), no claims are paid. Most farmers were unaware of the computation method (including concepts such as threshold yield), and thereby feel “misled” when they do not receive compensation despite being insured and facing crop losses. This reduces farmers faith in crop insurance, and reduced their participate in it. If farmers facing specific damage of crops which do not present over the entire area were not covered under insurance.

Many times, the insurance cover is only for the crop loan amount (estimated on the cost of cultivation, not on the value of yield) and thus it cannot cover the potential income of farmer and the insurance coverage is as per the scale of finance and not on the basis of output value. The insurance scheme is compulsory only for those farmers who availed crop loans from official sources, this was less than 33% of the total farmers and for others it remained voluntary. The intended enrolment in crop insurance in India was tremendously low.

According to Press Trust India, Government of India has a suggestion to introduce an comprehensive insurance plan that covers agriculture and related sectors together with farm equipment. Therefore, the total cost of the insurance policy will be reduced for protecting all the risks in farming. The farmers have choice to pick the risk cover in proposed scheme.

Key pricing components of the final crop insurance premium:

Fig. 3



Source: Saunak Dutta is assistant vice president and pricing actuary for Casualty Asia at Swiss Re, and a member of the GI Asia Working Party India's crop insurance schemes: Field goals Wednesday 4th November 2020

The pricing process and challenges

The insurance companies used farmers data from past 10 years at the level of each insured unit (claims settlement level) is used. The new data is added every year, with missing data points and differences in aggregation levels.

The threshold yield of a crop is calculated with moving average yield of the best five years out of past seven years, multiplied by the indemnity level.

Threshold yield = ((Σ Best of five-year yield) x Notified indemnity level) / 5

The burning cost is calculated by following formula:

(Maximum (Threshold yield - Actual yield, 0)) / Threshold yield) for all historical years

A data heterogeneity loading is believed to be required since the historical yield data is at a coarser resolution than the final loss settlement, which means that volatility is not represented well enough in the historical data.

Some of the other expenses incurred by insurance companies that are mandated by PMFBY operational guidelines or state governments are as follows:



- Companies must spend 0.5% of their gross premium on awareness activities
- Companies must set up offices and deploy manpower at district/block levels
- Various penalties are included in the guidelines and/or notified by the state government while tendering
- Other expenses mandated by states, for example towards acquiring weather data, acquiring satellite imagery data etc.

(Source: *Saunak Dutta* is assistant vice president and pricing actuary for Casualty Asia at Swiss Re, and a member of the GI Asia Working Party India's crop insurance schemes: Field goals, Wednesday 4th November 2020)

Scope for improvement

There is ample scope for improving data quality and processes for crop insurance, thanks to crop insurance's digital revolution, including technological advancements in satellite imagery and advanced satellite technology that helps to measure soil moisture data, the use of drones for crop-cutting experiments, and the allowing of cloud monitoring and digital connectivity through mobile apps. Even actuaries are involved in risk-based pricing, they can add value in other traditional and non-traditional aspects of crop insurance ecosystem – detecting fraud by using advanced technique of artificial intelligence or data science, monitoring exposure, adapting reinsurance treaties, improving techniques for de-trending and heterogeneity of data adjustments, and using various models for reserving and capital management.

Actuaries also work closely with the government and play a vital role in planning new risk management mechanisms.

“Thus the PMFBY scheme made some pricing correction and improved the advantage's scope, for bringing millions of additional farmers under crop insurance coverage”

RECOMMENDATIONS:

Following recommendations are made by the parliament advisory committee, after examining the various existing Schemes in the field of Crop Insurance:

1. A web portal should be developed for all States to make land record data be available to financial institutions.
2. Premium rates to be revisited for MNAIS.
3. Reserve Bank of India (RBI) and National Bank for Agriculture and Rural Development (NABARD) should effectively monitor the compliance of their circulars regarding compulsory crop insurance for loanee farmers.
4. Insurance companies and banks should play a pro-active role in insuring effective implementation of crop insurance schemes.
5. State Governments should ensure the use of GPRS-enabled and camera fitted mobile phones etc. while conducting crop cutting experiments.
6. An Atlas of critical weather elements for different agro-climatic regions.
7. An Agricultural Insurance Act should be formulated to take care of specific needs of the crop insurance and agricultural insurance in general.

The above recommendations are made in 2014 report

CONCLUSION:

The improved or suitable product of crop insurance and active involvement of private sector insurance companies in crop insurance markets are expected significant benefits for farmers and agriculture sector also, including systematic pricing process of insurance scheme or specific insurance according to the crop or region, faster claims settlement, a more reasonable distribution of subsidies and lower base risk along with transparency. The product for poor, small and marginal farmers must purchase with the support of state government.

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Climate change effects on agriculture: Community resilience in the habitations of Ladakh Himalayas

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Abstract: Discourses centered on climate change have been a serious concern in the field of agriculture and its sustainability. As its catastrophic effects are uneven occurrences, which are beyond our cognitive mapping, human society began to face new challenges on how to systematically understand/report them. This paper would critically examine the dynamics of cultural institutions and their practices as resilience systems responding to climate change. It further explores how such systems sustain human settlements under tough/extreme climate conditions. It is being argued that traditional wisdom and its continuance of existence in our times have invented the very tradition as a new logic of practice. In this paper, an attempt will be made to locate the vulnerable zones in the Ladakh region and the reflexive engagements of people, agencies and the state to encounter such events. Catastrophic events like a cloud burst adversely affected many habitations, tolled many human lives and washed off the agricultural field in Ladakh recently. Similarly, the death of 22000 Pashmina goats due to scarcity of fodder led by heavy snowfall in the Changthang region of Leh affected the cultural economy of the Changpa tribe. However, the mode of preparedness by the communities, civic engagements of the non-governmental organizations and responses by the state to these unintended consequences would reveal how communities produce and reproduce new cultures of practices in the time of crisis. This paper draws insights from the field observations in the sample villages of Leh to capture the changing dynamics of livelihood patterns due to climate change, particularly, the pastoral agricultural system. It focuses on community resilience and how it encounters climate change as an everyday reality.

Keywords: climate change, resilience, habitation, Ladakh



Introduction

Issues centered on climate change have been a serious concern for academics, policymakers and development practitioners for quite some time. As its catastrophic effects are uneven occurrences, which are beyond our cognitive mapping, human society began to face new challenges on how to systematically understand to rescue from such phenomena. The new evidence of climate change impact has been strong enough to prove the fact that various strategies of livelihood systems, especially the agricultural sector are at high risk. Thus, life-sustaining systems like agriculture, water resources, livestock, biodiversity etc. are being affected adversely. There are socioeconomic and political ramifications of climate-driven change that eventually led to conflict and violence, displacement and involuntary migration of communities and groups. In addition to that, ever-growing demographic expansion and urban centres have further led to assess the effect of climate change.

It is a well-known fact that the global discourses on climate change have restructured the global policy framework, the research agenda, and the investment strategies in the development and priorities of the nation-states. Recent studies also acknowledge the regional variations of the effects of climate change while taking into account the historicity, cultural sensibilities and diverse developmental trajectories of the regions. Poor nations, in comparison with the developed nations, have to grapple with multiple issues such as unplanned development on the one side and the lack of credible knowledge, database and specific expertise on critical issues identified and the resource crunch. Despite such macro-level debates, scholars have given scant attention to how the communities and their habitational settings make sense of climate change as well as how they encounter its disastrous effects in their everyday life (GoI, 2013). This paper, in fact, specifically offers a micro-level perspective on the issues of climate change by looking at the responses of communities inhabited in the Western Himalayas of India. This study would explore the resilience of communities and to what extent they can confront and overcome the risk of climate change. Moreover, we also critically examine the sustenance and sustainability of the cultural institutions being organized around habitational settings of community life in the backdrop of global environmental changes. The basic argument of the paper would be structured around the local responses of the communities not being the direct cause of climate change debates at the global level. Theoretically, the scope of micro-observations of resilience among local communities to global climate change may not be significant at the macro level since climate change as such may not be the primary cause, to begin with. As we



discussed earlier, there are internal processes and dynamics in the region due to modernization to be examined critically.

As the highest mountain pass in the world with several peaks which rise above 20000 feet high, the Himalayan ranges cover a tent-like roof in India. The highest point is a little off the centre, the western side short and disappears in Pakistan and the eastern side longer and comes to an end in a sweeping curve close to the Bay of Bengal. The flat landboarding the entire length of India's Himalayas forms the Indo-Gangetic Plain. As the snow piles up to form glaciers over centuries in the highest peaks of the Himalayan Mountains, the bottom layers continuously melt and form major contributors to perennial rivers. The rivers that form in the Himalayas such as the Ganges, the Indus and the Brahmaputra with their numerous tributaries keep the flow of water throughout the year, unlike other rivers in the rest of India. In other words, the melting glaciers and snows rushing down from the mountains flow across the plain contributing to large-scale natural irrigation system (Futelhally, 1998). The Himalayas Mountains represent one of the youngest but the most complex terrain. Because of its distinct geographical and ecological features, the Himalayas have continued to condition the climate and as a result, shape the bio-physical settings of societies in South Asia.

It is a well-known fact that tribal habitations in the Ladakh region are on hilly terrain with a complex topography and are exposed to extreme weather conditions in the western Himalayas located in the state of Jammu and Kashmir. Agricultural activities, though seasonal, are exclusively dependent upon glacier melt and snowfall water systems (Singh, 1993). It is being noticed from the field observation that the agricultural system is affected due to climate change. Due to the expansion of the warm season, farmers began to work in the agricultural field early. Similarly, they introduced a new cropping pattern as it brings more economic dividends. Recently, many settlements have adopted indigenous knowledge like artificial glacier technology for water harvesting during the off-season. Artificial glaciers have an impact on water recharging in the agricultural field as well as ensuring the availability of water at the time of scarcity. There are indigenous ways of regulating the water distribution system being followed as it was found to be a scarce resource for livelihood and agricultural activities. These are the innovative methods communities adopted to sustain the livelihood options in the field of agriculture.

This study examines the extent of cultural institutions and their practices as resilience system sustains human settlements under tough/extreme climate conditions. It is being argued



that the polyandry system (Bray, 2011) is a cultural logic followed by the communities for quite a long to keep the demography moderated and controlled. As Ladakh is a site of sacred geography, it was also the land of Lamas. Volunteer recruitment of children in the monastery from each family was considered to be an expression of religiosity on the one side, and politics of demographic regulation on the other. In other words, traditional wisdom and its existence in our times have invented the very tradition as a new logic of practice.

No doubt, mountainous regions are more vulnerable due to climate change. This study located the vulnerable zones in the Ladakh region and accounted for the reflexive engagements of people, agencies and the state to encounter changes in the ecosystem and human life. The catastrophic effects like a cloud burst adversely affected many habitations, tolled many human lives and washed off the agricultural field in Ladakh recently. Similarly, the death of 22000 Pashmina goats due to scarcity of fodder led by heavy snowfall in the Changthang region of Leh affected the cultural economy of the Changpa tribe. However, the mode of preparedness by the communities, civic engagements of the non-governmental organizations and responses by the state to these unintended consequences would reveal how communities produce and reproduce new cultures in the time of crisis. This study fundamentally will draw insights from the field observations and interviews conducted in the villages of Leh to capture the changing dynamics of livelihood patterns due to climate change, particularly, the agrarian system. By acknowledging the fact that the Ladakh region sustains limited water resources from Cryospheric sources, changes in climate regime will have an impact on agriculture. On the other hand, the growing demand for agricultural products due to seasonal tourism forces communities, to expand agricultural activities. The core running theme of this paper is to understand community resilience and how it encounters climate change as an everyday reality of Ladakhi habitations. Field studies were carried out in the six sample villages such as Shey, Nang, Ganglass, Stok, Sabu and Chonglamsar located in and around Leh town. The information collected from the field, both qualitative and quantitative, would indicate how the communities encounter the issues of climate change through reflexive processes.

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Tenantry and Conditions of Untouchables in Colonial United Provinces: The Background of the Rise of Dalit Movement

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Abstract: Education and *Bhakti* devotionism, no doubt, were played instrumental role in the rise of awareness and the process of community re-construction among untouchables in colonial United Provinces (UP). Nevertheless, economic conditions of untouchables largely remained unexplored, as traditionally it has, always, been assumed that there was no change of their condition as they performed their so-called 'traditional' occupation and there was no scope of gain or earn money as it was also prohibited in the *Manusmriti*. The notion of traditional occupation was, it seems, waning especially among Chamars of UP in nineteenth century onwards. They were emerging as major untouchable caste which was engaged in peasantry and the agriculture was considered as their primary occupation. More than 80 percent to 90 percent of their population was indulged in the agricultural activities and giving, somehow, secondary importance to leather works. In the light of this fact, this paper explores the conditions of untouchables and their tenancy and peasantry. It further throws light on their economic condition, especially as rent payer, in the colonial period. As soon, they consolidated their economic conditions, therefore, they performed the task of socio-religious reform among their brethren which further accelerated their movement and struggle towards attaining political rights also.

Keywords: Tenant, Peasant, Rent, Untouchable, Chamars, Dalit Awareness, Community Construction.

Introduction: The process of community formation and re-construction of identity was at work among the untouchables of UP from the early twentieth century onwards. By that time, *Bhakti* devotionism had come into practice extensively among the urban untouchables. For the poor urban untouchables, the message of caste equality and the denial of ritual hierarchy in *Bhakti* equipped them with the means to interrogate the discrimination, disabilities and deprivation that they continued to face.¹⁵ Economic conditions of untouchables, especially Chamars, were changing from nineteenth century onwards. They were engaged in agricultural activities which strengthened, somehow, their economic condition. Further, they devoted themselves for cause of untouchables. The first generation of the urban untouchables, especially from Chamars, Jatavs and Mallah castes, benefited from the cantonment/Christian missions' educational initiatives. The education provided by external agencies created, and was further strengthened by, a new leadership in the interwar period. The leaders guided the

¹⁵ Nandini Gooptu; *The Politics of Urban Poor in Early Twentieth Century India*, Cambridge: Cambridge University Press, 2001, pp. 150-151



untouchables of the UP into and through strong protest movements against Brahmanical Hinduism and set in motion the Adi Hindu movement. To be precise, this leadership was quite small in number, just as it was among the Namasudras of the Bengal where a tiny minority had improved its economic condition through land holding, and increasing exposure to education and the professions.¹⁶

A noteworthy development took place from the second half of the nineteenth century as the Chamar caste became major agriculturalists. However, they had no proprietary rights over agricultural land. In this direction, we discuss the state of the tenantry which remained largely unnoticed while studying economic condition of modern India. Generally, in colonial India, the conditions of the Permanent Settlement, Ryotwari and Mahalwari have been discussed in details with the role of big zamindars or Raiyyats, etc. In contrast to this, the economic condition of untouchables is noteworthy to mention as a large number of untouchables were tenants and agricultural labourers in nineteenth century. The Rent Act of 1868 provided an assured position of taluqdars with proprietary rights over agricultural land which earlier was a debatable question. The Act also debarred the courts from interfering in the matter of rents paid by tenants. Therefore, this Act became fatal blow to the peasantry in UP. "Assured of their position, the taluqdars became more free to use their power to obtain all the profit that could be extracted from land. The energies, which had been once used against the Britishers, were now divested to squeeze the tenantry."¹⁷ Enhancement of rents and eviction became common practices. Increase in rents made the tenantry more and more dependable on village Baniyas or mahajans. The worst kind of serfdom existed in the form of Sawak system which was a concrete proof of people's indebtedness. Any person belonging to Chamar, Kori, Kurmi or Lodh castes who received an advance sum of money from a rich farmer, landlord or mahajan became a bond serf for lifetime or till he repaid the advance. It was quite common to meet men whose fathers entered into these obligations and who still labour in their discharge.¹⁸ There were some other obligations which tenants had to fulfill: for instance as nazarana (an extra premium on rent taken as gift payment). The nazarana evil had penetrated to the extent that some tenants were painfully forced to commit the heinous sin of Kanya Vikray (sale of daughters) in order to raise nazarana money. This had been seen among caste Hindus tenants also, for example, as in the case of one tenant Gayadin Dubey, a

¹⁶ Sekhar Bandyopadhyay; Caste, Protest and Identity in Colonial India: The Namasudras of Bengal 1872-1947, Surrey: Curzen Press, 1997, p. 6

¹⁷ Kapil Kumar; Peasants in Revolt: Tenants, Landlords, Congress and the Raj in Oudh, 1886-1922, New Delhi: Manohar Publications, 1984, p. 18

¹⁸ Ibid., p. 22



poor dilapidated Brahman, who sold his daughter, ten years old, to a husband about forty years old to pay the nazarana of Rs. 400.¹⁹ Along with the Beshi system (tenants were not given the receipts of their rent which they paid), Gorawan tax (horse tax), Hathiava or Hathiavan (elephant tax), Nazar Daura (tenants had to pay some money when his landlord visited the village), Durbars (courts were held by Taluqdars on occasion of Dusshera and Holi, and again tenants had to present nazars to their landlords).²⁰ High rents and an unending list of customary cesses made the life of tenants full of sorrows. If a Brahman tenant was forced to sell his daughter then what would be the condition of untouchable tenants. Ramnarayan Rawat argued that the Chamar was highest rent payer caste in the early decades of the twentieth century. However, the inner story would be different. They had to pass painfully into the Sawak system, as the crops were usually not good every year. To present a true picture of the tenantry and their painful life, Swami Acchutanand, the pioneer of Dalit awareness and community re-construction, wrote a play. However, the main theme of the play was unjust rule of king Rama where a severe drought badly affected the conditions of common people in his kingdom.²¹

The conditions of untouchable tenants were improving, economically, in twentieth century. In 1909, the Chamars became the highest rent payer caste in UP. In Moradabad district, they paid Rs. 3, 24,571 as annual rent. They were followed by Sheik Rs 3, 13,733, Jat Rs. 2, 81,268, Thakur Rs. 1, 64,419 and Brahman Rs. 1, 42,597 as annual rent. These statistics do not represent an isolated example. The presence of Chamars as one of the largest rent paying caste was a common feature of many districts of UP.²²

The peasant movement of Modern India, especially United Provinces, has been discussed in the details.²³ But the condition of tenantry remained unexplored. In the national freedom movement, there were many efforts of, especially, Indian National Congress to bring peasant and untouchable tenants into the arena of 'national politics' which can be clearly demonstrated in the activity of Congress during the decade of 1920s. In 1920, the Indian National Congress started the Non-Cooperation movement against British rule under the leadership of Gandhi. In this year the most significant development in the UP Congress

¹⁹ Ibid., pp. 31-32

²⁰ Ibid., p. 32

²¹ Swami Acchutanand: Ram Rajya Nyaya Natak-Shambook Muni Balidan,

²² Ramnarayan S. Rawat; A Social History of "Chamars" in Uttar Pradesh, 1881-1956, Ph.D. Thesis (unpublished), University of Delhi, 2004, p. 75

²³ For more details see: Majid Hayat Siddiqi; Agrarian Unrest in North India: The United Provinces, 1918-22, New Delhi: Vikas Publishing House Pvt. Ltd., 1978 & Kapil Kumar; Peasants in Revolt: Tenants, Landlords, Congress and the Raj in Oudh, 1886-1922, New Delhi: Manohar Publications, 1984



organization was the establishment of Congress committees at various levels. In principle, every village with a minimum of five Congress members was to set up a village Congress committee.²⁴ This time the peasant movement was also on its peak. Peasants' support remained a mixture of denial and acceptance of the Congress programmes. However, once the local peasant leaders, especially Baba Ram Chandra, were arrested, the peasant movement began to appear more and more like the Non-Cooperation movement. Twenty instances were on record for the Rae Bareilly district alone in which it was difficult to differentiate between Kisan meetings and those of the Khilafat or the Non-Cooperation.²⁵

The passing of the Oudh Rent Act of 1921 adversely effected the peasant movement. And further, when "Swaraj refused to turn up within a year, the government decided to take action against the Congress leaders and it began to arrest them one by one. The political props of the Kisan movement thus slowly vanished from the scene and left without organizational support, the movement died a natural death."²⁶ Further, Government reports also claimed that "despite the efforts of the Congress, the movement could not crystallize itself."²⁷ The British government too declared that "systemic terrorism of loyal citizens in India, the formation and drilling of volunteers in opposition to the Government, and the preaching and practice of disobedience to the law, cannot be tolerated."²⁸

At this juncture, Swami Acchutanand exhorted untouchables not to become a member of Indian National Congress and not to participate in its activities as the Congress and Mahatma Gandhi were not a friend of untouchables. A drastic change occurred in Dalit awareness when Swami Acchutanand initiated the Adi Hindu Movement in 1922 by organizing a Virat Acchut Sammelan in Delhi and the Prince of Wales was the chief guest. Swami Acchutanand said in a big rally of untouchables in Delhi, "we were subjugated by the Aryans, foreign invaders, and were thrown on the threshold of slavery and untouchability. Now we have to stand against our oppressors and put forward our demand for the '*Mulki Haque*' (national rights) being the indigenous people of this land. We have to welcome the

²⁴ Gyanendra Pandey; The Ascendancy of the Congress in Uttar Pradesh: Class, Community and Nation in Northern India, 1920-1940, London: Anthem Press, 2002, p. 27

²⁵ Majid Hayat Siddiqi; Agrarian Unrest in North India: The United Provinces, 1918-22, New Delhi: Vikas Publishing House Pvt. Ltd., 1978, p. 184

²⁶ Ibid., p. 195

²⁷ Home – Political, File No. 18/1921, Report on the Political Situation in India for the Second Half of July 1921 (Including the Bombay and United Provinces), NAI

²⁸ House of Lords, 1st Vol. of Session, 1922, Comprising Period from Tuesday, 7th February, 1922 to Tuesday, 4th April, 1922. The Parliament Debates (Official Report), Fifth Series, Vol. XLIX, London: His Majesty's Stationary Office, 1922



Prince and put our demands to him rather than revolt against the British government.²⁹ By 'Mulki Haque' he meant those rights and privileges which untouchables enjoyed in pre-Aryan times."³⁰ It is remarkable that the untouchable leaders welcomed the British Prince and showed their loyalty towards foreign rule. They had no belief in Indian leaders who belonged to the upper caste and to the Congress, who were busy organising the protest demonstrations to uphold their caste interests because till now they had not even raised any demand for the removal of the caste system. Consequently, the untouchables looked up to the British government for their emancipation from the discriminatory social behaviour of Caste Hindus. It is noteworthy that this conference was attended by 25, 000 people from the Depressed Classes.³¹

Therefore, the Adi Hindu Movement and the rise of Dalit Awareness in twentieth century was a significant result of education, bhakti devotionism, and untouchable tenantry of nineteenth century. Further, as I mentioned earlier, as untouchables were becoming highest rent payer in many regions of UP, this shows an obvious improvement in their economic conditions. Therefore, some individuals there did raise their economic status through replacing their 'traditional' and agricultural occupations with professions such as law, teaching etc. Because of this, a middle class or rather a lower middle class, though admittedly small, did indeed emerge which paved the way for the emancipation of untouchables from orthodoxy Hinduism.

Conclusion: In traditional caste system, untouchables were not even considered as human beings. Their conditions were changing with advent of education and revival of Bhakti devotionism, especially, in nineteenth century onwards. A drastic change occurred in the period when untouchables, especially Chamars, were becoming agriculturists and emerged as highest rent payer caste in second half of nineteenth century onwards. This clearly shows that their economic condition was improving in contrast to earlier period. This, further, helped in the emergence of, a tiny, middle class among untouchables which spearheaded the first Dalit movement of modern India in UP during twentieth century: the Adi Hindu Movement.

²⁹ My translation from: Chandrika Prasad Jigyasu; Bhartiya Moulik Samajvaad: Srishti Aur Manav Samaj Ka Vikas Athava 'Bharat Ke Adi – Nivasi' Granth ka Pratham Khand, Lucknow: Adi Hindu Gyan Prasarak Bureau, 1941, pp. 271-272

³⁰ Guru Prasad Madan; Swami Acchutanand Harihar: Jivan Aur Krititva (unpublished manuscript, 1969, Allahabad)

³¹ V.C. Lahiri; (compiled) The Prince of Wales' Complete Tour in India and Burma, Delhi: The Ratan Press, April, 1922, p. 192

**भारतीय समाज : कृषि और कृषक का विशेष परिप्रेक्ष्य****डॉ० रवि कुमार मिश्र**

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सारांशिका**माता भूमिः पुत्रो अहं पृथिव्याः पर्जन्यः पिता स उ नः पिपर्तु ॥****(अथर्ववेद १२/१/१२)**

एक भारतीय और समाजशास्त्र के विद्यार्थी होने की वजह से भारतीय समाज को जनसामान्य और अकादमिक ढंग से जानने—समझने में हमें स्वाभाविक रूचि रही है। हम यह जानते हैं कि भारत की सही समझ गांव और किसान की समझ के बिना नहीं हो सकती है। यह समझ विविध तरीके से विकसित की जा सकती है। स्वयं को समाजशास्त्रीय और गैर—समाजशास्त्रीय अधिकृत हस्ताक्षरों पर केन्द्रित रखकर यह समझ विकसित करने का प्रयास किया गया है। यह शोध आलेख सामान्य तौर पर भारतीय समाज को कृषि और कृषक के विशेष परिप्रेक्ष्य से समझने पर केन्द्रित है। समकालीन परिदृश्य को भी ध्यान में रखा गया है। इस शोध आलेख में भारतीय समाज में कृषि, किसान और समाज को जानने के लिए द्वितीयक स्रोतों का उपयोग किया गया है। इन स्रोतों से यह समाजशास्त्रीय तथ्य स्पष्ट होता है कि भारतीय समाज में कृषि और कृषक को नजरअंदाज नहीं किया जा सकता है। समाजशास्त्रीय शब्दावली में यह पुस्तक दृष्टि है। इसके साथ—साथ प्राथमिक स्रोत के रूप में सीमित स्तर पर कुछ विशेषज्ञों के विचार को व्यक्तिगत अध्ययन के तौर पर शामिल किया गया है। केन्द्र सरकार के द्वारा घोषित नीति और उसके प्रावधानों और उसकी आपत्तियों को भी इस इस शोधपत्र में एक हद तक जानने का प्रयास किया गया है। इस शोध आलेख से यह पता चलता है कि भारतीय समाज की शास्त्रीय छवि एक कृषक और ग्रामीण समाज की रही है। आजादी के बाद से आज तक विविध कानूनों और सामाजिक आंदोलनों के कारण कृषकों की सामाजिक—आर्थिक स्थिति में परिवर्तन आया है। इसके साथ—साथ पारंपरिक कृषि उत्पाद और तरीके भी बदले हैं। पूरे भारत में कृषकों की स्थिति समान नहीं है। यह भी कहा जा सकता है कि वैश्वीकरण के दौर में सरकार की नीतियों में पर्याप्त परिवर्तन भी आया है। यह परिवर्तन काफी हद तक स्वाभाविक भी है, प्रासंगिक भी है। हम उत्तर—पूँजीवाद के दौर में हैं और हमें अपनी कृषि सम्बन्धी नीतियों में बाजार को भी शामिल करना होगा। प्रस्तुत शोध आलेख की सीमा के तौर पर हम यह कह सकते हैं कि यह आलेख सामान्य तौर पर भारतीय समाज में कृषि और उसके सामाजिक संदर्भ में ही केन्द्रित है और इस शोध आलेख का उद्देश्य एक सामान्य समझ विकसित करना है। अतः इससे एक सामान्य और सीमित आकलन ही हो सकता है।

मुख्य शब्द— कृषक और किसान, प्रमुख किसान आंदोलन, पंचायती राज, कृषि उत्पादन से सम्बद्ध क्रांतियां, किसान विधेयक २०२०



भारत को गांवों का देश कहा जाता है। विविध ग्रंथों में उल्लिखित और चर्चित कथनों से हम ग्रामीण और कृषि जीवन के विविध पक्षों से सरसरी तौर पर परिचित हो सकते हैं। अथर्ववेद में कहा गया है कि पृथ्वी मेरी माता है और मैं उसका पुत्र हूँ और पर्जन्य, बरसने वाले बादल हमारे पिता हैं। ये हमारा पालन करें।¹ यह जानना भी बहुत ही रूचिकर है कि अथर्ववेद में यह बताया गया है कि ओदन का अर्थ भात होता है अर्थात् पका हुआ चावल। अमरकोश में भात के छः नाम दिये गये हैं— भिस्सा, भक्त, अन्ध, अन्न, ओदन तथा दीदिवि।² रामायण और रामचरित मानस में भी गांव और किसान का उल्लेख आया है। रामचरित मानस के किष्किन्धाकाण्ड में जब वर्षा ऋतु का वर्णन है तो वहां यह बताया गया है कि कृषि निरावहिं चतुर किसान। जिमि बुध तजहिं मोह, मद, माना।³ इसका अर्थ है कि वर्षा ऋतु में चतुर किसान खेतों में से अनावश्यक खर—पतवार, घास आदि को निकालकर कृषि के उपयुक्त बना रहे हैं। यह बहुत कुछ ऐसे ही है जैसे कि विद्वान लोग मोह, मद और अहंकार आदि का त्याग कर देते हैं, अपने व्यक्तित्व से निकाल देते हैं।

इन शास्त्रीय उदाहरणों का समाजशास्त्रीय महत्व इस आशय से है कि किसी भी संस्कृति के तत्वों में मूल्य, प्रतिमान, विचारधारा, संज्ञानात्मक वस्तुओं और लोकसाहित्य का काफी महत्व होता है। भारतीय संस्कृति की विचारधारा धरती के प्रति क्या रही है, मूल्य क्या रहे हैं इसका गहरा प्रभाव हमारे जीवन पर पड़ता है। सूक्ष्म दृष्टि से देखा जाये तो कृषि और कृषि आधारित समाज के गठन पर इनका काफी प्रभाव रहा है। यह अक्सर कहा जाता है कि साहित्य समाज का दर्पण है। इस दृष्टि से एक उदाहरण के तौर पर प्रेमचंद के गोदान की चर्चा की जाये तो उसे कृषक जीवन का महाकाव्य⁴ कहा गया है। इसका कारण यह है कि इसमें प्रगतिवाद, गांधीवाद और मार्क्सवाद (साम्यवाद) का पूर्ण परिप्रेक्ष्य में चित्रण हुआ है। उसके कथानक से पता चलता है कि कृषि आधारित समाज की समस्याएं क्या हैं, मूल्य क्या हैं आदि। अगर हमारे समाज की विचारधारा आदि से उसका सम्बन्ध नहीं होता तो गोदान लोकप्रिय ही नहीं हो पाता। यही कारण है कि गोदान का होरी, गोबर, धनिया जैसे पात्र हमेशा चर्चित रहे हैं।

कौटिल्य ने भी ग्राम गणराज्यों का वर्णन किया था। शुक्राचार्य के नीतिसार में हम ग्राम राज्यों का वर्णन पाते हैं। जातकों में भी ग्राम सभाओं के उल्लेख मिलते हैं। मेटकॉफ ने भारतीय गांवों के बारे में यह बताया है कि ग्रामीण समाज छोटे छोटे गणराज्यों के सदृश हैं, अपनी आवश्यकता की प्रायः सभी वस्तुओं के उत्पादन एवं विदेशी सम्बन्धों से प्रायः स्वतंत्र। राजवंशों के बाद राजवंशों का पतन होता रहा, क्रातियों के बाद क्रांतियां होती रहींकिन्तु ग्रामीण समाज वैसा ही बना रहा।⁵ समाजशास्त्रीय दृष्टि से ग्रामीण और नगरीय अन्तर की बात की जाती है तो यह कहा जाता है कि ग्रामीण जीवन तालाब का ठहरा हुआ पानी है और शहरी जीवन केतली में खौलता हुआ पानी। सॉरोकिन के इस कथन से हम सब परिचित हैं। इससे यह तो पता चलता है कि ग्रामीण जीवन में उतनी तीव्रता से परिवर्तन नहीं आता है जितना कि शहरी जीवन में आता है। इसके बावजूद यह कहना उचित नहीं है कि ग्रामीण जीवन में गतिशीलता नहीं होती है। भारतीय समाज जहां कि जाति आधारित स्तरीकरण है वहां भी गतिशीलता की बात की जाती है। यह कहा जाता है कि संरचनात्मक परिवर्तन कम होते हैं, सांस्कृतिक परिवर्तन ज्यादा होते हैं। एम. एन. श्रीनिवास ने अपने पुराने अध्ययन में संस्कृतिकरण की चर्चा की थी और इस बात पर विशेष बल दिया था। यह भी एक दिलचस्प तथ्य है कि अपनी काफी बाद की (१९९६) संपादित कृति कास्ट इट्स ट्वेनटीथ सेंचुरी अवतार⁶ में वह यह तथ्य प्रकाश में लाते हैं कि जातियां अभी भी शक्तिशाली है और अपने आपको बनाये हुए है।



गांधी जी ने अपने व्याख्यानों और विविध आंदोलनों में भारत के सात लाख गांव की चर्चा की है। गांधी जी ने ग्राम स्वराज की अवधारणा भी दी थी। उनका स्पष्ट रूप से यह मानना था कि भारत के विकास के लिए गांव और किसानों को महत्व देना होगा। गांधीजी ने खेतों में काम करने वाले कृषि मजदूरों, कारीगरों तथा उपेक्षित गांव वासियों की दशा सुधारने के लिए विभिन्न कुटीर उद्योगों तथा आर्थिक कार्यक्रमों को बढ़ावा देने की बात कही। गांधी जी का आर्थिक उत्थान पर आधारित चिंतन उनके शब्दों में—' स्वतंत्रतायें नीचे से प्रारम्भ होनी चाहिए। इस प्रकार प्रत्येक गांव का एक गणराज्य अथवा पंचायत का राज्य होगा। उसके पास पूरी सत्ता और ताकत होगी। इसके लिए प्रत्येक गांव को आत्मनिर्भर होना होगा। अपनी आवश्यकताएं स्वयं पूरी करनी होंगी, ताकि वह अपना पूरा प्रबन्ध स्वयं कर सके।⁹ गांधी जी का यह कथन इस दृष्टि से काफी महत्वपूर्ण है कि वह गांव और किसानों के बारे में एक स्पष्ट राय रखते थे। समकालीन दौर में भी ग्राम पंचायत काफी महत्वपूर्ण है और ग्रामीण विकास की योजनाएं उसके माध्यम से ही संचालित होती हैं। गांधीजी इस तथ्य को भली भांति पहचानते थे कि किसानों के कल्याण और उत्थान के लिए हमें गंभीरता से विचार करना होगा। वह सामाजिक बुराईयों को तो दूर करना ही चाहते थे साथ ही साथ विशिष्ट आर्थिक कार्यक्रमों को चलाये जाने के पक्षधर भी थे।

२०११ की जनगणना के अनुसार भारत की ग्रामीण आबादी ६८.८ है। शास्त्रीय समाजशास्त्रीय अध्ययनों में भी गांव और किसान हैं। ५० के दशक में भारत में गांवों पर हुए गंभीर अध्ययनों में श्यामाचरण दुबे का समीरपेट, डी.एन. मजूमदार का मोहाना, गोविंद सदाशिव घूर्ये का लोनीकंड, आन्द्रे बेत्तेई का शिवपुरम और फ्रेडरिक जी. बेली का बीसीपाड़ा का अध्ययन उल्लेखनीय है।^{१०} भारतीय समाज का अध्ययन प्रायः जाति, शक्ति संरचना, गतिशीलता और परिवर्तन का अध्ययन रहा है। किसानों के जीवन और संस्कृति के बारे में हम यह जानते हैं कि उनकी एक विशिष्ट संस्कृति भी रही है। सॉरोकिन और जिम्मरमैन ने गांव और शहर के जिन अन्तरों की चर्चा की है उससे यह पता चलता है कि ग्रामीण जीवन में गतिशीलता कम होती है, परिवर्तन तेजी से नहीं होता है, सजातीयता और समानता ज्यादा होती है, जनसंख्या और जीवनशैली में विविधता नहीं होती है। इसके साथ-साथ रूढ़िवादिता भी होती है।

समाजशास्त्रीय दृष्टि से सर्वप्रथम हमें यह समझना है कि प्रायः हम ग्रामीण समाज और कृषक समाज को समानार्थी अथवा पर्याय के रूप में प्रयोग करते हैं। रॉबर्ट रेडफील्ड इसे उपयुक्त नहीं मानते हैं। ऐसे उदाहरण हैं कि ग्रामीण समाज है पर वहां अनिवार्य रूप से कृषि का अस्तित्व नहीं है। जनजातीय और खनन क्षेत्रों में ऐसा देखा गया है। इसलिए आंद्रे बेत्तेई ने लिखा है कि यदि हम भारत के समस्त ग्रामीण समुदायों के लिए ने कृषक समूह या समाज शब्द का संबोधन करते हैं तो उनमें कई कठिनाईयां आ सकती हैं। क्रोबर ने यह बताया कि किसी भी समाज में कृषक की स्थिति मध्यवर्ती होती है जिसके एक ओर नगरीय समाज होता है और दूसरी तरफ जनजातीय समाज।^{११} इन चर्चाओं से एक बात तो स्पष्ट है कि भारतीय समाज को जब हम ग्रामीण समाज के रूप में स्वीकार करते हैं तो उसे अनिवार्य रूप से हम किसानों का समाज नहीं कह सकते हैं।

२०२०-२१ में दिल्ली में चल रहे किसान आंदोलन की चर्चा सामाजिक, राजनैतिक और शैक्षिक मंचों पर होती रही है। इस आंदोलन को सरसरी तौर पर देखने पर ऐसा लगता है कि इस आंदोलन में भारत के कुछ राज्यों (पंजाब, हरियाणा, पश्चिमी उत्तर प्रदेश) के किसान की सहभागिता कहीं ज्यादा है। इसके विपरीत कुछ राज्यों में यह उतना चर्चित नहीं हुआ है। इसे समझने के लिए हमें सबसे पहले तो ग्रामीण समाज और कृषि के अनिवार्य अस्तित्व की धारणा से मुक्त होना होगा जिसकी चर्चा पहले की गयी है। इसके साथ-साथ यह भी समझना होगा कि



कृषक और किसान या पीजेंट और फार्मर शब्द का प्रयोग एक ही अर्थ में नहीं किया जा सकता है। रॉबर्ट रेडफील्ड ने यह बताया है कि कृषक वे हैं जो भूमि पर हल चलाते हैं जबकि किसान वे हैं जो अपने लाभ के लिए कृषि को व्यवसाय की भांति प्रयुक्त करते हैं। रॉबर्ट रेडफील्ड की अवधारणा की पृष्ठभूमि भारत नहीं है। आन्द्रे बेल्तेइ ने भारतीय कृषक समाज की संकल्पना दी है। उनके मतानुसार कृषक वर्ग और कुलीनता का सहअस्तित्व है। कुलीन वर्ग वह है जो दूसरों से अपनी भूमि पर कार्य करवाता है और कृषि का व्यवसाय करता है जबकि कृषक वर्ग उन परिवारों का समूह है जिन परिवारों के सभी सक्रिय सदस्य, जिनमें स्त्री, पुरुष और बच्चे शामिल हैं, खेत पर स्वयं कार्य करते हैं।^{१०} इन समाजशास्त्रीय तथ्यों से यह पता चलता है कि खेती—किसानी के स्तर पर काफी विविधता है, इसे समझने की आवश्यकता है। भारत के अलग—अलग हिस्सों में कौन सी फसलें उगायी जायेंगी, कैसे उगायी जायेंगी, स्त्रियों की भागीदारी कितनी होगी, इन सब पर काफी विविधता है। कई बार यह भी देखा गया है कि किसी विशिष्ट उत्पाद और किसानों की अर्थव्यवस्था और उनके जीवन पर उसका नकारात्मक प्रभाव भी पड़ा है। अतः भारतीय समाज और किसान की सामान्य समझ विकसित करने से पहले हमें इन पहलूओं पर भी विचार करना होगा।

किसी भी समाज के इतिहास और वहां के विविध वर्गों की स्थिति में एक सम्बन्ध अनिवार्य रूप से होता है, ऐसा कहा जाना अनुचित नहीं है। जनसामान्य के मध्य किसानों की सामाजिक और आर्थिक स्थिति अच्छी नहीं मानी जाती है। यह भारतीय साहित्य और किसानों के मध्य हुए आंदोलनों से भी स्पष्ट होता है। ए.आर.देसाइ^{११} ने अपनी चर्चित कृति भारतीय राष्ट्रवाद की सामाजिक पृष्ठभूमि में औपनिवेशिक शासन के दौरान हुए भारतीय कृषि के रूपांतरण के सामाजिक परिणाम और ग्रामीण शिल्प उद्योग के हास नामक अलग—अलग अध्यायों में इस पर विस्तार से लिखा है। औपनिवेशिक शासन का दुष्परिणाम उपनिवेशों को भुगतना पड़ता है। औपनिवेशिक शासन का सबसे नकारात्मक प्रभाव यह रहा है कि इसने उपनिवेशों के सकारात्मक पक्षों को भी अस्वीकार किया और इस बात का पूरा प्रयास किया कि शक्तिशाली देशों की मान्यताओं को ही मॉडल के रूप में स्वीकार किया जाये। उपनिवेशों की संस्कृति और जीवन को सही ढंग से समझने की जगह इस बात की पूरी कोशिश की गयी कि उनकी आस्था अपनी संस्कृति, जीवनशैली आदि को लेकर हिल जाये। इस सम्बन्ध में आधुनिकता की अवधारणा और विशेषताओं को भी हम देख सकते हैं। उत्तर—उपनिवेशवादी चिंतन में विभिन्न विचारकों ने इस पर विस्तार से प्रकाश डाला है। एडवर्ड एम. सर्ईद ने अपने चर्चित कृति ओरियेंटलिज्म (१९७८) में इसका उल्लेख किया है। हम यह जानते हैं कि उन्नीसवीं सदी में जो उपनिवेशवाद था वह बीसवीं सदी में नहीं रहा क्योंकि ज्यादातर देशों ने स्वतंत्रता प्राप्त कर ली है। एक नयी बहस जरूर शुरू हो गयी है कि किसे ज्यादा शोषणकारी माना जाये औपनिवेशिक शासन को अथवा उत्तर—औपनिवेशिक शासन को, क्योंकि यह देखा जा रहा है कि उत्तर औपनिवेशिक काल में अर्थव्यवस्था को बड़ी अंतरराष्ट्रीय कंपनियों लगातार प्रभावित कर रही हैं।^{१२} अगर हम भारत में किसान और ग्रामीण समाज के संदर्भ में देखें तो वहां भी यह बात प्रासंगिक है।

भारत में कृषक और किसान आंदोलन के सम्बन्ध में हमें यह समझना होगा कि कृषक आंदोलन का सम्बन्ध खेती के पिछड़ेपन से रहा है और किसान आंदोलन प्रगतिशील खेती के क्षेत्रों में जन्मा है। ब्रिटिश काल की जमींदारी और रैयतवाड़ी प्रथा से हम परिचित हैं। विभिन्न विद्रोहों और आंदोलनों पर सरसरी नजर डालने से यह पता चलता है कि अलग—अलग समय पर अलग—अलग विद्रोह हुए हैं। जैसे सन्यासी विद्रोह (१७६३—१८००), शमशेर गाजी का विद्रोह (१७६७—६८), बुनकरों का विद्रोह, अफीम किसानों का विद्रोह, बाकुरा के आदिवासी किसानों का



विद्रोह, संथाल विद्रोह (१८५४-१८५६), पाबना का किसान विद्रोह (१८७२-७३), १८७५ में महाराष्ट्र में किसानों का आन्दोलन, बिहार का चर्चित गांधी जी का चम्पारण सत्याग्रह (१९१७), गुजरात का खेड़ा किसान आंदोलन (१९१९), १९३०-३१ में गुजरात के बारदोली में किसानों का आन्दोलन, १९४६ में हुए तेलंगाना आंदोलन, उन्नीसवीं सदी के अन्त में पंजाब के लायलपुर, जालंधर, अमृतसर और होशियारपुर में हुए आंदोलन आदि प्रमुख किसान आंदोलन हैं। ऐसे आंदोलन आजादी के पूर्व और बाद में भी चले हैं। इनमें से कुछ ज्यादा चर्चित हैं। भारत के चर्चित व्यक्तित्वों ने भी विविध मंचों पर किसान और उनकी समस्याओं को सामने लाने का प्रयास किया है। आचार्य नरेन्द्र देव, अशोक मेहता, राममनोहर लोहिया, सरदार पटेल का नाम काफी चर्चित रहा है। इसके अतिरिक्त स्वामी सहजानंद सरस्वती, राहुल सांकृत्यायन, कार्यानन्द शर्मा, शिवपूजन सिंह शास्त्री, फजलूल हक, महेन्द्र सिंह टिकैत, दत्ता सामंत और चौधरी चरण सिंह ने भी किसानों के पक्ष में विविध संगठनों, व्याख्यानों आंदोलन के माध्यम से किसानों की समस्या को भारतीय परिदृश्य में जानने-समझने और किसानों की स्थिति में परिवर्तन का प्रयास किया है।^{१३}

हाल के समय में जब भारत की केन्द्रीय सरकार ने नया कृषि विधेयक-कृषि उत्पादन, व्यापार और वाणिज्य (संवर्धन और सुविधा) विधेयक २०२०, मूल्य आश्वासन एवं कृषि सेवाओं पर कृषक (सशक्तिकरण एवं संरक्षण) अनुबन्ध विधेयक २०२० और आवश्यक वस्तु संशोधन विधेयक २०२० पारित^{१४} किया तो इसके विरोध में काफी लम्बा किसान आंदोलन चल रहा है। उल्लेखनीय है कि सरकार के साथ कई दौर की वार्ता के बाद भी अभी भी गतिरोध जारी है। इस विधेयक के पक्ष और विपक्ष में कई तर्क दिये जाते हैं। किसान न्यूनतम समर्थन मूल्य की मांग कर रहे हैं, संविदा कृषि को लेकर आशंकित हैं। इस आंदोलन में पंजाब, हरियाणा, महाराष्ट्र और पश्चिमी उत्तर प्रदेश के किसानों की भागीदारी है। महेन्द्र सिंह टिकैत की भारतीय किसान यूनियन के अतिरिक्त अन्य कई संगठन इस किसान आंदोलन में अपनी सहभागिता कर रहे हैं।

समकालीन परिदृश्य में किसान और भारतीय समाज के अन्तर्सम्बन्धों को समाजशास्त्रीय आयाम में समझने का प्रयास जरूरी है। इन प्रावधानों को लेकर जो आशंकाएं हैं उन्हें सिरे से खारिज नहीं किया जा सकता है। हमें किसानों की आशंकाओं और सदेहों को दूर करना होगा। इसके साथ-साथ यह भी सही है कि वैश्विक परिवर्तन के अनुरूप हमें अपने बाजारों को भी बनाना होगा और साथ ही साथ कृषि के क्षेत्र में भी हमें पुरानी व्यवस्थाओं को बदलने की आवश्यकता है। यह बात भी मोटे तौर पर स्वीकार की जा चुकी है कि पूंजीवाद का विकल्प नहीं है। जिस तरह से पहले हम क्रांतिकारी, समाजवादी विचारधारा आदि को लेकर एक आग्रह था वह आग्रह अब कहीं न कहीं कमजोर पड़ गया है। वैश्वीकरण ने एक सर्वथा नया परिदृश्य गढ़ दिया है। अप्पादुराई^{१५} ने एक महत्वपूर्ण बात यह कही है कि समकालीन वैश्विक समाज के पांच आयाम—नृजातीय, तकनीकी पक्ष, वित्तीय पक्ष, जनसंचार माध्यमों का पक्ष और विचारधारा का पक्ष की चर्चा की है और यह बताया है कि इन सबसे हमारा समकालीन समाज गढ़ा जा रहा है। समाजशास्त्रीय ढंग से यह बात आसानी से समझ में आ सकती है कि अब हमारी अर्थव्यवस्था तथा हमारी सामाजिक संरचना वैश्विक आर्थिक संगठनों, सूचना प्रौद्योगिकी, जनसंचार माध्यमों, बहुराष्ट्रीय कंपनियों से प्रभावित हो रही हैं। इन बातों को यहां कहने का अर्थ यह है कि हम भारतीय कृषि और किसानों के बारे में किसी भी प्रावधानों को निर्मित करते हुए हमें इन तथ्यों पर भी विचार करना ही होगा। इस बात को जनसामान्य, सरकार और सम्बन्धित कृषि संगठनों को भी समझने की आवश्यकता है।



प्रश्न यह उठता है कि इन आशंकाओं की वजह क्या है। इसका उत्तर यह है कि पिछले कुछ दशकों में कृषि के क्षेत्र में परिवर्तन हुए हैं। यह परिवर्तन कर्ज की व्यवस्था को लेकर भी है और कृषि उत्पाद को लेकर भी है। सरकार ने फसलों की बीमा की नीति भी अपनायी है। पिछले कुछ समय की घटनाओं का उल्लेख किया जाना जरूरी है। कई बार वाणिज्यिक और बहुत लाभ देने वाली फसलों से जो उम्मीद थी वह पूरी नहीं हुई है। बीटी कॉटन की बात हम जानते ही हैं। ३० दिसम्बर २०१६ को किसानों की आत्महत्या पर राष्ट्रीय अपराध रिकॉर्ड ब्यूरो द्वारा जारी आंकड़ों से इस बात का खुलासा हुआ है कि वर्ष २०१५ में कुल ८००७ किसानों ने आत्महत्या की जो वर्ष २०१४ में आत्महत्या करने वाले ५६५० किसानों की संख्या की तुलना में ४२ फीसदी अधिक है।^{१६} इस तरह की कई स्थितियों और प्रवृत्तियों को हम आसानी से पहचान सकते हैं। ऐसा नहीं है कि सरकार ने इन समस्याओं पर कोई ध्यान नहीं दिया। सरकार द्वारा समय-समय पर फसल की बीमा, किसानों के कर्ज माफ करने जैसे महत्वपूर्ण कदम भी उठाये गये हैं। सरकार ने अलग-अलग तरीके विविध फसलों और उत्पादन पर समय-समय पर जोर भी दिया है। हरित क्रांति से तो हम परिचित हैं। इसके अतिरिक्त तिलहन उत्पादन से सम्बद्ध पीली क्रांति, झींगा उत्पादन से सम्बन्धित गुलाबी क्रांति, टमाटर और मांस के उत्पादन से सम्बद्ध लाल क्रांति, आलू उत्पादन उपभोग और योजनाबद्ध तरीके से अनुसंधान और तकनीकी विकास को समर्पित गोल क्रांति, मतस्य पालन से सम्बद्ध नीली क्रांति, उर्वरकों के उपयोग को बढ़ावा देने के लिए धूसर क्रांति, अण्डा उत्पादन और मुर्गी पालन के लिए सिल्वर क्रांति, बागवानी फसलों विशेषकर सेब के लिए सुनहरी क्रांति, विविध क्रांति के समन्वय से सम्बद्ध इन्द्रधनुषी क्रांति आदि चर्चित क्रांति हैं।^{१७} इनमें से ज्यादातर क्रांतियों के परिणाम सकारात्मक रहे हैं और हम इन्हें अप्रासंगिक नहीं मान सकते हैं।

हाल के कृषि कानूनों और उसके प्रावधानों को लेकर अधिकृत हस्ताक्षरों की राय में मतैक्य नहीं है। यह स्वाभाविक है। एक मिश्रित अर्थव्यवस्था वाले देश में लोगों की राय भी मिश्रित है। कुछ विचारक ऐसे हैं जो चल रहे किसान आंदोलन को खुद की आजादी का विरोध के रूप में पहचानते हैं, कुछ कृषि उत्पादों की कीमतों के पेचीदा अर्थशास्त्र की बात करते हैं, कुछ राजनीतिक इच्छाशक्ति की कमी के रूप में इसे समझना और व्याख्यायित करना चाहते हैं। प्रमोद कुमार जोशी, अनिल घनावत और अशोक गुलाटी जैसे लोगों ने नये विधेयक के प्रस्तावों को उपयुक्त माना है और किसानों के लिए जरूरी बताया है। इससे हटकर ज्यादातर किसान संगठन के नेता भूपिंदर सिंह मान, राजेवाल, कुलवंत सिंह संधु आदि इस आंदोलन के माध्यम से नये कानूनों को समाप्त करने के पक्ष में हैं।^{१८}

समकालीन सामाजिक सांस्कृतिक परिदृश्य में किसान और भारतीय समाज की समझ का प्रश्न बहुत ही जटिल है। इसका कारण यह है कि एक तरफ पारंपरिक कृषि ढांचा काफी हद तक परिवर्तित हो चुका है, परिवर्तन की प्रक्रिया में है और दूसरी तरफ सरकार की नीतियां भी अन्तराष्ट्रीय स्थितियों, बाजार आदि को समझते हुए चलने से है। हमें यह समझना होगा कि कोई भी समाज आर्थिक विकास और प्रगति के पथ पर तभी बढ़ सकता है जब वह व्यवस्था के परिवर्तन के प्रति नकारात्मक रूप से आग्रही नहीं हो। इसके साथ-साथ यह बात भी उतनी ही सही है कि भारत जैसे कृषि प्रधान देश में किसानों के हितों को नजरअंदाज नहीं किया जा सकता है। उनकी आशंकाओं और संदेहों को दूर करने का पूरा प्रयास किया जाना चाहिए। समाजशास्त्र के विद्यार्थी के रूप में हमें बहुत गंभीरता से भारतीय ग्रामीण समाज और कृषक समाज को समझने का प्रयास करना चाहिए। इसी से इस जटिल परिदृश्य को वास्तविक ढंग से समझा जा



सकता है। हमें समाजशास्त्रीय अध्ययन और शोध इस दिशा में विशेषकर करने होंगे। भारतीय सामाजिक संरचना की विविधता जटिलता और उसमें हो रहे परिवर्तन को भी देखना होगा।

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**भारत में किसान और किसान आंदोलन— ऐतिहासिक और सामयिक संदर्भ****डॉ० यशवन्त यादव**

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सारांशिका

यह शोध आलेख भारत में किसान और किसान आंदोलन की सामान्य समझ विकसित करने को केन्द्र में रख कर लिखा गया है। भारतीय समाज में किसानों की स्थिति को जानने के लिए ऐतिहासिक और सामाजिक संदर्भ को जानना जरूरी है। इस शोध आलेख में विविध किसान आंदोलनों की संक्षिप्त चर्चा कर उसकी पृष्ठभूमि को जानने का प्रयास किया गया है। प्रायः किसान आंदोलन शब्द समस्या के किसान केन्द्रित होने का संकेत करता है पर इस शोध आलेख में यह स्पष्ट करने का प्रयास किया गया है कि किसान आंदोलन का चरित्र और स्वरूप विविधतापूर्ण होता है। भारत देश को एक कृषि प्रधान देश कहा गया है। कृषि के क्षेत्र में हुए विविध परिवर्तन और सरकार के समय-समय पर किये गये सकारात्मक प्रयासों को भी हमें समझना होगा। हमें यह भी समझना होगा कि प्रायः सामाजिक आंदोलनों के विरुद्ध एक प्रतिरोधी आंदोलन भी होता है जो मूल आंदोलन के समानांतर चलता है और मूल आंदोलन के उद्देश्यों को भी नकारात्मक ढंग से प्रभावित करता है। इस शोध आलेख में अन्तरअनुशासनीय अध्ययन की दृष्टि अपनायी गयी है और समाजशास्त्रीय परिप्रेक्ष्य और ऐतिहासिक परिप्रेक्ष्य में अध्ययन किया गया है। पूर्णतया द्वितीयक स्रोतों पर आधारित इस शोध आलेख में किसान आंदोलन की अवधारणा, किसान आंदोलन के सिद्धान्त, चर्चित किसान आंदोलन, औपनिवेशिक शासन, प्रत्यक्ष और अप्रत्यक्ष प्रकार्य प्रमुख शब्दावली का प्रयोग किया गया है।

भारतीय संस्कृति में किसान एक सम्मोहक शब्द रहा है। किसान को अन्नदाता कहा जाता है। लोग स्वयं को किसान का पुत्र और किसान परिवार से सम्बद्ध होने की बात पर बहुत ज्यादा जोर देते हैं। गीता में भगवान कृष्ण द्वारा तेरहवें अध्याय में भी क्षेत्र और क्षेत्रज्ञ जैसे शब्दों का प्रयोग किया है। एक रूपक के रूप में इस शब्द का प्रयोग भले ही आध्यात्मिक ढंग से किया गया हो पर यह क्षेत्र और क्षेत्रज्ञ की गरिमा को ही स्पष्ट करता है। यह सही है कि उनका संदर्भ आध्यात्मिक है। हम सीताध्यक्ष (कृषि विभाग के अध्यक्ष), कोठाराध्यक्ष (कोठार या खाद्य पदार्थों के संग्रहालय का अध्यक्ष), कुप्याध्यक्ष (जंगली वस्तुओं के संग्रहालय का अध्यक्ष)^१ शब्द से परिचित हैं ही जिसकी चर्चा कौटिल्य की व्यवस्था में की गयी है। वैदिक साहित्य में कृषि जीवन के बारे में बहुत ही दिलचस्प ढंग से चर्चा की गयी है। कृषि का पहला अर्थ है हल चलाना। लाक्षणिक अर्थ है खेती। वैदिक युग में खेती थी। इसके स्पष्ट उल्लेख वेदों में आते हैं। ऋषि कहते हैं—‘पूषा हमारे लिए सोम के सहित छः ऋतुओं को उसी प्रकार लाता है जिस प्रकार किसान यव (जौ) पैदा करने के लिए खेत को बारंबार जोतता है।’^२ इससे स्पष्ट है कि भारतीय संस्कृति में कृषि और कृषि उत्पाद के सम्बन्ध में अत्यन्त प्राचीन उल्लेख मिलते हैं। इस तरह से अगर अलग-अलग कालखंडों में देखा जाये तो यह स्पष्ट है कि भारतीय इतिहास में कृषि और कृषक जीवन का



उत्तरोत्तर उदविकास ही हुआ है। मध्यकाल में भी हम दीवान—ए—अमीर—ए—कोही जैसे सल्तनतकालीन महत्वपूर्ण विभागों से परिचित होते हैं। यह विभाग मुहम्मद तुगलक द्वारा स्थापित था और इसका मुख्य कार्य मालगुजारी व्यवस्था की देखभाल करना एवं भूमि को खेती के योग्य बनाना होता था। बाद के मुगलकाल में भी कृषि, भूमि आदि सम्बन्धी विविध प्रावधान किये गये। अंग्रेजों के आगमन और उसके बाद भी कृषि के क्षेत्र में काफी परिवर्तन आता रहा है। इतिहास के विद्यार्थी के रूप में हम यह आसानी से देख सकते हैं कि जैसे—जैसे सामाजिक सांस्कृतिक परिवर्तन हुए वैसे—वैसे समाज का ढांचा भी परिवर्तित हुआ है। शासन व्यवस्था और समाज का गहरा सम्बन्ध भी है। कोई भी सामाजिक ताना—बाना शासन व्यवस्था से प्रभावित हुए बिना नहीं रह सकता है और कोई भी शासन व्यवस्था सामाजिक ताना—बाना को पूर्णतया नजरअंदाज नहीं कर सकती है। अगर ऐसा होता भी है तो इसकी प्रतिक्रिया और प्रत्युत्तर दोनों ही इतिहास में दर्ज होते हैं।

हाल के दिनों में पिछले वर्ष से संसद से सड़क तक किसान आंदोलन पर काफी चर्चा हुई है। यह चर्चा भारत की केन्द्रीय सरकार द्वारा तीन कृषि कानूनों को लाने के उपरांत तेज हुई। इन कानूनों के विरोध में भारत का किसान आंदोलनरत है। सरकार से कई दौर की बातचीत के बावजूद आंदोलन अभी तक जारी है। जब हम इस तरह के आंदोलन से परिचित होते हैं तो हम तात्कालिक रूप से और उसी समय विशेष के परिप्रेक्ष्य में इसे समझना चाहते हैं जो कि बहुत ही उचित नहीं है। इतिहास के विद्यार्थी के तौर पर जब मैं भारत में किसान आंदोलनों का सुदृढ़ इतिहास देखता हूँ तो मुझे लगता है कि उनकी चर्चा भी जरूरी है।

किसी भी आंदोलन के कुछ तात्कालिक और सतह पर दिखने वाले कारण मौजूद होते हैं। प्रायः हम इन्हीं कारणों से आंदोलन को समझने का प्रयास करते हैं। यहां हमें यह ध्यान रखना होगा कि किसान आंदोलन एक हद तक सामाजिक आंदोलन हैं। इनका सामाजिक ताने—बाने से गहरा सम्बन्ध होता है। अतः सामाजिक आंदोलन के जो कारक अथवा सिद्धान्त हैं, हमें उन्हें समझना होगा। भारत में सामाजिक आंदोलन पर उल्लेखनीय कार्य करने वाले एम.एस.ए. राव ने यह बताया है कि सामाजिक आंदोलन की उत्पत्ति में तीन तरह के सिद्धान्त कार्य करते हैं—सापेक्षिक वंचना का सिद्धान्त, संरचनात्मक दबाव या तनाव का सिद्धान्त और पुनःजीवन या पुनरूत्थान का सिद्धान्त। सापेक्षिक वंचना के सिद्धान्त में समूह के पास अभाव बोध का पक्ष प्रबल होता है। स्टाउफर ने इसकी चर्चा की है। हमारे पास जो है हम उससे संतुष्ट नहीं होते हैं किसी समूह से तुलना करते हैं और हमें अभाव बोध है। नील जे. स्मेलसर ने सामूहिक व्यवहार में होने वाले संरचनात्मक तनाव को सामाजिक आंदोलन के कारक के रूप में ज्यादा महत्व दिया है। वालेस का यह मानना है कि सामाजिक आंदोलन सायास होते हैं, चेतन रूप से किये जाते हैं, संगठित होते हैं और इसका उद्देश्य सम्बद्ध समूह अपने लिए ज्यादा संतोषजनक संस्कृति को गढ़ने के लिए करता है।⁸ भारत में चल रहे किसान आंदोलन को सिर्फ किसी एक कारण से समझना पर्याप्त नहीं कहा जा सकता है। भारत की जटिल सामाजिक सांस्कृतिक संरचना और कृषि कानूनों का समवर्ती सूची में होना जैसे महत्वपूर्ण पहलूओं को नजरअंदाज नहीं किया जा सकता है। भारत में चल रहे किसान आंदोलन का चरित्र भी विविधतापूर्ण है। सामाजिक आंदोलनों की चर्चा में प्रायः एक महत्वपूर्ण तथ्य नजरअंदाज कर दिया जाता है कि सामाजिक आंदोलनों के विरोध में भी प्रायः कोई आंदोलन प्रारंभ हो जाता है।⁹ यह प्रतिरोधी आंदोलन पहले हम आरक्षण के सम्बन्ध में देख चुके हैं। नागरिकता कानून के विरोध के साथ—साथ समर्थन में भी आंदोलन चले हैं। ऐसा ही किसान आंदोलन में भी अगर दिख रहा है तो इसे सामाजिक आंदोलनों का स्वाभाविक चरित्र मानना ही उचित होगा। इसके साथ—साथ जो अपेक्षित परिवर्तन की चाहत



सामाजिक आंदोलनों में होती है उसके अतिरिक्त भी परिवर्तन आ सकते हैं, आते हैं। वर्तमान किसान आंदोलन के साथ भी ऐसा होने की संभावना है।

सामाजिक विज्ञानों में प्रकार्यवादी दृष्टिकोण की चर्चा आती है। अमेरिकी प्रकार्यवादी समाजशास्त्री मर्टन ने प्रत्यक्ष और अप्रत्यक्ष प्रकार्य की चर्चा की है।¹⁵ प्रत्यक्ष प्रकार्य जहां वांछित परिणाम का संकेत करते हैं वहीं अप्रत्यक्ष प्रकार्य उन परिणामों का भी संकेत करते हैं जो वांछित नहीं था अथवा जिसका इरादा नहीं किया गया था। भारत के किसान आंदोलनों ने अप्रत्यक्ष प्रकार्य भी उत्पन्न किये ऐसा कहा जाये तो अनुचित नहीं होगा।

भारतीय इतिहास में किसानों के विद्रोह और कृषक आंदोलन का बहुत ही सुदृढ़ इतिहास है। किसी भी संस्कृति और भाषा के शब्द बहुत कुछ इतिहास संजाये होते हैं। अगर नील की खेती और नील की खेती करने वाले लोग जो विविध तरह के उत्पीड़न के शिकार नहीं होते तो शायद नीलहे शब्द भी हमारे लिए अपरिचित होता। इस उत्पीड़न का सजीव चित्रण प्रसिद्ध बंगला लेखक दीनबन्धु मित्र ने अपने नाटक नीलदर्पण में १८६० में किया है।¹⁶ १८५७ के विद्रोह में किसानों की भूमिका को लेकर तत्कालीन औपनिवेशिक शासन की नीतियां भी प्रभावित हुईं। यद्यपि इस विद्रोह में कृषकों की भूमिका के विषय में कोई एक प्रकार का चित्र नहीं मिलता फिर भी अवध तथा पश्चिमी यूपी में कृषकों ने जमींदारों की कठोरता को भुलाकर सामंतशाहों से मिलकर विदेशियों को उखाड़ फेंकने का प्रयत्न किया। विद्रोह के दिनों में जब लार्ड कैनिंग ने उनके भूमि में स्वामित्व के अधिकारों को समाप्त कर दिया तो यह एक प्रकार से उन लोगों को दण्ड देने का उपाय था जिन्होंने इस विद्रोह में भाग लिया था। किसानों के असंतोष भारत के विविध हिस्सों में अलग-अलग ढंग से प्रकट हो रहे थे। किसी एक पर केन्द्रित नहीं होकर उन पर एक सरसरी नजर डालने से भी प्रवृत्ति को पहचाना जा सकता है। बंगाल में नील उगाने वालों का विद्रोह १८६०, १८७५ के दक्षिण विद्रोह, पंजाबी कृषकों का असंतोष तथा पंजाब भूमि अन्याकरण अधिनियम १९००, १९१७ का चम्पारण तथा खेड़ा सत्याग्रह, १९२१ का मापिला विद्रोह, १९४६ का तेलंगाना विद्रोह का होना इस तथ्य को प्रकाश में लाता है कि औपनिवेशिक भारत में भी किसान अपने असंतोष को समय-समय पर प्रकट कर रहे थे। इन किसान आंदोलनों के साथ-साथ किसान सभाओं और समितियों के गठन का भी इतिहास है।

१९२० से आरम्भ होने वाले दशक में बंगाल, पंजाब तथा यूपी में किसान सभाओं का गठन हुआ। १९२८ में आन्ध्र प्रांतीय रैयत सभा का गठन हुआ परंतु अखिल भारतीय किसान सभा का गठन ११ अप्रैल १९३६ को लखनऊ में हुआ। १९३६ में ही बिहार में बाकाशत (स्वयं जोती हुई) भूमि के विरुद्ध आंदोलन आरम्भ किया गया।¹⁷ विभिन्न प्रांतों और क्षेत्रों में इन संगठनों का गठन इस तथ्य को प्रकाश में लाता है कि किसानों की समस्याएं आकार ले रही थीं और भारतीय समाज में इन्हें नजरअंदाज नहीं किया जा सकता था। ऐसा बताया जाता है कि १९२० के दिसम्बर में अयोध्या में हुए सम्मेलन में एक लाख किसान शामिल हुए। इस सम्मेलन में शामिल होने के लिए बाबा रामचन्द्र अपने शरीर को रस्सियों से बांधकर एक कैदी के रूप में आए थे।¹⁸ यह घटना काफी चर्चित हुई थी। विद्रोह और असहमति प्रकट करने के ये अंदाज बहुत ही मौलिक थे और इनका काफी सांकेतिक महत्व था। एक उल्लेखनीय बात यह भी है कि औपनिवेशिक शासन से जो शिकायतें किसानों को थी वह १९३७ में गठित लोकप्रिय सरकार से भी रही। इस दौरान बिहार विधानसभा के अधिवेशन के पहले दिन तेईस हजार किसान विधान सभा भवन के सामने एकत्रित हो गये। उनके नारे थे—हमें पानी दो, हम प्यासे हैं। हमें रोटी दो, हम भूखे हैं। हमारे सभी कृषि ऋण छोड़ दो, हमें जमींदारों के शोषण से बचाओ।¹⁹ इस तरह के अध्ययन से यह पता चलता है कि तत्कालीन बिहार के किसान मुखर थे और उनकी मांगों में कर्जमाफी का



मुद्दा महत्वपूर्ण था। यह सिलसिला आज भी जारी है तो कहीं न कहीं इस पर गंभीरता से विचार करना ही होगा। देश भर में कर्ज से डूबे आत्महत्या के बढ़ते मामलों पर सुप्रीम कोर्ट ने कई बार चिंता जताई है। इसका कारण यह है कि कर्ज के कारण किसानों के आत्महत्या की घटनाओं से हम परिचित हैं। ऐसी आत्महत्याएं २०१५ और २०१६ में भी हुई है^{१०} इन आत्महत्याओं के ताने-बाने को समझने के प्रयास से यह पता चलता है कि भारतीय कृषि को मानसून के साथ जूआ कहा जाता है। किसान आमतौर पर बहुत ही सहनशील होता है। जिन भारतीय किसानों के आत्महत्या की यहां चर्चा की जा रही है उनमें नैराश्य है और वे कहीं न कहीं सामाजिक विसंगति के वजह से हुई ऐसा कहा जा सकता है। आत्महत्या पर गहन समाजशास्त्रीय अध्ययन करने वाले समाजशास्त्री दुर्खीम की शब्दावली का सहारा लिया जाये तो यह घातक या नियतिवादी आत्महत्या है। हमें यह समझना होगा कि जैसे-जैसे समाज में परिवर्तन होते हैं वैसे-वैसे समाज यांत्रिक एकता से सावयवी एकता वाले समाज में परिवर्तित होता है। यहां यह उल्लेखनीय है कि दुर्खीम ने सामाजिक संरचना में आत्महत्या को समझने का प्रयास किया है न कि इसे व्यक्तिगत प्रेरणा की घटना के रूप में स्वीकार किया है^{११} किसानों की आत्महत्या का यह संदर्भ उपेक्षित नहीं किया जा सकता है। एक सभ्य समाज में हमें इस तरह की स्थितियों से बचने का पूरा प्रयास करना चाहिए। यही कारण है कि सरकार ने फसल बीमा योजना जैसे विविध कानूनों से इसे संभालने का प्रयास किया है।

चर्चित इतिहासकार सुमित सरकार^{१२} ने यह बताया है कि किसान आंदोलन ने दो क्षेत्र में सीधे और ठोस रूप से गांधीवाद के उदय में योगदान दिया। उत्तर पश्चिमी बिहार के चंपारन में और गुजरात के खेड़ा में। यह सत्य है कि इन स्थानों में स्थानीय मुद्दों को अखिल भारतीय राजनीति के स्तर तक ले जाने के लिए गांधी जी का हस्तक्षेप अपरिहार्य था, फिर भी इस बात के पर्याप्त परिणाम मिलते हैं कि इन दोनों स्थानों पर असंतोष और विरोध की भावना गांधीजी के आगमन से बहुत पहले ही विद्यमान थी और वह भी जिसे जाक पुष्पादास अपने चम्पारण के अध्ययन में स्वयं ग्रामीण जनसामान्य की ओर से उर्ध्वगामी दबाव कहते हैं।

इन उदाहरणों से हमें यह पता चलता है कि किसानों के आन्दोलन को हम सीमित परिप्रेक्ष्य में अगर रखना चाहें तो वह भारत जैसे कृषि प्रधान देश में उचित नहीं है। इस तरह के उदाहरण से यह भी पता चलता है कि एक सम्पर्क और नैरन्तर्य या निरन्तरता राष्ट्रीय और स्थानीय नेतृत्व में संभव है और इससे कई बार राष्ट्रीय नेतृत्व को उर्जा भी प्राप्त होती है। इसके साथ-साथ उस तरह की लोकप्रिय धारणा का भी खंडन होता है जैसा कि मेटकाफ ने कहा था कि भारत के गांव नन्हें गणतन्त्र हैं। भारत के गांवों और किसानों की समस्या को माइक्रो अथवा सूक्ष्म स्तर पर ही सुलझाने के प्रयास अपने आप में पूर्णतया सही नहीं हैं उन्हें व्यापक या मैक्रो स्तर पर भी समझने की जरूरत है।

समाजशास्त्री ए. आर. एन. श्रीवास्तव में कृषि आंदोलन के समाजशास्त्रीय पहलूओं पर प्रकाश डाला है^{१३} इन पहलूओं को समझना भारत जैसे बहुल समाज में काफी उपयोगी है। मोपला कृषक विद्रोह के सम्बन्ध में उन्होंने जो विचार व्यक्त किया है उसके सार के रूप में यह कहा जा सकता है कि मोपला विद्रोह से सम्बद्ध ज्यादातर लोग अत्यन्त गरीब थे। उन्होंने धर्म परिवर्तन भी किया था। जनांकिकीय और सामाजिक संरचना उससे प्रभावित हुई थी। इस विद्रोह का धार्मिक और साम्प्रदायिक चेहरा भी था पर इस विद्रोह के कारण कृषि, समाज व्यवस्था और राजनीतिक भेद-भाव रहे थे। इसी तरह से बारदोली के किसान आंदोलन के सम्बन्ध में उन्होंने यह बताया है कि बारदोली आंदोलन में अपेक्षाकृत कृषि सम्बन्धी मुद्दों पर बहुत कम बल था। यह मुख्य रूप से राजस्व के निर्धारण और सुधार से अधिक सम्बन्धित था। बारदोली का सम्पूर्ण कृषक



विद्रोह मुख्य रूप से धनी और मध्य कृषक वर्गों का था। इसमें गरीब लोगों की सामाजिक, आर्थिक स्थिति पर कोई प्रभाव नहीं पड़ा। इतना अवश्य हुआ कि नेताओं ने कृषक समुदाय को बिना अपना एकाधिकार खोये राजनीतिक आन्दोलन से जोड़ने का एक रास्ता प्राप्त कर लिया। वैचारिकी और व्यक्तित्व इस आंदोलन के सम्मिलित रूप से कारण थे। अवध के किसान आन्दोलन के सम्बन्ध में यह बताया गया है कि अवध का किसान आन्दोलन मुख्य रूप से धनी मध्यवर्गीय किसानों तथा ग्रामीण अभिजातों को राजनीतिक धारा से जोड़ने का आन्दोलन था और इस दौरान जो भी सरकारी तौर पर रियायतें मिलीं उससे गरीब किसान अछूता रहा और उन्हें राजनीतिक धारा से जोड़ने का प्रयास भी नहीं किया गया। आजादी के पहले के इन आंदोलनों के विश्लेषण से यह पता चलता है कि इन आंदोलनों को हमें गहन समाजशास्त्रीय ढंग से समझना होगा। इन्हें अगर एकांगी रूप से समझा जायेगा तो वह उचित नहीं होगा। औपचारिक और सतही तौर पर हम इसे भले ही किसान आंदोलन की संज्ञा देते हैं पर ऐसे आंदोलन का चरित्र काफी जटिल होता है। हम सामाजिक—आर्थिक संरचना और ताने—बाने को नजरअंदाज नहीं कर सकते हैं।

ऐसे आंदोलन भारत में अंग्रेजों के आने के बाद जरूर बढ़े। सामान्य तौर पर हम १८५७ के विद्रोह की ही चर्चा करते हैं पर भारत में औपनिवेशिक शासन के दौरान और भी कई विद्रोह हुए हैं। हमें यह समझना होगा कि औपनिवेशिक काल में अंग्रेजों की मंशा भारतीय अर्थव्यवस्था को अपने अनुकूल हितों के अनुरूप करने की थी। भारत के चर्चित मार्क्सवादी समाजशास्त्री अक्षय रमन्ना देसाई^{१४} ने यह तथ्य प्रकाश में लाया है। उन्होंने अपनी कृति के विविध अध्यायों में बताया है कि ब्रिटीश शासनकाल में भारतीय कृषि का रूपांतरण किस तरह से हुआ, इस रूपांतरण के सामाजिक परिणाम क्या हुए और किस तरह से ग्रामीण शिल्प उद्योगों का पतन हुआ। यह अध्ययन इसलिए महत्वपूर्ण है कि इस तरह के अध्ययन से यह पता चलता है कि भूमि और किसानों के सम्बन्ध में जो स्थिति आज हमें दिख रही है उसके पीछे एक बहुत बड़ा कारण इस तरह का औपनिवेशिक शासन रहा है। हमें इसी से गांधी जी के ग्राम स्वराज की अवधारणा को भी समझना होगा। गांधी क्यों ग्राम स्वराज की बात कर रहे थे। ग्राम स्वराज क्यों जरूरी था, उसकी भूमिका कितनी महत्वपूर्ण हो सकती थी। यह सही है कि आज पंचायती राज के माध्यम से ग्राम को काफी विकसित और समृद्ध बनाने के प्रयास चल रहे हैं पर आज भी गांव में बहुत कुछ किये जाने की आवश्यकता है, इससे इनकार नहीं किया जा सकता है।

स्वामी सहजानंद सरस्वती को भारत में किसान आंदोलन का जनक माना जाता है। उन्होंने ब्रितानी शासन के दौरान शोषण से कराहते किसानों को संगठित किया और उन्हें जमींदारों के चंगुल से मुक्त कराने के लिए संघर्ष किया। उनका कहना था—कैसे लोगे मालगुजारी, लठ हमारा जिंदाबाद^{१५} उन्होंने यह भी नारा दिया था— जो अन्न वस्त्र उपजायेगा, अब सो कानून बनायेगा

यह भारतवर्ष उसी का है, अब शासन भी वही चलायेगा।

स्वामी सहजानंद सरस्वती के उद्घोष इस अर्थ में बहुत मायने रखते हैं कि किसानों की सत्ता में भागी दारी और निर्णयात्मक भूमिका निभाने की बात कहीं न कहीं कही गयी है। इतना ही नहीं किसानों के भाग्य विधाता बनने की भूमिका में स्वयं किसान ही हो सकते हैं, अन्य कोई समूह नहीं।

भारत में आजादी के बाद विविध स्तरों पर इस बात के प्रयास किये गये कि किसानों की स्थिति में सकारात्मक परिवर्तन हो, उत्पादन के तरीकों में परिवर्तन लाया जाये आदि। इन प्रयासों के परिणाम मिश्रित ही रहे। उन्हें हम सीधे—सीधे सकारात्मक या नकारात्मक नहीं कह सकते हैं।



जैसे— कृषि अनुसंधान संस्थान द्वारा जेनेटिकली मॉडिफाइड फसलों पर शोध एवं अध्ययन किये गये हैं। इस अध्ययन में जीएम फसलों से जुड़े पांच महत्वपूर्ण पहलूओं—आर्थिक, सामाजिक, सांस्कृतिक, स्वास्थ्य तथा पर्यावरण सम्बन्धी पर शोध किया गया है।^{१६} इन सबके बावजूद हमें इन जीएम फसल (जैसे बीटी कॉटन, एरोबिक चावल, बीटी बैंगन, सरसों और अन्य) के उपयोग पर काफी गंभीरता से विचार करना होगा। सरकार ने कुछ बिंदुओं (वर्षा एवं मानसून पर निर्भरता, कृषि विपणन प्रणाली में मध्यस्थों द्वारा किया जानेवाला शोषण, अपनी उपज का मूल्य स्वयं निर्धारित नहीं करना, फार्म मूल्य एवं उपभोक्ता मूल्य में भारी अन्तराल, शीघ्र नाशवान वस्तु की कीमतों में भारी उतार—चढ़ाव, बढ़ती कृषि लागतें और उन्हें पूरा करने के लिए गैर संस्थागत साख स्त्रोंतों पर निर्भरता)^{१७} को ध्यान में रखकर अगर किसानों की आय २०२२ तक दुगुना करने का प्रयास किया है तो इसे स्वागत योग्य कदम ही कहना होगा। इसमें हमें जो लोगों की शंकाएं हैं उसे भी दूर करने का प्रयास करना चाहिए। किसानों को अन्नदाता कहा गया है, अतः उसके पक्ष को नजरअंदाज भी करना उचित नहीं होगा। हमें यह भी समझना होगा कि भारत के किसानों और आम जनों का अपनी जमीन और मिट्टी के प्रति एक भावनात्मक लगाव भी है। ऐसे में जब अनुबंधित कृषि की बात आती है तो किसानों का शंकित होना स्वाभाविक है क्योंकि इस जमीन का आर्थिक संदर्भ भी है, जमीन अचल पूंजी है। अनुबंधित कृषि के पक्ष में यह कहा जाता है कि अनुबंध खेती से ग्रामीण युवाओं में कृषि आधारित रोजगार पैदा होंगे। फलतः उनका ग्रामीण क्षेत्रों से पलायन रूकेगा तथा कृषि उत्पाद निर्यात में बढ़ोत्तरी होगी जो भारतीय अर्थव्यवस्था को मजबूत करने में भी सहायक होगी। वर्तमान में अनुबंध खेती हेतु मॉडल कानून बनाने से छोटे किसानों को फायदा मिलेगा चूंकि खेती का आकार निरन्तर घटता जा रहा है।^{१८} इसके अतिरिक्त समय—समय पर विविध प्रावधान जैसे १६ अगस्त २००७ से प्रारम्भ राष्ट्रीय कृषि विकास योजना, वर्ष २००७ से प्रारम्भ राष्ट्रीय खाद्य सुरक्षा मिशन, वर्ष २००४ से प्रारम्भ राष्ट्रीय बागवानी मिशन, वर्ष २००८ से प्रारम्भ कृषि ऋण योजना, वर्ष २००७ से प्रारम्भ एकमुश्त कर्ज माफी तथा कर्ज राहत आदि किसानों की स्थिति में सकारात्मक परिवर्तन लाने के ही प्रयास है।^{१९} सिर्फ इन प्रयासों का उल्लेख किया जाये तो काफी विस्तार हो सकता है। इन प्रयासों से यह पता चलता है कि भारतीय शासन व्यवस्था के इन प्रयासों में यह ध्यान रखा गया है कि किसान के खेत सुरक्षित रहें, उनकी फसलों के नष्ट होने पर उन्हें मदद मिल सके, अकाल की स्थिति में उन्हें आर्थिक सुरक्षा दी जाये, उनके उत्पादन के तौर तरीके परिवर्तित करने में सहायता प्रदान की जाये इत्यादि। इन प्रावधानों से यह तो पता चलता है कि भारत की शासन व्यवस्था और सरकार कृषक और किसानों को उपेक्षित नहीं करना चाहते हैं। उनकी समस्या समझने का प्रयास किया जाता है। अगर कहीं इनका लाभ सम्बन्धित किसानों तक नहीं पहुंच रहा है तो इसका सीधा सा मतलब यह है कि कार्यप्रणाली या कार्यान्वयन की समस्या है। इस सम्बन्ध में भी लोगों की राय देखी जा सकती है।

समकालीन भारत में केन्द्र सरकार द्वारा तीन कृषि कानूनों (कृषक उपज व्यापार और वाणिज्य संवर्धन और सरलीकरण विधेयक, कृषक सशक्तिकरण व संरक्षण कीमत आश्वासन और कृषि सेवाय पर करार विधेयक, सेवा विधेयक और आवश्यक वस्तुएं संशोधन विधेयक २०२०) के पारित किये जाने और उसके बाद उभरने वाले परिदृश्य पर काफी चर्चा की जाती है। सरकार से कई दौर की बातचीत के बावजूद किसानों के आंदोलन का जारी रहना और देश के बहुत सारे किसान संगठनों का उसमें शामिल होना कहीं न कहीं समस्या की गंभीरता को स्पष्ट करता है। इस विधेयक के पक्ष में जो लोग हैं उनका यह कहना है कि इनसे किसानों की लम्बित मांगे पूरी होती है, यह कानून बिचौलियों को समाप्त करने वाला है, अगर सरकार किसानों के आगे झुक जाती है तो भविष्य में कोई भी सरकार कृषि कानूनों को लाने का हिम्मत नहीं करेगी,



यह किसानों की खुद की आजादी का विरोध है इत्यादि। इसके विपरीत बहुत सारे लोगों का यह भी मानना है कि कृषि कानून की अपनी सीमाएं हैं, यह किसानों के हित में नहीं हैं जैसे भूपिंदर सिंह मान ने यह बताया है कि तीनों कानूनों में संशोधन किया जाना चाहिए ताकि न्यायिक कदम सुनिश्चित किया जा सके, कुलवंत सिंह संधु ने भी अपने आंदोलन का एजेंडा तीनों कानूनों को रद्द करना ही बताया है।¹⁹ वस्तुतः यह समझने की आवश्यकता है कि इन विधेयकों के पक्ष और विपक्ष में बहुत कुछ कहा जा सकता है और किसी भी निष्कर्ष पर आसानी से नहीं पहुंचा जा सकता है। हमें किसानों की आशंकाएं दूर करनी होंगी। किसानों की सबसे बड़ी आशंका न्यूनतम समर्थन मूल्य को लेकर है। हमें यह समझने की आवश्यकता है कि अगर इस दिशा में कोई ऐसा कदम उठ जाये जो कि भारतीय सामाजिक संरचना में नकारात्मक संरचनात्मक परिवर्तन लाये और हम फिर अपने किसानों के आगे एक अंधकारमय भविष्य छोड़ दे तो यह उचित नहीं है। यह भी सही है कि कोई भी सरकार अगर गंभीर निर्णय लेती है तो उसके पीछे उसकी मंशा सकारात्मक ही होती है और राष्ट्रीय हितों को वह निश्चित रूप से प्राथमिकता पर रखती है।

एक बात काफी जोर शोर से समझायी जाती है कि पूंजीवाद ही वास्तविकता है। हमारा जीवन सकारात्मक दिशा में इससे परिवर्तित हो सकता है। वैश्वीकरण और बाजारवाद के समर्थकों की संख्या काफी ज्यादा हो गयी है। इस लेख के आरंभ में प्रकृति और कृषि के साथ मानव के जिस सहज स्वाभाविक सम्बन्ध की बात कही गयी है उसमें हम धीरे-धीरे नकारात्मक परिवर्तन देखते हैं। कुछ विचारकों ने यह पाया है कि अब मानव उत्पादित खतरे बढ़ गये हैं। उलरिच बेक ऐसे ही एक विचारक हैं। आधुनिकता का यह चेहरा उन्हें पसंद नहीं है। अपनी कृति द रिस्क सोसायटी में उन्होंने इस पर विस्तार से लिखा है। उनका यह मानना है कि हम प्रत्यावर्ती आधुनिकता की तरफ बढ़ रहे हैं। हमारे समय में एक ऐसा माहौल है जहां हम खतरों से घिरे हैं और यह खतरे मानव जनित हैं, मानव उत्पादित है।²⁰ मैकयोनिंस ने इक्कीसवीं सदी के अर्थव्यवस्था की चर्चा की है और यह बताया है कि²¹ समकालीन समाज की अर्थव्यवस्था में काफी परिवर्तन आया है। हम उत्तर-औद्योगिक समाज के दौर में हैं। इसके साथ-साथ वैश्वीकरण का दौर भी है। निगमों का महत्व बढ़ता जा रहा है। यह सही है कि उनकी धारणा भारत के संदर्भ में नहीं है पर विश्व के समाजों में ऐसा परिवर्तन तो निश्चित रूप से हो रहा है। प्रेम प्रकाश ने अपने एक लेख में यह बताया है कि जहां एक तरफ दुनिया आज क्रेता-विक्रेता और उत्पादक उपभोक्ता जैसे खांचों में बंटी है वहीं अमीर-गरीब और श्वेत-अश्वेत जैसा अमानवीय विभाजन और गहराया है। उनका कहना है कि देश में किसानों के संघर्ष को जो लोग तीन कानूनों के महज विरोध के रूप में देख रहे हैं वे इस आंदोलन की स्लेट पर उभरी उस लिखावट को नहीं पढ़ पा रहे हैं जिसमें आने वाले बदलाव और आंदोलन की गति और उसके हथ्र से जुड़े कई अहम संकेत छिपे हैं।

अंततः गांधी जी के जन्तर से अपनी बात को हम समाप्त करना चाहेंगे क्योंकि यह हमारे लिए काफी प्रेरणादायी है और किसान आंदोलन की पृष्ठभूमि में प्रासंगिक भी है—तुम्हें एक जन्तर देता हूं। जब भी तुम्हें सन्देह हो या तुम्हारा अहम तुम पर हावी होने लगे तो यह कसौटी आजमाओ। जो सबसे गरीब और कमजोर आदमी तुमने देखा हो, उसकी शकल याद करो और अपने दिल से पूछो कि जो कदम उठाने का तुम विचार कर रहे हो, वह उस आदमी के लिए कितना उपयोगी होगा, क्या उससे उसे कुछ लाभ पहुंचेगा, क्या उससे वह अपने ही जीवन और भाग्य पर कुछ काबू रख सकेगा यानि क्या उससे उन करोड़ों लोगों को स्वराज मिल सकेगा जिनके पेट भूखे हैं और आत्मा अतृप्त है तब तुम देखोगे कि तुम्हारा सन्देह मिट रहा है और अहम समाप्त होता जा रहा है।

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**भारतीय अर्थव्यवस्था में कृषि क्षेत्र की भूमिका****विरेन्द्र कुमार सैनी (लेखक)****वरूण कुमार (सह—लेखक)।**

सहायक प्राध्यापक (वाणिज्य)

राजकीय स्नातकोत्तर महाविद्यालय जयहरीखाल

जनपद—पौड़ी गढ़वाल, राज्य—उत्तराखण्ड, पिन २४६१९३

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सारांश :-

वर्तमान परिपेक्ष्य में भारतीय अर्थव्यवस्था में प्राथमिक क्षेत्र कृषि की महत्त्वपूर्ण भूमिका इस तथ्य से स्वतः स्पष्ट हो जाती है कि कोविड.—१९ वैश्विक महामारी के बावजूद उत्पादन के मामलों में इसका प्रदर्शन सकारात्मक रहा है। वर्ष २०११ की जनगणना के अनुसार देश का लगभग ५४.६ प्रतिशत कार्यबल कृषि कार्य और संबद्ध क्षेत्र की गतिविधियों में लगा है, साथ ही कृषि कार्य और संबद्ध क्षेत्र का देश के सकल योजित मूल्य वर्ष २०१९—२० में लगभग १७.८ प्रतिशत योगदान है। कोविड.—१९ महामारी की रोकथाम के लिए देश में लागू हुए लॉकडाउन ने जहां गैर कृषि क्षेत्रों पर प्रतिकूल प्रभाव डाला है, वहीं कृषि के क्षेत्र में वित्तीय वर्ष २०२०—२१ में ३.४ प्रतिशत की विकास दर हासिल की और भारतीय अर्थव्यवस्था के लिए संजीवनी का कार्य किया। वैश्विक महामारी कोविड.—१९ ने भारतीय अर्थव्यवस्था के तीनों विकास स्तंभों—प्राथमिक क्षेत्र, द्वितीय क्षेत्र, और तीतृय क्षेत्र को प्राभावित किया, लेकिन सभी प्रतिकूल स्थितियों के बाद भी कृषि उत्पाद विशेष रूप से चावल, गेहूं, दाल और सब्जियों जैसे दैनिक आवश्यकता के खाद्य पदार्थों की निरंतर आपूर्ति होने के कारण राष्ट्रीय स्तर पर खाद्य सुरक्षा बनी रही। वर्ष २०१९—२० में भारत का कृषि और संबंधित वस्तु निर्यात लगभग २५२ हजार कोरड रूपये का हुआ। कृषि आधारित और संबंधित वस्तुओं के निर्यात में भारत की स्थिति विश्व स्तर पर अग्रणी रही है। इस क्षेत्र में विश्व का लगभग २.५ प्रतिशत निर्यात भारत से ही किया जाता है प्राथमिक क्षेत्र के महत्त्व को दृष्टिगत रखते हुए कृषि क्षेत्र को और अधिक सशक्त बनाने के लिए भारत सरकार ने आत्म निर्भर भारत अभियान के अंतर्गत अनेक सरकारी नितियों को लागू किया गया है, क्योंकि कृषि क्षेत्र देश के औद्योगिक विकास का भी आधार है। देश के अधिकांश उद्योगों को कच्चे माल की आपूर्ति कृषि क्षेत्र से ही होती है जैसे सूती वस्त्र उद्योग, चीनी उद्योग, कॉफी, रबर, वनस्पति घी इत्यादि। प्रस्तुत शोध पत्र में भारतीय अर्थव्यवस्था में प्राथमिक क्षेत्र कृषि का राष्ट्रीय विकास में योगदान और भारत सरकार द्वारा कृषि क्षेत्र की विकास योजनाओं को जानने के संदर्भ में एक गहन अध्ययन प्रस्तुत किया गया है।

कुंजी शब्दः—भारतीय अर्थव्यवस्था, कृषि, राष्ट्रीय विकास, कृषि क्षेत्र की विकास योजनाएं।**प्रस्तावनाः—**

वर्तमान समय में कृषि शब्द व्यापक अर्थ में प्रयुक्त होने लगा है। भारतीय अर्थव्यवस्था के प्राथमिक क्षेत्र में कृषि के साथ वान्यिकी, मत्स्यपालन, पशुपालन, दुग्ध उत्पादन, खनन तथा उत्खनन को भी सम्मिलित किया जाने लगा है। यह कहना कोई अतिशयोक्ति नहीं होगी कि कृषि क्षेत्र भारतीय अर्थव्यवस्था का आधारभूत स्तंभ है। जहाँ विश्व में कुल क्षेत्रफल के ११ प्रतिशत भू-भाग पर कृषि की जाती है, वहीं भारत के कुल भू-भाग के ५१ प्रतिशत क्षेत्रफल पर कृषि होती है। भारत की जीडीपी में लगभग १५ प्रतिशत का योगदान प्राथमिक क्षेत्र कृषि का रहता है वहीं देश की आधी जनसंख्या (लगभग ५८ प्रतिशत) रोजगार के लिए कृषि क्षेत्र पर



निर्भर है। अर्थात् भारत एक कृषि प्रधान देश है ,जो द्वितीयक क्षेत्र के लिए कच्चे माल की आपूर्ति का मुख्य स्रोत है। देश की अर्थव्यवस्था में कृषि के योगदान से इसका महत्व स्पष्ट होता है:— राष्ट्रीय आय में योगदान, खाद्य पदार्थों की पूर्ति का साधन, रोजगार में सहायक, औद्योगिक विकास में सहायक, विदेशी व्यापार में योगदान, आन्तरिक व्यापार में योगदान, पूंजी निर्माण में सहायक, यातायात के विकास में कृषि का महत्वपूर्ण योगदान है।

प्रसिद्ध भारतीय विद्वान दांतेवाला के अनुसार:—

भारतीय अर्थव्यवस्था के आर्थिक विकास में कृषि क्षेत्र की सफलता देश को आर्थिक प्रगति के मार्ग की तरफ अग्रसर करती है“

योजना आयोग के अनुसार:—

“ योजनाओं की सफलता के लिए कृषि का विकास सबसे अधिक आवश्यक है भारत की बढ़ती हुई जनसंख्या भोजन के लिए कृषि पर निर्भर करती है। भारतीय कृषि पर ही देश के उद्योग, व्यवसाय, विदेशी व्यापार तथा यातायात आश्रित हैं।

षोध पत्र का उद्देश्य:—

१. भारतीय अर्थव्यवस्था/राष्ट्रीय विकास में कृषि क्षेत्र के योगदान का अध्ययन करना है।

२. कृषि क्षेत्र को और अधिक सशक्त बनाने हेतु वर्तमान सरकारी नितियों अध्ययन करना है।

अनुसंधान क्रियाविधि:—

यह अध्ययन अलग अलग रिपोर्ट अनुसंधान, षोध लेख, नीर्तीगत कागजात और सरकारी डेटाबेस के सांख्यिकीय आकड़ों के तुलनात्मक विष्लेक्षण की समीक्षा पर आधारित है । डेटा मुख्य रूप से संबंधित विशय पर प्रकाषित और अप्रकाषित कार्य (द्वितीयक डेटा) से लिया गया है।

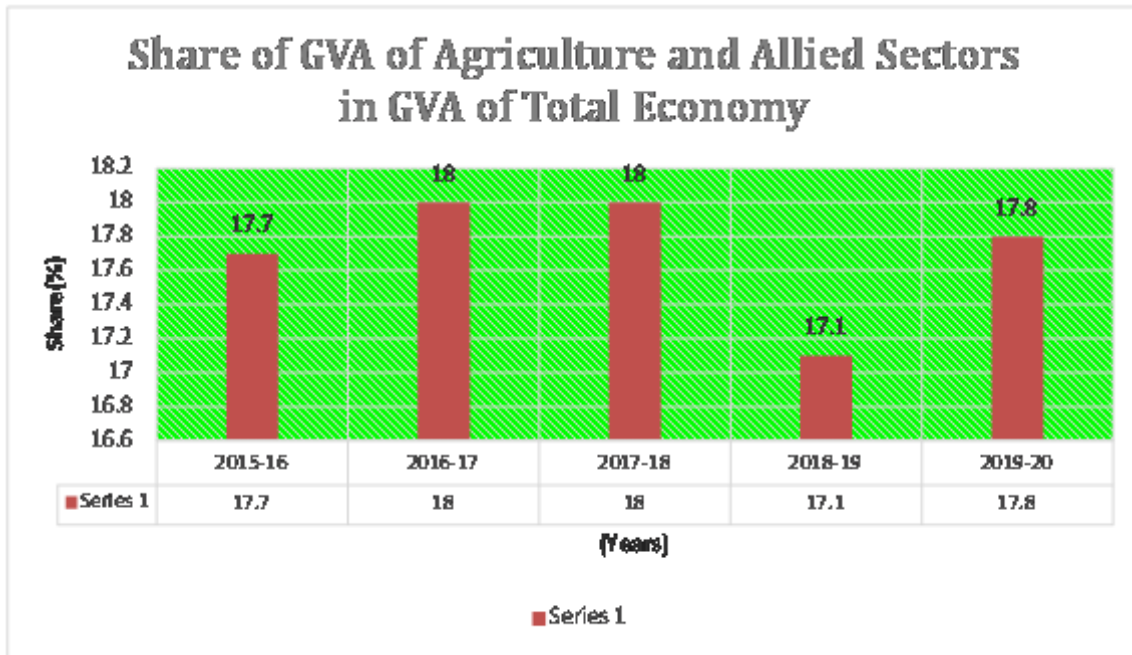
आँकड़ों द्वारा प्रस्तुतिकरण:—

केंद्रीय सांख्यिकी कार्यालय (सीएसओ) सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय द्वारा जारी वार्षिक राष्ट्रीय के अनंतिम अनुमानों के अनुसार कृषि और संबद्ध क्षेत्र के द्वारा वर्ष २०१९-२० के दौरान चालू मूल्यों पर भारत के सकल मूल्यवर्धन जीवीए में लगभग १७.८ प्रतिषत का योगदान दिया जो कि वर्ष २०१५-१६ में १७.७ प्रतिषत की तुलना में अधिक है।

विगत पाँच वर्षों में कृषि और संबद्ध क्षेत्रों का देश के कुल जीवीए में योगदान तालिका:—

मद	२०१५-१६	२०१६-१७	२०१७-१८	२०१८-१९	२०१९-२०
कृषि और संबद्ध क्षेत्रों का जीवीए (रूपए करोड में)	२२,२७,५३३	२५,१८,६६२	२७,९६,९०८	२९,२२,८४६	३२,५७,४४३
कुल जीवीए का प्रतिषत	१७.७	१८.०	१८.०	१७.१	१७.८

स्रोत:—केंद्रीय सांख्यिकी कार्यालय, सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय भारत सरकार।



वर्ष २०१५-१६ से २०१८-१९ में भारतीय अर्थव्यवस्था के कुल जीविए में वृद्धि और कृषि और संबद्ध क्षेत्रों के जीविए वृद्धि का विवरण:-

वर्ष	कुल अर्थव्यवस्था	कृषि और संबद्ध क्षेत्र	फसल	पशुधन	वानिकी	मत्स्य पालन
२०१५-१६	८.०	०.६	-२.९	७.५	१.७	९.७
२०१६-१७	८.०	६.८	५.३	१०.०	५.५	१०.४
२०१७-१८	६.६	५.९	४.४	७.४	६.२	१४.७
२०१८-१९	६.०	२.४	-१.०	८.१	०.४	१२.०

स्रोत:-केंद्रीय सांख्यिकी कार्यालय, सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय भारत सरकार।

राष्ट्रीय विकास में कृषि क्षेत्र का योगदान:-

आर्थिक विकास में कृषि की प्रत्यक्ष भूमिका का आकलन सकल घरेलू उत्पाद , रोजगार, निर्यात, कृषि खाद्य उद्योगों को कच्चे माल की आपूर्ति और पूंजी निर्माण के लिए बचतों में उसके योगदान के आधार पर किया जा सकता है । और अप्रत्यक्ष भूमिका का आकलन गरीबी न्यूनीकरण, खाद्य आपूर्ति और पशु चारे की आपूर्ति, आर्थिक स्थिरता, पारिस्थितिक और पर्यावरणीय संतुलन के सहायक के तौर पर किया जा सकता है, ।

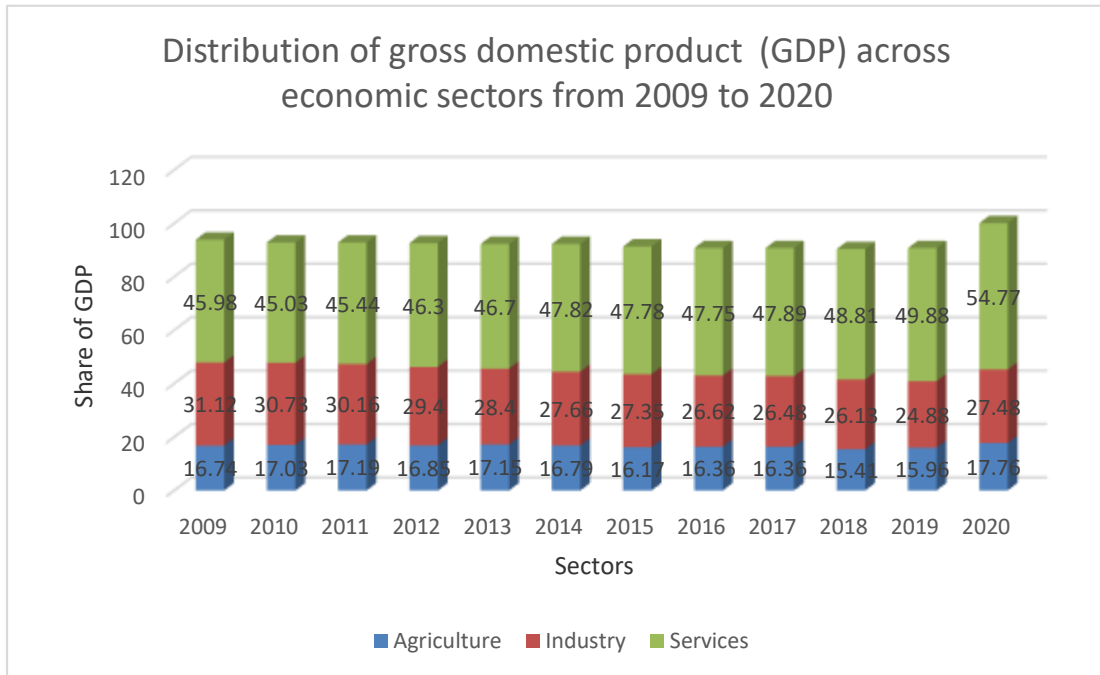
सकल घरेलू उत्पाद में कृषि क्षेत्र का योगदान:- (प्रतिषत में)

वित्तीय वर्ष	कृषि क्षेत्र	उद्योग क्षेत्र	सेवा क्षेत्र
२००९	१६.७४	३१.१२	४५.९८
२०१०	१७.०३	३०.७३	४५.०३
२०११	१७.१९	३०.१६	४५.४४
२०१२	१६.८५	२९.४	४६.३
२०१३	१७.१५	२८.४	४६.७
२०१४	१६.७९	२७.६६	४७.८२
२०१५	१६.१७	२७.३५	४७.७८



२०१६	१६.३६	२६.६२	४७.७५
२०१७	१६.३६	२६.४८	४७.८९
२०१८	१५.४१	२६.१३	४८.८१
२०१९	१५.९६	२४.८८	४९.८८
२०२०	१७.७६	२७.४८	५४.७७

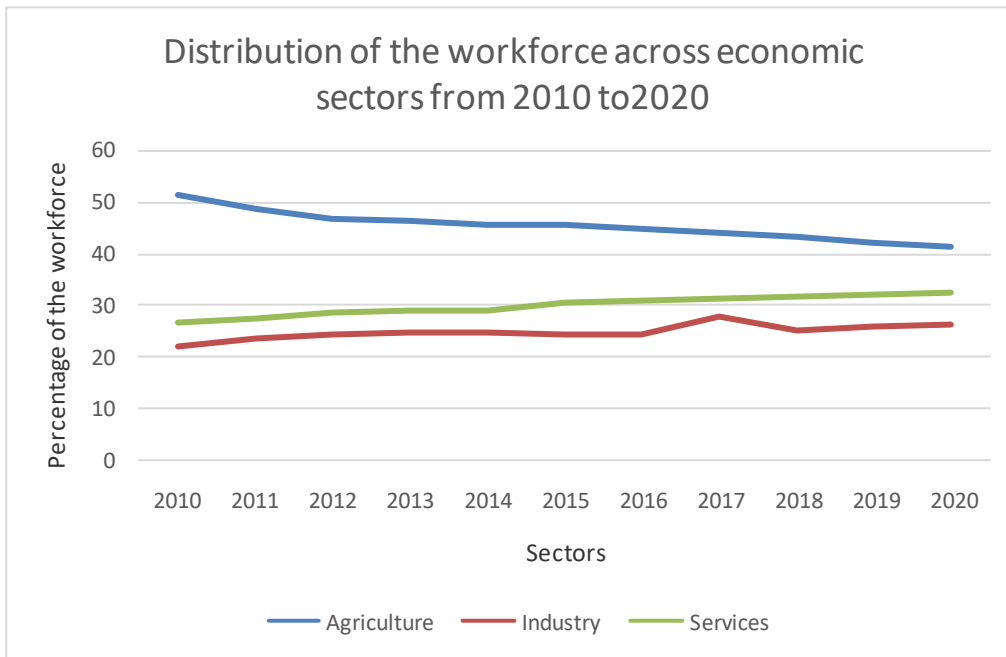
स्रोत:—www.statista.com and www.statisticstimes.com



रोजगार सर्जन करने में कृषि क्षेत्र का योगदान:— (प्रतिषत में)

वित्तीय वर्ष	कृषि क्षेत्र में रोजगार	उद्योग क्षेत्र में रोजगार	सेवा क्षेत्र में रोजगार
२०१०	५१.५२	२१.८१	२६.६८
२०११	४८.९८	२३.४९	२७.५३
२०१२	४७.००	२४.३६	२८.६४
२०१३	४६.३६	२४.५५	२९.०९
२०१४	४५.८४	२४.५५	२९.६१
२०१५	४५.६७	२४.०६	३०.२७
२०१६	४५.१४	२३.९८	३०.८७
२०१७	४४.०५	२४.७	३१.२५
२०१८	४३.३३	२४.९५	३१.७२
२०१९	४२.३९	२५.५८	३२.०४
२०२०	४१.४९	२६.१८	३२.३३

स्रोत:—www.statista.com and www.statisticstimes.com



● **निर्यात में भारतीय कृषि का योगदान:—**

भारत अपनी विषाल एवं विविध कृषि के साथ अनाज, दुग्ध, चीनी, सब्जियों, मसालों व समुद्री उत्पादों के प्रमुख उत्पादकों में से एक है। भारतीय कृषि हमारे समाज का आधारभूत स्तंभ है जो हमारी ५८ प्रतिशत जनसंख्या को रोजगार प्रदान करता है। विश्व के मात्र २.४ प्रतिशत भूमि व ४ प्रतिशत जल संसाधनों के साथ भारत विश्व की जनसंख्या का १७.८४ प्रतिशत, पशुधन की १५ प्रतिशत आबादी को खाद्य आपूर्ति कर पोषण करता है। कृषि उत्पादों के विश्वव्यापी निर्यात में भारत का योगदान निरंतर बढ़ रहा है। २०१६ के डब्ल्यूटीओ व्यापारिक आंकड़ों के अनुसार वैश्विक स्तर पर प्रमुख निर्यातकों में भारत का १० वां स्थान है। कोरोना संकटके बीच वित्त वर्ष २०२०-२१ की पहली छमाही यानी अप्रैल से सितंबर २०२० के दौरान कृषि उत्पादों के निर्यात में घातक बढ़ोतरी दर्ज की गई है, इस दौरान पिछले साल की समान अवधि के मुकाबले देश से ४३.४ प्रतिशत ज्यादा कृषि उत्पादों का निर्यात किया गया है, केंद्रीय कृषि व किसान कल्याण मंत्रालय के अनुसार चालू वित्त वर्ष की पहली छमाही के दौरान ५३,६२६.६ करोड़ रुपये के कृषि उत्पादों का निर्यात किया गया, जो कि विगत वर्ष २०१९-२० की पहली छमाही के दौरान ३७,३९७.३ करोड़ रुपये था।

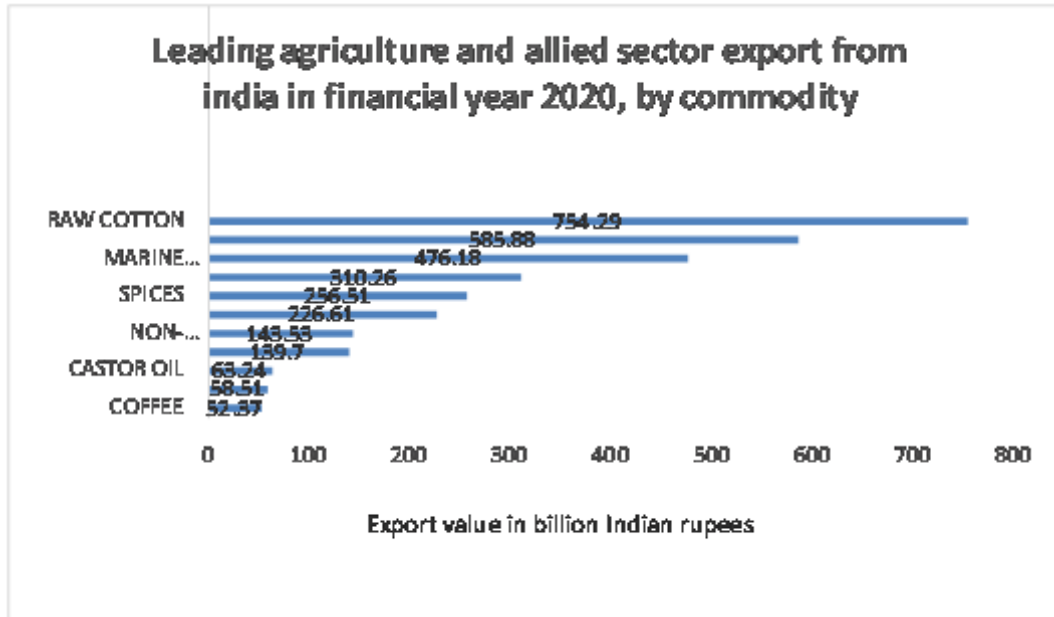
विगत वित्तीय वर्ष २०२० में कृषि उत्पादों का निर्यात —(बीलियन में)

निर्यात उत्पाद	धनराषी बीलियन में
कच्चा कपास	७५४७२९
खाद्य तेल	५८५७८८
समुद्री उत्पाद	४७६७१८
बासमती चावल	३१०७२६
मसालें	२५६७५१
भैंस का मांस	२२६७६१
चवल	१४३७५३



चेनी	१३९७७
अरंडी का तेल	६३७२४
चाय	५८७५१
काफी	५२७३७
सब्जियां	४६७१६

स्रोत:—www.statista.com

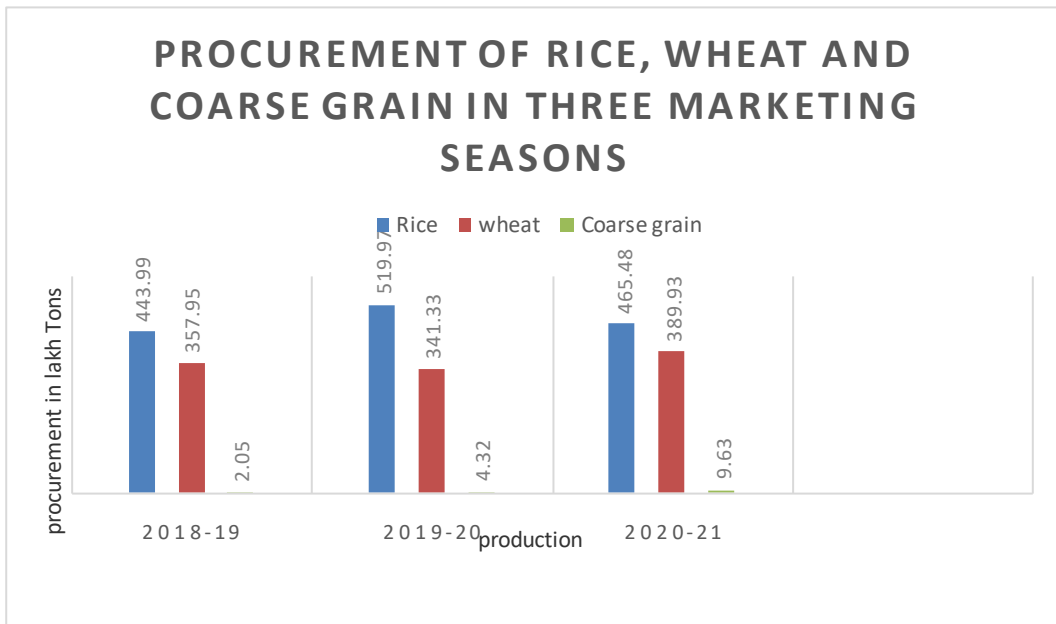


खाद्य सुरक्षा में कृषि क्षेत्र की भूमिका:—

कृषि उत्पादन को बढ़ाकर ही राष्ट्रीय खाद्य सुरक्षा की समस्या को दूर किया जा सकता है जिससे उपभोक्ताओं को खाद्य उत्पाद उपलब्ध हो सकेंगे और कृषि कार्य और उससे संबंधित कार्यों में रोजगार के अवसर प्राप्त कर सकेंगे। भारत देश की जनसंख्या और पशुधन कसे दृष्टिगत रखते हुए यें कहा जा सकता है कि राष्ट्रीय सुरक्षा के समान ही खाद्य सुरक्षा कम महत्वपूर्ण नहीं है। क्योंकि भारत खाद्य सुरक्षा के लिए आयात पर निर्भर नहीं रह सकता है । जिसमें भारतीय कृषि उत्पादन का विशेष योगदान है। विगत वर्षों की तुलना में मुख्य खाद्यान चावल, गेहूँ, मोटे अनाज, के उत्पादन में विगत वर्ष वृद्धि दर्ज की गयी है।

वित्तीय वर्ष २०१८-१९, २०१९-२० व २०२०-२१ में चावल, गेहु, और मोटे अनाज की अधिप्राप्ति का विवरण:— (लाख टन में)

वित्तीय वर्ष	चावल	गेहूँ	मोटे अनाज
२०१८-१९	४४३.९९	३५७.९५	२.०५
२०१९-२०	५१९.९७	३४१.३३	४.३२
२०२०-२१	४६५.४८	३८९.९३	९.६३



स्रोत :- एफसीआई ३१.०३.२०२१

• तऊर्जा स्रोत मे कृश क्षेत्र की भूमिका :-

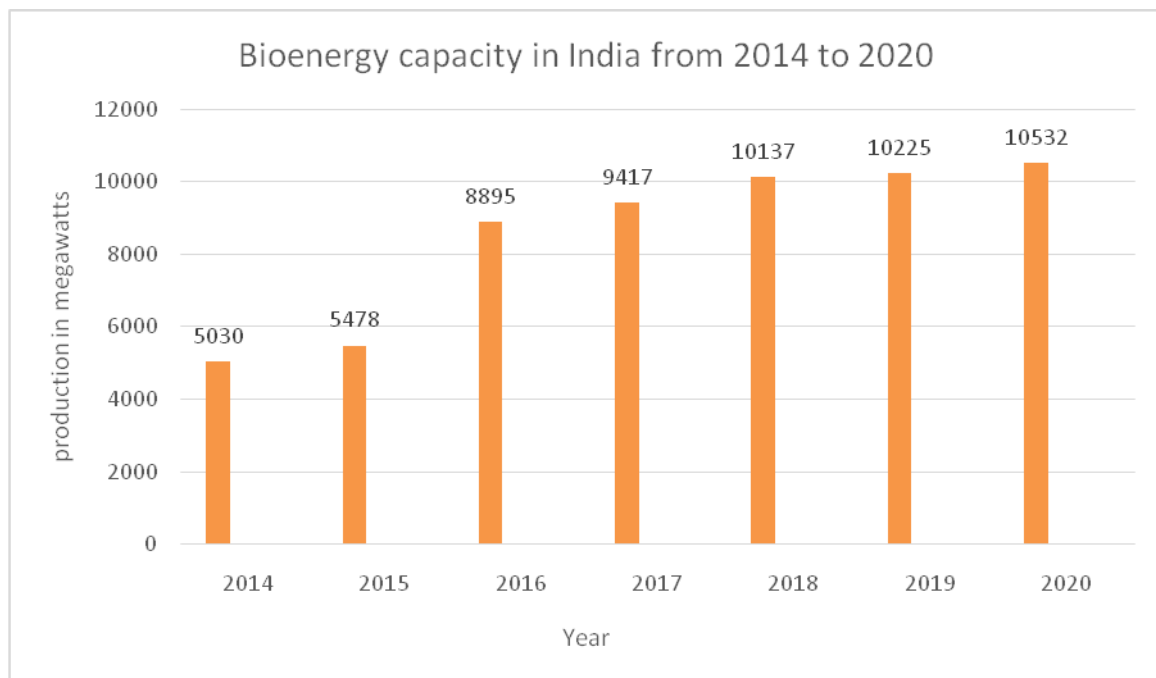
ईधन के तौर पर प्रयोग में लायी जाने वाली जलावनी लकडी, फसलों के अवपेश एवं पशु मल के रूप में प्राप्त जैवभार विश्व की आधी जनसंख्या की आवष्यकता की पूर्ति करता है, देश के ग्रामीणजन अपनी ऊर्जा की अधिकांश आवष्यकता जैवभार (बायोमास) से पूरा करते है। (जैवभार/ बायोमास :- सभी प्रकार के जीवित अथवा मृत पादप एवं प्राणी स्रोत से प्राप्त द्रव्यों को बायोमास कहते है सभी प्रकार के अपषिष्ट एवं अवपेश चाहे वे फसलों से अथवा सब्जी मण्डी से सभी बायोमास की श्रेणी में आते है)। भारत मे बायोमास का भरपूर भण्डार है पर अभी भी यहाँ उपलब्ध बायोमास का ऊर्जा उत्पादन में इस्तेमाल नहीं किया जा रहा है। इसे व्यर्थ समझकर फेंक दिया जाता है अथवा जला दिया जाता है।

वर्तमान में सरकार द्वारा चीनी मिल से निकलने वाल अवपेश एथेनॉल का १० से १५ प्रतिषत पेट्रोल में मिलाकर करने की अनुमति प्रदान की गयी है और इसका उत्पादन बढ़ाने पर विचार कर रही है। गोबर के साथ ही जैविक कचरे का भी प्रयोग गैस बनाने के लिए इस्तेमाल करें तो भारत में ऊर्जा संकट कम हो सकता है। एथेनॉल बनाने के लिए गन्ना, चुकन्दर, मुलायम लकडी, मक्का, ज्वार व अन्य जैविक कचरा (गन्ने की खोई, पेड पौधो की पत्तियाँ, गेहूँ का भूसा, धान का पुआल, फसलों की जडे, सब्जियों आदि) का इस्तेमाल किया जाता है। भारत में पेट्रोल में १० प्रतिषत एथेनॉल कर मिश्रण अनिवार्य कर दिया गया है जिसको भविश्य में २५ प्रतिषत तक बढ़ाने की योजना है । जैवईधन/ जैवडीजल का उत्पादन कृश उत्पाद जैसे जैट्रोफा, करंज, सोयाबीन, राई एवं तोरिया, सरसों, आयल पाम, नारियल, कुसुम और सूरजमुखी, अरण्ड, आदि जैवडीजल के निर्माण के लिए प्रयोग किया जाता है। जिसका प्रयोग कर अन्य देशो पर ईधन की निर्भरता को नियंत्रित किया जा सकता है क्योंकि जैवईधन ऊर्जा का एक महत्वपूर्ण स्रोत है जिसका देश के कुल ईधन उपयोग में एक तिहाई का योगदान है और ग्रामीण क्षेत्रों में इसकी खपत ९० प्रतिषत है, जिसका व्यापक उपयोग खाना बनाने में किया जाता है जो कृश और वानिकी अवपेशों से उत्पादित है।

भारत में जैवईधन उत्पादन क्षमता का विवरण वर्ष २०१४ से २०२०:- (मेगावाट में)



वर्ष	उत्पादन मेगावाट में
२०१४	५०३०
२०१५	५४७८
२०१६	८८९५
२०१७	९४१७
२०१८	१०१३७
२०१९	१०२२५
२०२०	१०५३२



स्रोत:—www.statista.com

भारतीय अर्थव्यवस्था में कृषि के महत्व को दृष्टिगत रखते और उसको अधिक सक्षम बनाने के उद्देश्य से भारत सरकार के द्वारा विभिन्न योजनाओं को लागू किया है।

- १—राष्ट्रीय कृषि ई—गवर्नेंस योजना (एनईजीपी—ए)
- २—समेकित बागवानी विकास मिशन
- ३—राष्ट्रीय मधुमक्खी पालन और षहद मिशन /राष्ट्रीय मधुमक्खी बोर्ड
- ४— राष्ट्रीय खाद्य सुरक्षा मिशन
- ५— राष्ट्रीय सतत कृषि मिशन
- ६—प्रधानमंत्री कृषि सिंचाई योजना
- ७—प्रधानमंत्री किसान सम्मान निधि
- ८—राष्ट्रीय फसल बीमा कार्यक्रम
- ९—कृषि ऋण योजना
- १०—राष्ट्रीय कृषि विपणन योजना (ई—एनएएम)
- ११—कृषि सहकारिता
- १२—कृषि व्यापार



- १३—राष्ट्रीय कृषि विकास योजना
- १४—सूखा प्रबंधन
- १५—समेकित कृषि संगणना एवं सांख्यिकी स्कीम
- १६—कृषि विस्तार उप—मिषन
- १७—बीज एवं रोपण सामग्री उप—मिषन
- १८—कृषि यंत्रीकरण उप—मिषन
- १९—पौध संरक्षण एवं पौध संगरोध उप—मिषन
- २०—मंडी हस्तक्षेप योजना
- २१—सॉयल हेल्थ कार्ड योजना (एसएचसी)
- २२—परंपरागत कृषि विकास योजना
- २३—राष्ट्रीय तिलहन और तेल मिषन कार्यक्रम
- २४—पशुधन विपणन
- २५—राष्ट्रीय औषधीय पादप मिषन
- २६—डेयरी उद्यमिता विकास योजना
- २७—किसान काल सेण्टर
- २८—डीडी किसान सेवा
- २९—भंडार गृह निर्माण/विस्तार/आधुनिकीकरण योजना आदि।

कोविड—१९ महामारी की रोकथाम के दौरान जब देश में सम्पूर्ण लॉकडाउन लगा था , जिसके फलस्वरूप सभी आर्थिक गतिविधियों थम गई थी तो कृषि क्षेत्र ने ही भारतीय अर्थव्यवस्था सभालने का कार्य किया था। जिसके महत्व को स्वीकार करते हुए वित्त मंत्री निर्मला सीतारमण ने २० लाख करोड के राहत पैकेज की तीसरी किस्त मुख्यतौर पर कृषि और इससे संबंधित क्षेत्रों पर केंद्रित थी, जिसमें कुल ११ ऐलान किये गए थे इनमें ८ फैसले कृषि और कृषि इन्फ्रास्ट्रक्चर क्षेत्र से जुड़े थे(१—कृषि क्षेत्र में बुनियादी ढांचा के लिए एक लाख करोड रूपये,२—छोटी खाद्य प्रसंस्करण इकाइयों के लिए १०००० करोड रूपये,३—प्रधानमंत्री मत्स्य संपदा योजना के लिए २० हजार करोड रूपये,४—राष्ट्रीय पशु बीमारी नियंत्रण कार्यक्रम के लिए १३३४२ करोड,५—पशुपालन को बढ़ावा देने के लिए १५००० करोड,६—हर्बल पौधों के बढ़ावा देने के लिए ४००० करोड,७—मधुमक्खी पालकों को ५०० करोड ,८—ऑपरेशन ग्रीन का विस्तार करने के लिए ५०० करोड)। भारतीय अर्थव्यवस्था में कृषि के महत्व को स्वीकार करते हुए आत्मनिर्भर भारत पैकेज की तीसरी किस्त में कृषि और इससे संबंधित क्षेत्रों के लिए कुल १.६५ लाख करोड रूपये का राहत पैकेज की घोषणा की गई।

निष्कर्ष:—

उपरोक्त षोडश पत्र के अध्ययन के आधार पर यह कहा जा सकता है कि कृषि भारतीय अर्थव्यवस्था की मेरूदंड है। कृषि क्षेत्र का भारत के सकल घरेलू उत्पाद में महत्वपूर्ण योगदान है । वित्तीय वर्ष १९५०—५१ में कुल सकल घरेलू उत्पाद का ५१ प्रतिषत था। जो मौजूदा बाजार कीमतों पर सकल सर्वाधिक मूल्य में कृषि एवं सहायक क्षेत्रों का वर्ष २०१४—१५ के १८.२ प्रतिषत से गिरकर वर्ष २०१९—२० में १६.५ प्रतिषत हो गया है, जो अर्थव्यवस्था में कृषि के महत्व में गिरावट को नहीं दर्शाती है, बल्कि अर्थव्यवस्था के द्वितीयक तथा तृतीयक क्षेत्रों की सापेक्षिक तीव्र वृद्धि को दर्शाती है। भारत में कृषि क्षेत्र के उत्पादन में लगातार वृद्धि हो रही है। वित्तीय वर्ष २०१६—१७ में कुल



खाद्यान्नों का उत्पादन २७५.११ मिलियन टन रहा था। जो कि वित्तीय वर्ष २०१८—१९ में बढ़कर २८१.४ मिलियन टन हो गया है अर्थात वर्तमान भारत को अपनी विषाल जनसंख्या की खाद्य आपूर्ति के लिए आयात पर निर्भर नहीं रहना पड़ता है। जिससे भुगतान सन्तुलन पर कोई प्रतिकूल प्रभाव नहीं पड़ता है। भारत में कृषि रोजगार का सबसे प्रमुख स्रोत है देश की लगभग ५० प्रतिशत कार्यशील जनसंख्या कृषि क्षेत्र में कार्यरत है। कृषि क्षेत्र के द्वारा औद्योगिक कच्चे मालों, जैसे कपड़ा उद्योग को कपास, तेल उद्योग को सरसों, तिल, सोयाबीन, आदि। इसी प्रकार यह खाद्य प्रसंस्करण उद्योगों को कृषि उत्पाद के रूप में कच्चे माल की आपूर्ति करता है। जैवईंधन के निर्माण में कृषि अपशिष्ट महत्वपूर्ण भूमिका निभाते हैं जिसका प्रयोग ईंधन के तौर पर कर ऊर्जा की आवश्यकता की पूर्ति होती है। कृषि भारत के अंतर्राष्ट्रीय व्यापार में भी महत्वपूर्ण योगदान देती है भारत से कच्चा कपास, चाय, काफी, तेल, चीनी, हरी सब्जीया, मसालों आदि का निर्यात कराता है। उपरोक्त अध्ययन से स्पष्ट हो जाता है कि राष्ट्रपिता महात्मा गांधी जी ने सही कहा था कि “कृषि तो भारत की आत्मा है”।

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जशपुर जिले में जल एवं कृषि की सुविधा एवं शिशु मर्त्यता दर: एक भौगोलिक अध्ययन

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सारांश—

शिशु मर्त्यता के निर्धारक कारक एक स्थान से दूसरे स्थान पर तथा समय के साथ परिवर्तनशील है। अलग—अलग स्थानों के सामाजिक—आर्थिक विकास, जनसुविधाएँ तथा वातावरण भिन्न—भिन्न स्तर के होते हैं। शिशु मर्त्यता दर निर्धारण करने के बहुत से कारक हैं, जिनमें जनसुविधाएँ एवं वातावरण महत्वपूर्ण कारक हैं। वातावरण एवं जन सुविधाओं का प्रत्यक्ष अथवा अप्रत्यक्ष रूप से प्रभाव वहाँ जन्म लेने वाले शिशु पर भी पड़ता है। किसी क्षेत्र में उपलब्ध सुविधाओं और वातावरण का शिशु मर्त्यता से विपरीत संबंध पाया जाता है। सामान्यतः विभिन्न क्षेत्रों में शिशु मर्त्यता, जनसुविधाओं तथा स्वच्छ वातावरण की दशाओं के अनुगामी है। कम विकसित देशों में जहाँ जनसुविधाओं की कमी तथा अस्वच्छता की अवस्थाएँ हैं, वहाँ सामान्यतया शिशु मर्त्यता दर उच्च है। किसी क्षेत्र में शिशु मर्त्यता दर को सामान्यतया जल की उत्तम सुविधा और वातावरण, आदि का प्रतीक माना जाता है। जशपुर जिले में शिशु मर्त्यता दर के अध्ययन के लिए परिवारिक एवं ग्रामीण स्तर पर जल की सुविधा से संबंधित है।

षड् कुंजी— मर्त्यता, नवजात, नवजातोत्तर।

प्रस्तावना—

पेय जल का स्रोत शिशु मर्त्यता दर का सर्वाधिक प्रभावित करता है। ग्रामीण क्षेत्रों में अधिकांश जनसंख्या पीने के लिए पानी कुँआ तथा हैण्डपम्प का प्रयोग करता है। ग्रामों में हैण्डपम्प तथा कुँआ सार्वजनिक होने के कारण इनकी साफ—सफाई नियमित रूप से नहीं होती है। जिस कारण हैण्डपम्प तथा कुँआ के आस—पास गंदगी फैली रहती है, जिससे संक्रमण रोग फैलने की संभावना बनी रहती है।

अध्ययन का उद्देश्य :-

प्रस्तुत अध्ययन का उद्देश्य जशपुर जिले के अनुसूचित जनजातियों में शिशु मर्त्यता के स्थिति का आकलन एवं जल की सुविधा का शिशु मर्त्यता पर प्रभाव की व्याख्या करना है।

अध्ययन क्षेत्र :-

यह शोध पत्र छत्तीसगढ़ के उत्तर — पूर्वी भाग में स्थित जशपुर जिले (अक्षांशीय विस्तार २२°१६'३८" से २३°१५' उत्तरी अक्षांश तथा ८३°२३'३६" से ८४°८'४३" पूर्वी देशांतर मध्य स्थित है। इसका कुल क्षेत्रफल ६,०८८ वर्ग किलोमीटर तथा कुल जनसंख्या ६,५६,३५२ है।) में शिशु मर्त्यता से संबंधित है। जिले की कुल जनसंख्या का ७.२ प्रतिशत अनुसूचित जाति एवं ६५.४ प्रतिशत अनुसूचित जनजाति है।

आंकड़ों के स्रोत एवं विधि तंत्र :-

प्रस्तुत शोध पत्र का अध्ययन प्राथमिक आंकड़ों पर आधारित है। इस अध्ययन हेतु जशपुर जिले के ८ विकासखंडों में से प्रत्येक से पांच गांव का चयन प्रतिचयन यादृच्छित विधि द्वारा किया गया है। ग्रामों का सर्वेक्षण कार्य २००६ में की गई है। गांव के केवल उन्हीं अनुसूचित जनजाति



महिलाओं से सूचना एकत्र की गई है, जिन्होंने गत ५ वर्षों में किसी शिशु को जन्म दिया हो अथवा जिनकी शिशु की मृत्यु हुई हो, इन महिलाओं में उरांव (३५८३), गोंड(८१०), कंवर(६०४), नगेसिया(२७०), कोरवा (१८१), खरिया(१४५), भूईहार (१३१), अगरिया (६९), तथा अन्य जनजाति (११३) महिलाएं सम्मिलित है। इन परिवारों से शिशु मृत्यु तथा उनकी प्रभावित करने वाले आर्थिक कारक संबंधी सूचना एकत्र की गई है। आंकड़ों के संकलन के लिए दो प्रकार की अनुसूची का प्रयोग किया गया है— प्रथम — पारिवारिक एवं द्वितीय व्यक्तिगत।

पेय जल का स्रोत:—

पेय जल का स्रोत शिशु मर्त्यता दर का सर्वाधिक प्रभावित करता है। ग्रामीण क्षेत्रों में अधिकांश जनसंख्या पीने के लिए पानी कुँआ तथा हैण्डपम्प का प्रयोग करता है। ग्रामों में हैण्डपम्प तथा कुँआ सार्वजनिक होने के कारण इनकी साफ—सफाई नियमित रूप से नहीं होती है। जिस कारण हैण्डपम्प तथा कुँआ के आस—पास गंदगी फैली रहती है, जिससे संक्रमण रोग फैलने की संभावना बनी रहती है। ष्रदूशित जल के उपयोग से सबसे अधिक अतिसार तत्पश्चात् तीव्र श्वसन (Acute Respiratory Infection, ARI) व अन्य बीमारियों को क्रमशः कम किया जा सकता है (जैकोबी एवं वांग, २००४)। सेकर स्टेन (१९९६) ने अपने अध्ययन में पाया कि निमोनिया और डायरिया जैसे संक्रमण रोगों के कारण शिशु एवं बाल मर्त्यता दर का स्तर अनेक देशों में उँचा रहता है। साफ पानी से डायरिया को रोकने में मदद मिलती है।

सारणी क्रमांक ७.२३

जशपुर जिला :- पेय जल का स्रोत और शिशु मर्त्यता दर २००६

पेय जल स्रोत	परिवार की संख्या	जीवित जन्म	शिशु मर्त्यता	दर
नल/हैण्डपम्प	१३३८	१९८७	१११	५५.९
कुँआ	५५८	८३६	११४	१३६.४
अन्य	१७	२२	०४	१८१.८
योग	१९१३	२८४५	२२९	८०.५

जशपुर जिले में सर्वाधिक ६९.९ प्रतिषत परिवारों में पीने के पानी का स्रोत नल/हैण्डपम्प तथा २९.२ प्रतिषत परिवार कुँआ और ०.९ प्रतिषत परिवार अन्य स्रोत से पीने का पानी प्राप्त करते हैं। जिले में सर्वाधिक शिशु मर्त्यता दर (१८१.८ प्रति हजार) अन्य स्रोतों से पीने का पानी प्राप्त करने वाले परिवारों में है, जिनमें नवजातोत्तर मर्त्यता दर ९०.१ प्रति हजार तथा मर्त्यता दर ९०.९ प्रति हजार है। उल्लेखनीय है कि पीने का पानी शिशु को नवजात तथा नवजातोत्तर अवस्था में सर्वाधिक प्रभावित करती है। सबसे कम शिशु मर्त्यता दर (५५.९ प्रति हजार) नल हैण्डपम्प का प्रयोग करने वाले परिवारों में है, जिनमें नवजात मर्त्यता दर ३८.८ प्रति हजार तथा नवजातोत्तर मर्त्यता दर १७.१ प्रति हजार है। कुँआ द्वारा पीने का पानी प्राप्त करने वाले परिवारों में शिशु मर्त्यता दर १३६.४ प्रति हजार है, जिनमें नवजात मर्त्यता दर ९०.९ प्रति हजार तथा नवजातोत्तर मर्त्यता दर ४५.५ प्रति हजार है। उल्लेखनीय है, कि हैण्डपम्प, कुँआ तथा अन्य स्रोतों से पीने का पानी प्राप्त करने वाले परिवारों में शिशु मर्त्यता दर में क्रमशः वृद्धि हुई है।

जिले में कोरवा जनजाति में ६८.८ प्रतिषत परिवार में कुँआ पेयजल का स्रोत है। किन्तु अन्य सभी जनजातियों में हैण्डपम्प जल पेयजल का प्रमुख स्रोत है। हैण्डपम्प द्वारा पीने का पानी का प्रयोग करने वाले जनजातीय परिवारों में खरिया में ६०.४ प्रतिषत, भुमिया में ७७.५ प्रतिषत, अधरिया में ९०.९ प्रतिषत, नगेसिया में ७३.१ प्रतिषत, उराँव में ७२.७ प्रतिषत, गोड़ में ६४.५ प्रतिषत, कंवर में ७०.८ प्रतिषत तथा अन्य जनजातियों में ९४.४ प्रतिषत है। जिले में मर्त्यता दर



हैण्डपम्प जल पेयजल का प्रमुख स्रोत है। हैण्डपम्प द्वारा पीने का पानी प्रयोग करने वाले जनजातीय परिवारों में खरिया में ६०.४ प्रतिषत, गोंड में ६४.५ प्रतिषत, कंवर में ७०.८ प्रतिषत तथा अन्य जनजातियों में ९४.४ प्रतिषत है। जिले में मर्त्यता दर हैण्डपम्प का प्रयोग करने वाले परिवारों से कुँआ का पानी पीने वाले परिवारों में शिशु मर्त्यता दर अधिक है। कुँआ द्वारा पीने का पानी का उपयोग करने वाले परिवारों में कोरवा (३१९.४ प्रति हजार), भूमिया (३३३.३ प्रति हजार), अघरिया (१०००.० प्रति हजार), नगेसिया (२६४.७ प्रति हजार), उरांव (१०२.६ प्रति हजार), गोंड (११३.५) तथा जनजातियों में (१०००.० प्रति हजार) १००.० प्रति हजार से अधिक है। जिले में कोरवा जनजाति में अन्य स्रोतों से पीने का पानी प्राप्त करने वाले परिवारों में शिशु मर्त्यता दर २८५.७ प्रति हजार है।

गंदे पानी की निकासी की सुविधा:—

खान—पान तथा दैनिक क्रियाओं के लिए जल की आवश्यकता होती है। उपयोग में लाए गए जल की निकासी की समुचित व्यवस्था आवश्यक होती है। जल की निकासी तथा नालियों की सफाई की उचित व्यवस्था न होने से जलीय जीव, कीड़े—मकोड़े, मच्छर, गंदगी एवं वातारण प्रदूषित होने से अनेक प्रकार की बीमारी फैलने की संभावना होती है। जिससे शिशु मर्त्यता दर में वृद्धि की संभावनाएँ रहती है।

सारणी क्रमांक १.२

जशपुर जिला— गंदेपानी की निकासी और शिशुमर्त्यता दर २००६

बिजली की उपलब्धता	परिवार की संख्या	जीवित जन्म	शिशु मर्त्यता	दर
अन्दर	२१०	३०७	२५	८१.४
बाहर	१७०३	२५३८	२०४	८०.४
योग	१९१३	२८४५	२२९	८०.५

जशपुर जिले में अनुसूचित जनजाति क्षेत्रों में मात्र ११.० प्रतिषत परिवारों में गंदे पानी की निकासी की सुविधा उपलब्ध नहीं है, जिनमें शिशु मर्त्यता दर ८१.४ प्रति हजार है। इन परिवारों में नवजातोत्तर मर्त्यता दर ४८.९ प्रति हजार है। इसके विपरीत जिन परिवारों में गंदा पानी निकासी की व्यवस्था है, उन परिवारों में शिशु मर्त्यता दर (८०.४ प्रति हजार) अपेक्षाकृत कम है। इन परिवारों में नवजातोत्तर मर्त्यता दर २४.९ प्रति हजार है।

निष्कर्ष—

किसी क्षेत्र में उपलब्ध सुविधाओं और वातारण का शिशु मर्त्यता से विपरीत संबंध पाया जाता है। सामान्यतः विभिन्न क्षेत्रों में शिशु मर्त्यता, जनसुविधाओं तथा स्वच्छ वातारण की दशाओं के अनुगामी है। कम विकसित देशों में जहाँ जनसुविधाओं की कमी तथा अस्वच्छता की अवस्थाएँ हैं, वहाँ सामान्यतया शिशु मर्त्यता दर उच्च है।

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**रेमण्ड सीमेंट गोपालनगर संयंत्र के श्रमिकों का जीवन स्तर****कुमुदिनी किस्पोट्टा****डॉ. अनोज एक्का****अल्मा प्रेस केरकेट्टा**

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शोध सारांश :-

भारतीय उद्योगों में श्रमिकों का एक प्रमुख एवं विशाल रूप से फैली हुई श्रम समस्या है । इसके कारण उत्पादन की कमी, श्रम लागत में वृद्धि और कार्य क्षमता में कमी जैसे — परिणाम होते हैं । श्रमिकों की भर्ती एवं प्रशिक्षण तथा श्रमिकों को कार्य देने के लिए और अधिक मात्रा में पूंजी का व्यय करना होता है । मानव संसाधनों की योजना में उतार — चढ़ाव के कारण उद्योगों के कार्यों में अनिश्चितता बनी रहती है । नये श्रमिकों को बार — बार लगाते रहने से अनुभव ही श्रमिक कार्य पर लगते हैं , जो कि तकनीकी जानकारी के अभाव में मशीनों का नुकसान एवं उत्पादन में कमी का कारण बनते हैं । यदि इन सब तत्वों को समग्रत व्यक्त करें तो परिणाम चौकाने वाले होंगे ।

संसार के बड़े — बड़े उद्योगपति अनुभव के अधार पर कहते हैं कि उद्योग में कार्यरत श्रमिकों की स्वास्थ्य चिकित्सा का ऊँचा स्तर कार्य क्षमता की उच्च अवस्थाएँ सामाजिक एवं आर्थिक दशाओं में देखी जाती है । उद्योगों में श्रम मालिक का सम्बंध होना अति आवश्यक होता है । उद्योगों में नियमित आने वाले श्रमिकों का कार्य के प्रति विचार के आधार पर तुलनात्मक अध्ययन किया जाए तो यह तथ्य सामने आता है कि कार्य के प्रति दोनों के विचारों में अन्तर है ।

अन्त में देखा जाय तो श्रमिकों को श्रम मालिक सम्बंध के प्रति ऋणात्मक विचारों और कार्य के प्रकृति पर आधारित होता है और उद्योगों में लगे श्रमिकों की कार्यक्षमता में कभी — कभी कमी अनुभव होता है ।

शब्द सार — उत्पादन , उद्योगपति , प्रशिक्षण , अनिश्चितता ।

परिचय :-

किसी भी उद्योग के उत्पादन एवं उत्पादकता तथा श्रमिकों के कार्य पर निरन्तर श्रम — मालिक में धनात्मक सम्बंध है । यदि श्रमिक कार्य पर पूरी लगानता के साथ करता है तो वहाँ की उत्पादन क्षमता व कार्य कुशलता में वृद्धि होगी । साथ ही श्रम मालिक के साथ जो सम्बंध बना रहता है वह भी श्रमिकों की उत्पादन क्षमता में निरन्तर वृद्धि की सम्भावना रहती है । यदि श्रमिक कार्य पर उपस्थित रहे तो उससे उत्पादन कार्य सुचारू रूप से चलेगा । जिसका परिणाम उत्पादन तथा उत्पादकता वृद्धि के रूप में देखा जा सकता है इसके साथ ही उत्पादन का गुणात्मक स्तर ऊँचा होगा ।

आज का युग विज्ञान का युग है । हमारे चारो तरफ नजर डाले तो हमें अधिकांश वस्तुएँ एसी मिलती है जो विज्ञान एवं बढ़ते हुए औद्योगिकीकरण का प्रतिफल है । दूरसंचार के साधनों के सहारे पलक झपकते ही विश्व के किसी भी होने में अपना सन्देश पहुंचा सकता है ।

किसी भी उद्योग को व्यवस्थित करने एवं सुचारू रूप से चलने के लिए मुख्य रूप से पांच साधनों की आवश्यकता पड़ती है । पूंजी अर्थात् उद्योग में प्रयुक्त मशीनरी एवं श्रम अर्थात् मनुष्य के द्वारा उत्पादन के लिए लगाया गया मानवीय श्रम से है । श्रमिकों की मनोदशा एवं



उनका नियुक्तियों , ही उनके कार्य निष्पादन की नियमितता को निर्धारित करता है । कम्पनी या संस्था को नियुक्तियों , प्रशिक्षण एवं सुविधाओं में अधिक खर्च करना पड़ता है । अस्थिर श्रम शक्ति या अनिश्चय कार्य दल के कारण किसी भी योजना को कार्य रूप में परिणित करना लगभग असम्भव होता है । इसकी जानकारी सामान्य लोगों तक पहुंचाना है।

अध्ययन क्षेत्र एवं स्थिति विस्तार :-

बिलासपुर जिला मध्यप्रदेश के पूर्वी आंचल में स्थित है । जिसका विस्तार ८१.१२ “ के पूर्वी देशान्तर से ८३.४० “ के पूर्वी देशान्तर रेखाओं और २१.३७“ से २३.७ “ अंश के उत्तरी अक्षांशों के मध्य है । जिले का क्षेत्रफल १९८९७ वर्ग किलो मीटर हैं । इसके पूर्व में रायगढ़ जिला , उत्तर में सरगुजा , उत्तर पश्चिम में शहडोल , पश्चिम में मंडला , दक्षिण में रायपुर और दक्षिण पश्चिम में दुर्ग जिला स्थित हैं । बिलासपुर जिला आबादी के आधार पर राज्य का दूसरा सबसे बड़ा जिला है । यह जिला क्षेत्रफल में भी राज्य का चौथा जिला है । वर्तमान में इसकी १६ तहसीलें ।

अध्ययन पद्धति :-

किसी भी उद्योग की अध्ययन को अधिक सन्तुलित एवं वास्तविक बनाने तथा सांख्यिकी निकटता तक ले जाने के लिए प्रबंधन के चुने हुए अधिकारियों एवं कर्मचारियों तथा श्रमिकों से भी एक निर्धारित प्रश्नावली के आधार पर चर्चा की गयी है जिसे अध्ययन एक पक्षीय न हों ।

लघु शोध प्रबंध के लिए आवश्यकतानुसार प्रथमिक एवं द्वितीयक समकों को प्राप्त करने के लिए रेमण्ड सीमेंट भवन का सहारा लिया गया है ।

द्वितीयक समकों को प्रकाशित प्रतिवेदनों उपलब्ध प्रलेखों एवं पुस्तकों से एकत्र किये गये हैं ।

अध्ययन का उद्देश्य :-

सामाजिक अनुसंधान वास्तविकता से संबंधित है । अतः इसका उद्देश्य सामाजिक वास्तविकता को यथा सम्भव वस्तुनिष्ठ एवं क्रमबंध रूप में समझना है । इसका उद्देश्य केवल ज्ञान प्राप्त करना ही नहीं है अपितु ज्ञान को व्यावहारिक जीवन में पायी जाने वाली समस्याओं के समाधान के लिए प्रयोग में लाना भी है ।

मुख्य रूप से अनुसंधान के दो प्रमुख उद्देश्य है :-

स्रोत :- सामाजिक अनुसंधान के तत्व पेज — ३

(१) सैद्धांतिक उद्देश्य :-

अनुसंधान का उद्देश्य अन्य अनुसंधान की तरह ज्ञान की प्राप्ति करना है जिससे सैद्धांतिक उद्देश्य कहते हैं । इस प्रकार के अनुसंधान में घटनाओं के बारे में नवीन तथ्यों की खोज , पुराने नियमों की जाँच या पहले से उपलब्ध ज्ञान में वृद्धि मानव जिज्ञासा की संतुष्टि के लिए की जाती है ।

(२) व्यावहारिक उद्देश्य :-

व्यावहारिक उद्देश्य प्राप्त ज्ञान का प्रयोग व्याधिकीय एवं विघटनकारी समस्याओं के समाधान के लिए करना है । पी.बी.यंग लेजर्स फेल्ड तथा रोजनबर्ग ने सामाजिक अनुसंधान के व्यावहारिक पक्ष पर अधिक महत्व दिया है। ज्ञान सैद्धांतिक तथा व्यावहारिक दोनों ही दृष्टियों से तभी अधिक उपयोगी सिद्ध हो सकता है । जबकि इसके अन्तर्गत भविष्यवाणी करने की क्षमता हो क्योंकि इससे परिस्थितियों का पूर्वानुमान लगाया जा सकता है।



(क) अनुसंधान का एक और व्यावहारिक उद्देश्य योजनाओं के निर्माण में मदद करना है। किसी योजना की सफलता के लिए यह आवश्यक है कि वह अनुसंधान की सशक्त धरातर पर खड़ी हो ।

(ख) अनुसंधान से प्राप्त ज्ञान के अधार पर तनाव एवं संघर्ष को कम करने का प्रयास किया जाता है । अनुसंधान के द्वारा हम किसी प्रघटना के स्वरूप व कारणों के बारे में गहन जानकारी प्राप्त कर उस समस्या को नियंत्रित कर तनाव एवं संघर्ष को कम करने में सफल हो पाते हैं ।

रेमण्ड सीमेंट संयंत्र के श्रमिकों का वर्गीकरण :-

औद्योगिक विकास के लिए तीन महत्वपूर्ण साधनों की आवश्यक होती हैं मानव माल और मशीन इन तीनों साधनों में प्रथम साधन अर्थात् श्रमशक्ति का होना अति आवश्यक है । उत्पादन के महत्वपूर्ण साधन के रूप में श्रम को तीन प्रकार से वर्गीकृत किया गया है —

(१) उत्पादक और अनुत्पादक श्रम

(२) कुशल और अकुशल श्रम

(३) मानसिक और शारीरिक श्रम

(१) उत्पादक और अनुत्पादक श्रम :-

प्रतिष्ठित अर्थशास्त्रियों ने उस श्रमिक को उत्पादक माना है जिनसे किसी ठोस भौतिक तथा विक्रय योग्य वस्तु का निर्माण होता है। प्रो. मार्शल के अनुसार — जो प्रयत्न उपयोगिता का सृजन करता है और अपने उद्देश्य की पूर्ति में सफल होता है उसे उत्पादक श्रमिक कहेंगे । इसके विपरीत दिशाओं में श्रमिक अनुत्पादक होगा । बेन्हम का कहना है कि — जो श्रम आय अर्जित करते हैं वे उत्पादक हैं तथा जो आय अर्जित नहीं करते हैं वे अनुत्पादक हैं ।

(२) कुशल तथा अकुशल श्रमिक :-

कुशल श्रमिक से तात्पर्य उस श्रमिक से है जिसे करने हेतु विशिष्ट ज्ञान एवं प्रशिक्षण की आवश्यकता होती है । जैसे — इंजीनियर , डॉक्टर अथवा मशीनर चालक का श्रम । इसके विपरीत अकुशल श्रम वह है जिसे करने हेतु किसी विशेष ज्ञान एवं प्रशिक्षण की आवश्यकता नहीं होती जैसे घरेलू नौकर , चपरासी या मुंशी का श्रम ।

कुशल व अकुशल श्रमों का वर्गीकरण सापेक्षिक है । इस अन्तर को शिक्षा प्रसार औद्योगिक विकास तथा श्रमिकों के प्रशिक्षण की सुविधाओं द्वारा दूर किया जा सकता है ।

(३) मानसिक तथा शारीरिक श्रमिक :-

वह श्रम जिसमें शरीर की अपेक्षा मस्तिष्क अथवा बुद्धि का अधिक प्रयोग होता है , मानसिक श्रम कहलाता है । इसके विपरीत वह श्रम जिसमें मस्तिष्क अथवा बुद्धि की अपेक्षा शरीर का अधिक प्रयोग होता है । शारीरिक श्रम कहलाता है ।

कोई श्रम न तो पूर्णतया मानसिक होता है और न पूर्णतया शारीरिक वरन् प्रत्येक श्रम में मानसिक और शारीरिक दोनों प्रकार के श्रम का प्रयोग होता है अन्तर केवल मात्रा का है । कुछ श्रमों में मस्तिष्क की प्रधानता होती है जबकि कुछ में शरीर की ।

श्रेणीवार श्रमिकों की संख्या :-

रेमण्ड सीमेंट संयंत्र का चयन फैक्टरी के निर्माण काल में लगातर कार्य करने वाले श्रमिकों के अनुभव को आधार लिया गया है । श्रमिकों की श्रेणी परिवर्तन योग्यता के अनुसार पदोन्नति के समय या निर्माण काल में सिविल विभाग के मैकेनिकल विभाग के तथा इलैक्ट्रिक विभाग के कई कार्य विभाग के कई विभिन्न बड़े — बड़े ठेकेदारों के माध्यमों से होता है , जिसमें उनके ठेकेदारों द्वारा भर्ती श्रमिक कार्य करते हैं , जो सैकड़ों की मात्रा में थे । फैक्टरी के अन्तर्गत सिविल विभाग में कार्य करने वाले कई सुपरवाजर तथा मजदूर होते हैं , उसी प्रकार मैकेनिकल



विभाग में निर्माण के अवसर पर कार्यरत कई फिटर वेल्डर तथा खलासी होते हैं । इलेक्ट्रिकल विभाग में भी विभिन्न सुपरवाइजर तथा इलेक्ट्रिशियन होते हैं , ये सभी श्रमिक फैक्टरी के निर्माण काल में लगभग ३ वर्ष की अवधि में कार्य अनुभव अपने – अपने क्षेत्र में प्राप्त कर लेते हैं । तथा फैक्टरी उत्पादन कार्य प्रारंभ करती हैं तब से श्रमिक अपने अनुभव के अनुसार कंपनी में कार्य पा जाते हैं ।

किसी भी विकासशील देश में आर्थिक विकास को तेजी से बढ़ाने के साधन के रूप में श्रमिकों की शिक्षा या प्रशिक्षण को महत्व दिया जाता है । रेमण्ड सीमेंट फैक्टरी में आफिस वर्ग या मेकेनिकल्स व सिविल विभाग के सभी श्रमिकों का चुनाव प्रशिक्षण के आधार पर किया जाता है । औद्योगिक विकास के लिए योग्यता और प्रशिक्षण का महत्व कितना है यह निम्न वाक्यांश से स्पष्ट है – “ किसी औद्योगिक दृष्टि से विकसित देश का बड़ा पूंजी भंडार इसकी भौतिक सामग्री में नहीं वरन् जाँचे हुए निष्कर्षों से इकट्ठा किये गए ज्ञान तथा उस ज्ञान को प्रभावशाली ढंग से प्रयोग करने की योग्यता एवं प्रशिक्षण में होती है । “

श्रमिक शिक्षा का निर्माण में विनियोग का आय की वृद्धि तथा आर्थिक विकास में योगदान माना जाता है रेमण्ड सीमेंट संयंत्र में श्रमिकों का चयन प्रशिक्षण के अतिरिक्त कम्पनी के किसी विशेष संदर्भ में किया जाता है । जैसे – फैक्टरी जिन लोगों की जमीन अपने फैक्टरी क्षेत्र के अन्तर्गत खरीदती हैं । उन्हें अपनी फैक्टरी में रोजगार देने की पूरी कोशिश करती हैं जिसके घर के लड़के कम से कम मैट्रिक तक शिक्षित होते हैं , उन्हें फैक्टरी अपनी सुविधा प्रदान करके आई.टी.आई ट्रेनिंग में भेजती हैं तथा कम्पनी ट्रेनिंग के पश्चात् अपनी फैक्टरी में उचित रोजगार देती हैं । इनमें से अनपढ़ लोगों को मजदूर वर्ग में रखती हैं ।

रेमण्ड सीमेंट संयंत्र अपने कर्तव्य को ध्यान में रखकर व लोगों की भलाई के लिए यह प्रयास करती है कि जिन लोगों की जमीन फैक्टरी के कार्य में खरीदी गयी उन्हें मुआवजों के अतिरिक्त परिवार के सदस्यों में से एक सदस्य को रोजगार अवश्य दें ।

रेमण्ड सीमेंट वर्क्स के अन्तर्गत श्रमिकों की श्रेणी योग्यतानुसार दी गई है । इनमें कुछ अधिकारी वर्ग में आते हैं कुछ क्लर्क श्रेणी और अन्य मजदूर वर्ग के अन्तर्गत आते हैं मजदूर वर्ग में कुछ श्रेणी बना दी गई जिनके उपनाम इस प्रकार अ,ब,स,द,ई आदि ।

रेमण्ड सीमेंट वर्क्स की श्रमिक तालिका (श्रेणीवार) :-

श्रमिकों के प्रकार	श्रमिकों की संख्या	श्रमिकों की श्रेणियाँ	श्रेणीवार श्रमिकों की संख्या
१ कार्यशील कुल श्रमिक	८००	श्रेणी “ अ “	८०
		श्रेणी “ ब “	११०
		श्रेणी “ स “	३००
		श्रेणी “ द “	१६०
		श्रेणी “ इ “	१५०

		कुल	८००
२ स्थानापन्न	५०		५० कुल श्रमिक
महोयोग			८५०



उपर्युक्त तालिका से स्पष्ट होता है कि श्रमिकों की श्रेणी अलग – अलग विभाजित कर दिया गया है और उन्हें श्रेणी के आधार पर वेतन भी दिया जाता है । श्रेणी “अ” के श्रमिकों की संख्या ८० , ‘ब’ के ११० , “स” श्रेणी ३०० । इस तरह श्रमिकों की संख्या को बढ़ा दिया जाता है और स्थानापन्न श्रमिकों की संख्या ५० कर दिया गया है ।

श्रमिकों का जीवन स्तर :-

रेमण्ड सीमेंट फैक्टरी में कार्यरत श्रमिकों के जीवन स्तर के संबंध में कहा जा सकता है । कि साधारण न होकर ऊंचा जीवन – स्तर है । “ जीवन स्तर या रहन – सहन के स्तर से हमारा मतलब किसी व्यक्ति वर्ग या समाज की आवश्यक , आरामदायक एवं विलासिता की वस्तुओं एवं सेवाओं की उस मात्रा से होता है , जिसका काफी समय से उपयोग करने के कारण यह इतना आदि हो जाता है कि जीवन स्तर को बनाये रखने के लिए यथासंभव प्रयत्न करता है । “ जीवन स्तर या रहन – सहन को स्तर को निर्धारित करने वाले तत्वों में से —

(अ) “ वातावरण “ जिसमें समय , आय , और वर्ग शामिल रहते हैं तथा

(ब) “ व्यक्तित्व

प्रत्येक उद्योग एवं केन्द्र में कार्यों और मजदूरी की दशाओं में भिन्नता होने के कारण श्रमिकों का जीवन स्तर की लागतों में भी भिन्नता होती है ।

रेमण्ड में उपर्युक्त बातों को ध्यान में रखते हुए अध्ययन करने से यह ज्ञात होता है कि फैक्टरी में श्रमिकों को प्राप्त पर्यान्त व उचित मजदूरी , उचित कार्य के घण्टे तथा सामाजिक व आर्थिक सुविधाएँ एवं सुरक्षा आदि श्रमिकों के जीवन स्तर को ऊंचा उठाये रखने में संलग्न है जिससे आस – पास के उद्योग में कार्यरत श्रमिक जीवन स्तर में आकर्षिक होकर रेमण्ड सीमेंट फैक्टरी की ओर खींचे चले आते हैं ।

रेमण्ड में श्रमिकों के जीवनस्तर में वृद्धि करने के लिए शिक्षा , स्वास्थ्य , सुरक्षा व मनोरंजन की सभी सुविधाएँ उपलब्ध है तथा उपयोग वस्तुओं के लिए उचित मूल्य की दुकान है । जिससे कालोनी में लोगों को उचित समय में वस्तुएँ उपलब्ध हो सकें ।

वर्तमान स्थिति में रेमण्ड सीमेंट फैक्टरी में श्रमिकों के जीवन स्तर में और वृद्धि हेतु सभी संभव प्रयास किये जा रहे हैं ।

श्रमिकों की मजदूरी व वेतन :-

रेमण्ड सीमेंट वर्क्स के श्रमिकों की मजदूरी व वेतन उनके योग्यता के आधार पर दिया जाता है तथा उच्च श्रेणी के मजदूर को निम्न श्रेणी या मध्यम श्रेणी के मजदूर से थोड़ा ज्यादा वेतन दिया जाता है । मजदूरों की भी अनेक संघ होती है तथा उन्हें मुख्य प्रबंधक के द्वारा नियुक्त किया जाता है ।

श्रमिकों की मजदूरी व वेतन तालिका ४.२

श्रमिकों की श्रेणी	श्रमिकों का वेतन
“अ”	१७०५.००
“ब”	१७०४.५०
“स”	१७०५.००
“द”	१६०८.००
“इ”	१६०४.२५



उपर्युक्त तालिका से स्पष्ट होता है कि रेमण्ड सीमेंट श्रमिकों की मजूदरी व वेतन कितना है । अतः “अ” श्रेणी को १७०५ , श्रेणी “ब” को १७०४.५०, श्रेणी “स” को १७०५.००, श्रेणी “द” को १६०८ और “इ” को १६०४.२५ प्रति दिया जाता है तथा इसी के आधार पर उनका कार्य विभाजित किया गया है ।

श्रमिकों की आवास की सुविधा :-

आवास से आशय श्रमिकों के रहने के लिए मकान की व्यवस्था से है । व्यापक अर्थ में आवास व्यवस्था से आशय श्रमिकों के लिए ऐसे आश्रय से है जो आरामदायक हो , श्रमिकों की आवश्यकताओं के अनुरूप हो और जहाँ श्रमिकों के परिवार के सदस्य सुखमय जीवन व्यतीत कर सकें । अतः श्रमिकों के आवास की ऐसी सुविधा हो , जहाँ चिकित्सा शिक्षा , क्रीडा , मनोरंजन , स्वच्छवायु, प्रकाश व जल , आग आदि की समुचित व्यवस्था हो ।

रेमण्ड सीमेंट के प्रत्येक मजदूर को आवास उनके पद तथा आय के आधार पर दिया गया है । आवास की संख्या मजदूरों की संख्या से बहुत कम है । इसलिए वरिष्ठता के आधार पर आवास को वितरित किया गया है ।

पद के आधार पर रहने के लिए स्थान और अन्य वस्तु जैसे पलंग , टेबल , कुर्सी आदि दिया जाता है । ये सारी सुविधाएँ निःशुल्क प्रदान की जाती हैं ।

विभिन्न प्रकार के आवास उनका वितरण तथा उनकी संख्या इस प्रकार से है

- “सी” प्रकार २८ मैनेजर (प्रबंधक)
- “डी” प्रकार परिवर्तित ६६ डीपी सहायक प्रबंध
- “डी” प्रकार साधाण ३८ अधिकारी
- “एफ” प्रकार बीच १२८ कनिष्ठ अधिकारी
- “एफ” प्रकार साधारण ३६ स्टाफ

फ्लेट १८० कुशल कारीगर

बाराकेक्स १४३ अकुशल कारीगर या मजदूर

इससे स्पष्ट होता है कि श्रमिकों की आवास की सुविधा किस तरह विभाजित किया गया है । साथ ही रेमण्ड फैक्टरी में कार्यरत अनेक श्रमिक ऐसे हैं जो कालोनी क्षेत्र से दूर शहरी और गाँवों में निवास करते हैं और अपने काम के समय में फैक्टरी पहुंचते हैं , फैक्टरी उन श्रमिकों के आने जाने के लिए पर्याप्त व्यवस्था करती है । इसलिए रेमण्ड श्रमिकों की आवास व्यवस्था एक सफल उद्योग के लिए पर्याप्त कही जा सकती है ।

श्रमिकों की कार्य दशाएँ :-

श्रम उत्पादन का एक महत्वपूर्ण सक्रिय साधन है , और श्रमिक इस साधन का वाहक है । अच्छे व उत्साहवर्धक वातावरण में श्रमिक अधिक कार्य करता है । व्यक्ति परिस्थितियों की उपज है , जिस प्रकार की परिस्थितियों में वह रहता है , ढ़लकर उसी प्रकार बन जाता है । कार्य की दशाओं का संतोषप्रद न होना केवल कार्य क्षमता अथवा स्वास्थ्य को प्रभावित नहीं करता , वरन् उनके वेतन प्रवासी प्रवृत्ति और औद्योगिक संबंधों के भी प्रभावित करता है । कार्य दशाएँ एसी होनी चाहिए जिससे श्रमिक के जीवन पर काम करने का दबाव न पड़े। उन्हें कार्य नीरसता एवं थान का अनुभव न हो जिसके परिणामस्वरूप उनके स्वास्थ्य पर बुरा प्रभाव न पड़े ।

रेमण्ड सीमेंट संयंत्र में श्रमिक लिस वातावरण में कार्य करते हैं अर्थात् कार्य दशाएँ पर्याप्त है , इसमें श्रमिकों के स्वास्थ्य स्वच्छता सुरक्षा एवं कल्याण संबंधी सभी बातों का विशेष



ध्यान रखा गया है । कारखाना अधिनियम १९४८ के अनुसार जो कार्य की दशाओं से संबंधित हैं ।

रेमण्ड सीमेंट कारखाने में कार्य की दशाओं से संबंधित व्यवस्था इस प्रकार है

रेमण्ड सीमेंट कारखाने में उत्तम कार्य दशाएँ सुनिश्चित करने के लिए श्रमिकों और प्रबंधकों द्वारा नियमों का पालन करना अनिवार्य है :-

(१) स्वच्छता :-

रेमण्ड सीमेंट कारखाने में पूर्ण रूप से कारखाने के अन्दर और बाहर सफाई की उचित व्यवस्था की गयी है । निर्माण कार्य के समय यदि फर्श , गीला हो जाये तो जल निकालने की सुविधा दी गई है । कारखानों के अन्दर की दीवारे , छत, हर वर्ष साफ किये जाते उन पर सफेद अथवा वार्निस होनी चाहिए ।

(२) मंदगीयुक्त पदार्थों की सफाई :-

रेमण्ड सीमेंट कारखाने में निर्माण के फलस्वरूप यदि वहाँ कूड़ा — करकट या व्यर्थ पदार्थ उत्पन्न होते हैं , तो उनकी सफाई के लिए उचित व्यवस्था की गयी ।

(३) धूल व धुएँ से सुरक्षा :-

रेमण्ड सीमेंट उत्पादन क्रिया के फलस्वरूप जो धूल व धुआँ उत्पन्न होता है , वह श्रमिकों के लिए हानिकारक व दुर्गंधयुक्त होता है , उसे तुरन्त निकालने और एकत्रित न होने के लिए चिमनी आदि की व्यवस्था की गयी है ।

(४) रोशनदान तथा तापमान :-

रेमण्ड सीमेंट कारखाने में शुद्ध वायु के आने जाने के लिए रोशनदान पर्याप्त है , जो कि श्रमिकों के स्वास्थ्य के लिए आवश्यक है तथा कारखाने में कमरों का तापमान श्रमिकों के स्वास्थ्य को देखते हुए उचित रखा गया है ।

(५) रेमण्ड में कारखाने के अन्दर अधिक भीड़भाड़ पर नियंत्रण किया गया है ।

(६) रेमण्ड सीमेंट में कारखाने के अन्दर प्रकाश की प्राकृतिक व कृत्रिम रूप से पूर्ण व्यवस्था की गई है ।

(७) शौचालय व मूत्रालय की उचित व्यवस्था ।

(८) पीने योग्य पर्याप्त शुद्ध जल कारखाने में सुविधा ।

(९) यंत्रों की घेराबंदी :-

रेमण्ड कारखाने के श्रमिकों की सुरक्षा और दुर्घटनाओं की रोकथाम के लिए खतरनाक मशीनो , अनेक घुमने वाले भागों और पहियों के चारों ओर आड़ लगाकर रखने की व्यवस्था की गयी है ।

यातायात की सुविधा एवं भत्ता :-

रेमण्ड सीमेंट फैक्टरी में कार्यरत सभी श्रमिकों को पर्याप्त यातायात की सुविधाएँ प्राप्त हैं । गोपालनगर रेमण्ड सीमेंट संयंत्र बिलासपुर जिले से कुल दूर स्थित एक ग्राम आरसमेटा में बनायी गयी है इस फैक्टरी में कार्य करने वाले श्रमिकों में से २५ : स्टाफ तथा ५०: वर्कर इस सीमेंट कालोनी क्षेत्र के बाहर से आते है , ये श्रमिक बिलासपुर नगर और आस — पास के गाँवों में निवास करते हैं । अतः रेमण्ड सीमेंट फैक्टरी अपने इस ७५: श्रमिकों के लिए परिवहन की सुविधा उपलब्ध कराती है ।

रेमण्ड सीमेंट फैक्टरी की स्वयं की तीन बस है जो श्रमिकों को उनकी शिफ्ट के आधार पर लाने ले जाने का कार्य करती है तथा कुछ श्रमिकों को अन्य वाहन की सुविधा भी दी जाती है ।



इसके अतिरिक्त सीमेंट में कार्यरत श्रमिकों के परिवार जो कालोनी में रहते हैं , अच्छे स्कूल व कॉलेजों की सुविधा के लिए शहर जाते हैं , उन बच्चों को समयानुसार पहुंचाने , जाने की व्यवस्था बस द्वारा या जीप द्वारा की जाती है । श्रमिकों की कुछ आवश्यकताएँ ऐसी भी होती हैं । जिनके लिए उन्हें बाहर जाना पड़ता है , अर्थात् कालोनी क्षेत्र में इनकी व्यवस्था नहीं हो , उसके लिए भी बस का विशेष समय में आवागमन होता है लेकिन इसका समय निश्चित है । अतः कहा जा सकता है कि रेमण्ड सीमेंट फैक्टरी में श्रमिकों के लिए यातायात सुविधाएँ पर्याप्त हैं ।

भत्ता :-

गोपालनगर रेमण्ड सीमेंट वर्क्स के कार्यरत सभी श्रमिकों को राष्ट्रीय लाभांश में वृद्धि को दृष्टिगत रखते हुए , अच्छे कार्य के फलस्वरूप लाभांश को श्रमिकों में बांटते हुए प्रतिवर्ष व प्रति माह कुछ भत्ता दिया जाता है , जो इस प्रकार से है — श्रमिकों के व्यक्तिगत जीवन के लिए आवश्यक होता है तथा जिससे कार्य कुशलता में वृद्धि होती है :-

(१) धुलाई भत्ता :-

रेमण्ड सीमेंट के सभी श्रमिकों को प्रतिमाह ३०: वाशिंग भत्ता के रूप में दिया जाता है ।

(२) साइकिल भत्ता :- रेमण्ड श्रमिकों को आवागमन के लिए यदि कोई अन्य सुविधा न हो तो उन्हें प्रतिमाह ४० : दर से साइकिल भत्ता दिया जाता है ।

(३) बच्चों का शिक्षा भत्ता :-

कार्यरत श्रमिकों के परिवार के सदस्यों में शिक्षा के क्षेत्र में लड़के व लड़कियाँ स्कूल व कॉलेजों में अध्ययन करते हैं उनके लिए ३० : प्रतिमाह भत्ता प्रदान किया जाता है ।

(४) नाईट शिफ्ट भत्ता :-

प्लांट के उन सभी श्रमिकों को जो ६ बजे शाम ड्यूटी समाप्त करते हैं । लेकिन १२ बजे मध्य रात्रि से पहले और जो मध्यरात्रि के बाद ड्यूटी शुरू या समाप्त करते हैं उनके लिए ४५ रू. की दर से २० रू. की दर से प्रति शिफ्ट क्रमशः दिया जाता है ।

(५) धूल भत्ता :-

वे श्रमिक जो अत्याधिक कार्य करते हैं उन्हें ८० ग्राम गेगरी व ४० ग्राम ऑयल (कोकोनट व मदर डे ऑयल) प्रति दिन मिलता है ।

(६) एल.टी.ए :-

श्रमिकों को भत्ते के रूप में ४० : प्रति वर्ष दिया जाता है तथा इसमें उत्पादन में वृद्धि या कमी तथा बिना उत्पादन के भी श्रमिकों का मिलना अनिवार्य होता है ।

इसके अतिरिक्त रेमण्ड सीमेंट प्लांट के श्रमिकों को ग्रेच्युटी बोनस आदि अधिनियम के प्रावधान के अनुसार उपर्युक्त या योग्य रूप से श्रमिकों को दिये जाते हैं । इस प्रकार से सभी लाभ श्रमिकों के लिए दिया जाता है । भत्ता के साथ निवास के लिए भी सुविधा दिया जाता है । रेमण्ड सीमेंट फैक्टरी द्वारा आफिसर स्टाफ व मैनेजर की प्लांट स्टाल में उचित सुविधानुसार ३ से ६ कमरे तक के मकान आबंटित किये गये हैं ये मकान उनके योग्यतानुसार दिया जाता है ।

औद्योगिक श्रम की भर्ती :-

उद्योग की सफलता एवं विफलता काफी सीमा तक श्रम की भर्ती पर निर्भर करती है । श्रम शक्ति की पूर्ति के उस साधन को अपनाना चाहिए जिसके माध्यम से श्रेष्ठतम प्रकृति का श्रमिक पर्याप्त संख्या में एवं उपयुक्त समय पर उपलब्ध हो सकें ।



श्रमिकों की कार्यक्षमता एवं औद्योगिक उत्पादकता काफी सीमा तक भर्ती पद्धति पर निर्भर करती है । उद्योग को एक स्थायी कार्यकुशल और संतुष्ट श्रमिक वर्ग प्राप्त हो , इसलिए भर्ती वैज्ञानिक विधि से की जानी चाहिए । जहाँ उच्च वर्ग या उद्योग के स्थायी मंडल के सदस्य या आफिसर वर्ग तो , शिक्षण या वैज्ञानिक चयन की कार्य विधि से संबंधित होते हैं ।
ठेकेदारों द्वारा भर्ती :-

अनेक उद्योगों में श्रमिकों की भर्ती के लिए ठेके देने की प्रथा का प्रचलन है । जिस प्रकार हम दैनिक व्यवहार में देखते हैं कि मकानों , सड़कों , नहर सार्वजनिक विभाग आदि काम ठेकों में होता है । उसी प्रकार किसी विशेष कार्य के लिए भी कारखानों के मालिक ठेकेदारों को ठेका देता है ।

ठेके का श्रम उद्योगपतियों को अधिक प्रिय होने के कारण या फिर ऐसी व्यवस्था से उन्हें अनेक सुविधाएँ व बचते प्राप्त होती है जैसे —

- (१) किसी भी समय आवश्यक श्रम शक्ति प्राप्त हो जाती है ।
- (२) मिल मालिकों को ऐसे श्रम पर विशेष निगरानी नहीं रखनी पड़ती ।
- (३) कार्य भी बड़ी शीघ्रता के साथ होता है ।

रेमण्ड सीमेंट वर्क्स में प्रबंध वर्ग के अन्तर्गत जो स्थायी मंडल के अधिकारी है , उनका चयन तो वैज्ञानिक विधि से ही किया गया है । रेमण्ड सीमेंट वर्क्स सरकारी न होकर एक व्यक्तिगत कम्पनी है । अतः कम्पनी के मालिक अपनी सुविधाओं व बचतों को ध्यान में रखते हुए ऐसी व्यवस्था करते हैं और ठेकेदारों को कम्पनी में नियुक्त करके श्रमिकों एवं स्थानापन्न श्रमिकों की भर्ती करते हैं ।

रेमण्ड सीमेंट उद्योग में इस प्रकार भिन्न — भिन्न स्थानों में भर्ती करने के ढंगों से विभिन्नता पाई जाती है । यह विशेष रूप से श्रम की उपलब्धता , कार्य व उद्योग की व्यवस्था को देखकर की जाती है । रेमण्ड कम्पनी के प्रबंधक इस क्षेत्र में प्रयत्नशील होते हैं ।

रेमण्ड सीमेंट वर्क्स के ठेकेदारों को संख्या और उनके अन्तर्गत कार्यरत श्रमिकों की कार्यविधि —

ठेकेदारों का नाम	मजदूरों का कार्य	मजदूरों की संख्या	मजदूरों का वेतन
१ रमा ट्रेडर्स	पैकिंग प्लांट में सीमेंट बोरी भरने व लोडिंग का काम	६००	फैक्टरी एक्ट में “इ” श्रेणी में आने वाले मजदूरों के समकक्ष
२ वर्षा इंजीनियरिंगकोल	अनलोडिंग एवं एवं शिफ्टिंग एवं शिफ्टिंग जिप्सम अनलोडिंग	२५०	“ ई” श्रेणी में आने वाले मजदूरों के समकक्ष
३ घासीराम यादव	विभिन्न कार्या एवं सफाई आदि के कार्यों के लिए प्रतिदिन तक भुगतान	१.१५० मजदूर स्थायी २. २००	“ ई” श्रेणी में आने वाले श्रमिकों के समकक्ष १०० से २०० रू. हिसाब
४ मनीष साहू	—“—	२५०	१०० से २०० रू. तक
५. के.एन.यादव	—“—	३००	१५०रू. से १७५रू.
(निम्नतम मजदूरी)			
६ बी.के.दुबे	विभिन्न कार्यों एवं सफाई आदि के कार्यों के लिए	१५०	२५० से ३०० रू. तक फेब्रीकेशन



७ शार्मा

फेब्रीकेशन
इंजीनियरिंग

१२५

२५० रू. से ३०० रू.
तक

निष्कर्ष

भारत जैसे विकासशील राष्ट्र के लिए उद्योगों की बहुत आवश्यकता है , क्योंकि इससे कच्चे मालों का समुचित विदोहन हो सकेगा तथा पूंजी निर्माण की दर में वृद्धि होगी । किन्तु समय – समय पर उद्योगों के समक्ष कुछ समस्याएँ उत्पन्न हो जाती हैं । ये समस्याएँ आर्थिक , राजनीतिक , समाजिक तथा पारिवारिक हो सकती है आर्थिक एवं सामाजिक स्थिति में सुधार लाने के लिए समस्याओं को हल करना आवश्यक है ।

रेमण्ड सीमेंट वर्क्स उद्योग में श्रमिकों व संवायोजकों के पारस्परिक संबंधों को अधिक घनिष्ठ व मैत्रीपूर्ण बनाने में श्रमिक संघ महत्वपूर्ण स्थान रखता है । जिससे संगठित श्रमिक संघ महत्वापूर्ण स्थान रखता है । जिससे संगठित श्रमिकों से सम्पर्क रखना दुखदर्द , सुविधा , असुविधा एवं इच्छा अनिच्छा को समझना होता है । ये संगठित श्रमिक अधिक अनुशासिक और उत्तरदायी होती है । श्रमिक संघ औद्योगिक संघर्षों को रोकने में सफल होता ।

रेमण्ड सीमेंट संयंत्र संघ श्रमिक और मालिक के बीच पारस्पर संबंध बना रहता है जिससे श्रमिक अपनी शिकायतों को दूर कराने या उनके द्वारा अपनी परिस्थियों में परिवर्तन लाने का प्रयत्न करने है। यहाँ सेवायोजकों एवं श्रमिकों के बीच संयुक्त परामर्श की स्थिति है , जिससे समस्याओं का हल हो और रेमण्ड सीमेंट संयंत्र के श्रम – मालिक संबंध मधूर बने रहें।

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**रचनाकारों की राजनीतिक चेतना : एक अध्ययन****“ महाभोज के विषेश संदर्भ में “****अल्मा ग्रेस केरकेट्टा**

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डॉ. अनोज एक्का**कुमुदिनी किस्पोट्टा****शोध सारांश :-**

प्रत्येक देश का साहित्य अपने समाज के प्रतिरूप होता है । समाजिक जीवन में घटित होने वाले विभिन्न प्रकार के क्रिया — कलाप , वेश — भूषा , रहन — सहन आदि के आधार पर ही साहित्यकार अपने साहित्य का सृजन करता है । साहित्यकार को सामाजिक गतिविधियों के प्रति पूर्ण सचेत रहना पड़ता है । साहित्यकार के अतः मन पर समाज का जो स्वरूप अंकित होता है। उसे ही वह पुनः समाज के समक्ष प्रदर्शित कर देता है ।

समाज और राजनीति का सम्बन्ध निर्विवाद ही घनिष्ठ है । राजनीति समाज द्वारा संचारित वह संस्था है जो मनवीय जीवन को उच्च आदर्श स्थिति पर पहुँचाकर समाज के सर्वांगीण विकास में सहायक होती है । जहाँ राजनीति समाज द्वारा संचालित होती है वहीं समाज भी राजनीति से प्रभावित होते हैं ।

सामान्यतः समकालीन राजनीतिक पृष्ठभूमि पर आधारित उपन्यास ' महाभोज ' में मन्नूजी ने सामाजिक और राजनीतिक विकृतियों एवं भ्रष्टताओं पर तीक्ष्ण प्रहार किये हैं । महिला रचनाकारों में मन्नू भण्डारी जी ने समाज में राजनैतिक चेतना जगाने तथा अधिकारों के लिए लड़ने सिखाने में महत्वपूर्ण भूमिका निभायी है । जो इस लघु शोध प्रबंध का उद्देश्य भी है ।

मन्नू भण्डारी जी का उपन्यास 'महाभोज' , जिसमें गाँव सरोहा के सामंती सभ्यता का साम्राज्य और जमींदारों के शोषण जैसे सामाजिक अव्यवस्था को दर्शाया गया है । 'महाभोज' उपन्यास का मुख्य पात्र बिसू जो अत्याचारों के प्रमाण एकत्रित कर राजनेताओं के सामने रखना चाहता है परन्तु दिल्ली पहुँचने के पूर्व ही उसे प्राणों से हाथ धोना पड़ता है ।

सार शब्द : वेश भूषा , सभ्यता , निर्विवाद , तीक्ष्ण ।

राजनीतिक चेतना :- चेतना को समझने के लिए चेतना का अर्थ पर गौर करना जरूरी है ।

श्री नवल जी द्वारा सम्पादित नालन्दा विशाल शब्द सागर के अनुसार (संज्ञा स्त्री) (सं) १. बुद्धि । २.होष में आना , ३. यूनात्मक मनोवृत्ति । ४. स्मृति। सुधि । ५. चेतनता । संज्ञा । होश ।

नगेन्द्र नाथ वसु द्वारा प्रकाशित हिन्दी विश्व कोश के अनुसार — (हि. क्रि) १. सावधान होना, चौकन्ना होना । २. होश में आना , ३. विचारना , सोचना , ध्यान देना , समझना ।

रामचन्द्र वर्मा द्वारा प्रकाशित मानक हिन्दी कोश के अनुसार — स्त्री (सं. चित् +युच् — अन , टाफ) १. मन की वह वृत्ति या शक्ति जिससे जीव या प्राणी को आन्तरिक (अनुभूतियों , भावों , विचारों आदि) और बाह्य घटनाओं तत्वों या बातों का अनुभव या मान होता है । होश — हवास । २. बुद्धि। समझ । ३. मनोवृत्ति , विशेषतः ज्ञान मूलक मनोवृत्ति ४. याद स्मृति ।

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अच्छी बातों की ओर प्रवृत्त हो सके । ३. सावधान या होशियार होना । ४. सोच — समझकर किसी बात की ओर ध्यान देना ।

‘ महाभोज ’ में निहित राजनैतिक चेतना :-

१. भ्रष्टाचार :-

राजनीतिक और भ्रष्टाचार एक दूसरे के साथ चलती है आज समाज के चारों ओर भ्रष्टाचार फैला हुआ है । राजनीतिक परिदृश्य की सबसे बड़ी विसंगति राजनीतिक व्यवस्था का भ्रष्ट होना है ।

भ्रष्टाचार से तात्पर्य है — “ भ्रष्ट आचरण अर्थात् प्रत्यक्ष या अप्रत्यक्ष रूप से नियम के विरुद्ध अनुचित कुलपति क्रिया — कलापों को भ्रष्टाचार कहते हैं “ ।¹ अरस्तु ने अपने प्रसिद्ध ग्रंथ “ पॉलिटिक्स में क्रांति के प्रमुख कारणों में नेताओं की दुनीति , दुर्व्यवहार एवं भ्रष्टाचार बताते हुए कई ऐसे राज्यों का उदाहरण दिया है , जहाँ प्रजातंत्र में शासकों की बेईमानी के फलस्वरूप क्रांतियाँ हुई हैं । “²

राजनीतिक क्षेत्र में भ्रष्टाचार हमें कई रूपों में देखने को मिलता है जैसे — राजनीतिक संगठनों , चुनावों प्रशासन , न्याय , पुलिस एवं स्वायत्त शासन आदि सभी इसके पक्ष है । नेताओं द्वारा सत्ता प्राप्त करने , वोट प्राप्त करने तथा पदों पर बने रहने के लिए भ्रष्ट तरीकों का सहारा लिया जाता है और इन्हें सत्ता की प्राप्ति होती है तो सरकारी कर्मचारियों का चयन , स्थानांतरण पदस्थ करने तथा प्रतियोगी परिक्षाओं में सफल होने के लिए इन्हीं नेताओं ने साथ देते हैं । जैसे — ‘महाभोज ’ उपन्यास में देखा गया है कि “ सिन्हा को डी.आई.जी. बना दिया जाता है इसी खुशी में पार्टी दी जाती है । लेकिन किसी के दिमाग में एक क्षण के लिए भी यह बात न आयी की डी.आई.जी हैसियत का आदमी इतनी कीमती शराबें कहाँ से पिला सकता है , कैसे पिला सकता है ? किसी बड़े जौहरी की दुकान के शो — केस की शोभा बढ़ाने वाला कम से कम बीस हजार हीरों का श्रीमति सिन्हा के शरीर की शोभा बढ़ाने कैसे कहाँ से आ पहुँचा “ । ड

आज सरकारी सेवा में भ्रष्टाचार प्रशासन का अंग बन गया है । एक समय था जब राजकीय कर्मचारियों और प्रशासकों को जनता के सेवक रूप में माना जाता था किंतु आज नहीं । सरकार के कुछ विभाग जैसे सार्वजनिक निर्माण विभाग , आय — कर भूमि रजिस्ट्रेशन आदि के बारे में सामान्य जनता की धारणा यह है कि वहाँ पैसे देकर

१. डॉ.रामजी सिंह , समाज दर्शन के मूल तत्व पृ.सं. ३४०

२. मन्नु भण्डारी , महाभोज पृ.सं १७४

सब — कुछ कराया जा सकता है । चपरासी , बाबू से लेकर अधिकारी तक का हिस्सा बंधा हुआ होता है । यही कारण है कि सरकार का छोटे से छोटा अधिकारी भी ठाट से रहता है । उच्च अधिकारियों को भ्रष्टाचार में लिप्त देखकर अन्य छोटे और अधीनस्त कर्मचारी भी वैसा ही करते हैं । इस प्रकार भ्रष्टाचार का दुष्क्रम बढ़ता जा रहा है ।

राजनीति में भ्रष्टाचार इतना बढ़ गया है कि वह सत्ता को हासिल करने के लिए यह कुछ भी कर सकता है चाहे वह कितनी भी हत्या क्यों न करना पड़े ? जैसे ‘महाभोज’ उपन्यास में “ जोरावर ने टिटहरी गाँव के दो लड़के बंसी और बिहारी को पैसे देकर इस बात के लिए तैयार किया कि पुन्तन की चाय की दुकान में जहर मिला चाय बिसू को पिला दिया जिससे बिसू की मृत्यु हो गई “ ।¹



२. चुनाव :-

चुनाव के समय राजनीतिक दलों की गतिविधियाँ विशेष रूप से सक्रिय हो उठती है । विरोधी दल के प्रत्याशी को पराजित करने के लिए नये — नये चुनावी हथकड़ों को अपनाते हुए एक दूसरे पर कीचड़ उछालते हैं । साम, दाम , दण्ड , भेद की नीति अपना कर ये उचित — अनुचित कोई भी कार्य ये रूचि पूर्वक करते हैं अर्थात् पीछे नहीं हटते हैं । अपना काम निकलवाने के लिए ये निःसंकोच दूसरों के पांव पर गिर जाते हैं। क्योंकि ये जानते हैं काम बन जाने पर नेताओं ने अपने पांव तले आसानी से रौंद सकते हैं । चुनाव के समय बड़े — बड़े वादे जनता से करते हैं जैसे ' महाभोज ' उपन्यास में सुकुल बाबू जनता के हितैसी मालूम पड़ते हैं । जनता को अपनापन दिखाते हुए कहते हैं — “ खड़ा हुआ हूँ आप लोगों के हक की लड़ाई लड़ने के लिए बिसू की मौत का हिसाब पूछने के लिए । बात केवल बिसू की मौत की नहीं है ————— यह आप सब लोगों के जिन्दा रहने का सवाल है ————— अपने पूरे हक के साथ जिन्दा रहने का । आपका यह हक जरा से स्वार्थ के लिए गाँव के धनी किसानों के हाथ बेच दिया गया और यही हक मुझे आपको वापस दिलवाना है । जुल्म ने आप लोगों के हौसले तोड़ दिए हैं , इसलिए मैं लड़ूँगा आपकी यह लड़ाई “ ।² चुनाव जीतने के लिए कभी — कभी ऐसे कार्य भी करते हैं जो सामान्य अवस्था में नहीं कर सकते जैसे — हरिजनों के साथ प्रेम पूर्वक व्यवहार करना , गरीबों के दुख — कष्टों को दूर करना , उनके घर में बैठकर भोजन करना आदि । इसी तरह सुदर्शन वशिष्ठ की कहानी औरंगजेब की जीत इस यथार्थ को प्रस्तुत करती है — “ तीसरे चुनाव के आते — आते उन्होंने कार खरीद ली । अब घर आते समय जो भी रास्ते में मिलता उसे कार में बिठाकर उसके घर के पास छोड़ देते हैं । कई बार गन्दे बटूबदार लोगों को कार में बिठाने पर भीतर से कार गंधा उठाती है “ । इस प्रकार नेता अपने स्वार्थ के लिए लोगों के लिए लोगों की सेवा करते हैं । ' महाभोज ' उपन्यास में दा सहाब द्वारा सत्ता में बने रहने के लिए ' घरेलू उद्योग योजना ' का उद्घाटन हीरा के द्वारा करते हैं।

आज चुनाव लड़ना सामान्य व्यक्ति की पहुँच से बाहर की बात है क्योंकि चुनाव निष्ठा का नहीं अर्थ का प्रश्न हो गया है । आज वहीं व्यक्ति चुनाव लड़ने की

१. मन्नु भण्डारी , महाभोज पृ.सं . ३३

२. मन्नु भण्डारी , महाभोज पृ.सं दृ ३३

३. सुदर्शन वशिष्ठ, पिंजरा औरंगजेब की जीत पृ . सं. ३८

सोच रख सकता है जिसके पास पैसा हो और पैसे को पानी की तरह बहाया जाता है क्योंकि वे जानते हैं कि बाद में वे सारा पैसे बटोर लेंगे । इस प्रकार गरीबों को पैसे का लोभ देकर वोट खरीदे जाते हैं । जो जितना ज्यादा फायदा देता है उसे उतने ही अधिक वोट मिलता है ।

लोकतंत्र में चुनाव का बड़ा महत्व है । मतदाता क्या सोचता है , भविष्य में वह क्या चाहता है ? इसकी अभिव्यक्ति उसके उस निर्णय में होती है जो मत पेटियों से प्रगट होता है ।

भारत में चुनाव की परम्परा अंग्रेजों के शासन काल से प्रारम्भ हुई थी । प्रारम्भ में धनी लोगों को ही मत देने का अधिकार प्राप्त था । इस स्वतंत्र भारत में वोट देन और देने और चुनाव लड़ने का अधिकार यद्यपि सभी नागरिकों को समान रूप से प्राप्त है । इस स्वतंत्र भारत में वोट देने और चुनाव लड़ने का अधिकार यद्यपि सभी नागरिकों को समान रूप से प्राप्त है किंतु आज चुनाव पद्धति में अनेक दोष भी आ गये हैं । जिसके कारण गरीब और मध्यम वर्ग तो क्या सामान्य सम्पन्न वर्ग भी अपनी शक्ति के आधार पर चुनाव लड़ने का साहस नहीं कर



सकता । आज चुनाव बड़े महंगे हो गये हैं और ऐसा लगता है कि राजनीति की आत्मा नैतिकता को अपहरण कर लिया है ।

३. नारेबाजी :-

चुनाव में सफलता प्राप्त करने के लिए नेतागण नारे द्वारा जनता का ध्यान अपनी ओर आकर्षित करते हैं और अनेक जगहों पर पोस्टरों को चिपकाया जाता है । इन्हीं के द्वारा जनता को अपना परिचय देने हैं । जैसे 'महाभोज' उपन्यास में जब दा सहाब सरोहा गांव में भाषण देने के पहले घर - घर के दीवारों पर घरेलू उद्योग योजना के पोस्टर चिपकाने लगे । शीघ्र ही स्थिति यह हो गई कि " जिधर देखो नजर उठाओ , उधर मुसकुराते हुए दा सहाब और नीचे योजना की रूप रेखा मानो उनकी मुस्कान से ही बहकर निकल रही है योजना ।"¹ नारे के सम्बन्ध में कवि जगमोहन मिश्र की निम्न पक्तियाँ इस सम्बन्ध में विशेष दृष्टव्य है -

" जो कल तक , मेरी सत्ता का

खुला इजहार करते थे

लिए औरों को अब घूमें

चलन देखो तो नारों के । " ²

चुनाव छोटा हो या बड़ा नारेबाजी सभी क्षेत्रों में होता है । नारे का प्रयोग चुनाव के समय , चुनाव के पश्चात् नेताओं के आगमन पर नारेबाजी की जाती है । ' महाभोज' उपन्यास में जब सुकुल बाबू बिसू की मौत का हिसाब दा सहाब से मांगते हैं। तो वहां के बैठे सभी जनता नारे लगाने लगे - " और धांधली नहीं चलेगी , नहीं चलेगी , सुकुल बाबू जिंदा बाद जिन्दा बाद " । उ इस प्रकार किसी भी नेताओं के आगमन पर नारे लगाये जाते हैं ।

१. मन्नु भण्डारी ,महाभोज पृ.सं . ९९

२. डॉ.जगमोहन मिश्र, मोर्चा सम्भालो पृ . सं . २९

३. मन्नु भण्डारी ,महाभोज पृ.सं. ३३

४. सत्ता का मोह :-

नेताओं को जब मत प्राप्त करना होता है तो ये बड़ी - बड़ी बातें करते हैं परन्तु एक बार जीत जाने पर नेतागण ईद का चाँद हो जाते हैं । जनता की ओर ध्यान नहीं देते हैं इनकी बातें बातें जितनी मीठी होती है कार्य में उतने ही लापरवाह और पलक झपकते ही ये अपना रंग बदल लेते हैं । समाज में जनता के रक्षक उसी जनता से विश्वासघात करने में थोड़ा भी नहीं हिचकिचाते । खुले आम उनकी भावनाओं से खेलते हैं । ' महाभोज' उपन्यास में सुकुल बाबू ने कहा " इस बार तो देख लिया सबने जनता की एकता में बड़ा जोर है । तूफानी जोर । तूफान आता है तो बड़े - बड़े पेड़ों को जड़ से उखाड़ फेंकता है । जनता एक ऐसी है । फेंका हुआ आदमी ही इस बात को सबसे ज्यादा महसूस करता है । कुर्सी पर बैठना है तो जनता में फूट डालो । जनता की एकता कुर्सी के लिए सबसे बड़ा खतरा है " ¹ नेतागण वैसे तो समाज सुधार , छुआछूत दूर करने , दहेज , जातिवाद का विरोध , राष्ट्रीय एकता की बात एवं व्यक्ति के समान राष्ट्रीय अधिकारों की बात करते हैं । लेकिन ये यथार्थ में स्वयं इनसे बचना चाहते हैं । जातिवाद का रक्त इनके शरीर में प्रवाहित होता है और छुआछूत का जन्म इन्हीं के द्वारा हुआ है ।

सत्ता में बने रहने के लिए मंत्रियों द्वारा आहतों और पीड़ितों के लिए राशि वितरित की जाती है , जिसका उद्देश्य पीड़ियों की सेवा करना कम और अपना प्रचार करना अधिक होता है । जैसे ' महाभोज' उपन्यास में बिसू की हत्या हो जाने के कारण बिसू के पिता हीरा द्वारा " घरेलू उद्योग योजना का दा साहब उद्घाटन करवाते हैं और इसका लाभ अधिक से अधिक



हरिजनों तथा खेतिहर मजदूरों को मिले । “² इस प्रकार नेताओं की उदार मानी छवि जनता के सामने दिखाया जाता है और वे सत्ता का सुख — भोग सके । सत्ता का मोह आज इतना अधिक बढ़ गया है कि युगीन राजनीतिज्ञ को अपने चारों ओर सत्ता ही सत्ता दिखाई देती है अर्थात् वह सत्तामय हो गया है । परन्तु सत्ता से जुड़े कर्तव्यों की उसे कोई चिंता नहीं है । आम आदमी आज भी भुखमरी , पीड़ा , दुख , कष्ट विपत्तियों के दलदल में फंसे हुए है । सत्ता पर बैठा हुआ आदमी चाहता है कि वह सत्ता पर सदा — सदा के लिए बैठा रहे । यही नेताओं की मानसिकता होती है और छुआछूत का जन्त इन्ही के द्वारा हुआ है ।

नेताओं को केवल अपनी सत्ता को मोह रहता है । उसके लिए केवल सत्ता या कुर्सी ही मुख्या होती है । बाकी सभी गौण इन्हें सत्ता का मोह इतना अधिक रहता है , कि ये कुछ भी कर सकते हैं। चाहे किसी की भावनाओं से क्यों न खेलना पड़े ? ‘महाभोज ‘ उपन्यास में “ सक्सेना एक ईमानदार पुलिस आफिसर है जिन्हें राजनीतिक दबाव के कारण पदच्युत किया जाता है । इनके जैसे ईमानदार लोगों के लिए कहीं जगह नहीं होता है । “ड आज के व्यक्ति राजनीति को स्वार्थ सिद्धि का मंच बना दिया गया है । नेता बनने के पश्चात् तो मानों वह राजा ही बने जाते हैं । ऐसा राजा जो सब पर शासन करें , किन्तु उस पर किसी का शासन न हो ।

५. मतों की राजनीति :—

पहले राजनीति में आने का उद्देश्य लोगों की सेवा करना था । देश के प्रति समर्पण का सूचक था । लोग अपना सब कुछ खो कर भी देश सेवा को तत्पर कहते थे । परन्तु आज यह बात नहीं रही । आज अधिकांश लोग राजनीति में आते ही इसलिए है कि अपना स्वार्थ सिद्ध कर सके और इस स्वार्थ के कारण ही नेतागण एक — दूसरे पर लांछन लगाते ।

१. मन्नु भण्डारी महोभोज पृ.सं . ८२

२. मन्नु भण्डारी महोभोज पृ.सं . ८०

३. मन्नु भण्डारी महोभोज पृ.सं . १०५

अपने आप को श्रेष्ठ बनाया जाता है । जब चुनाव का समय आता है तो नेतागण जनता से अत्यधिक वोट प्राप्त करने के लिए अपनत्व दिखाते हैं उन्हें चंद सिक्कों तथा शराब की बोतलों से खरीद लेते हैं और मतदाताओं की खुब सेवा की जाती है । आज राजनीति में ही लोग प्रवेश कर सकते हैं जिसके पास रूपया हो । नेतागण भोली — भाली जनता के भावनाओं से खिलवाड़ करते हैं और तरह — तरह के आश्वासन देते हैं ।

जनता को लगता है कि हमें अधिकार प्राप्त होगा लेकिन ये नेतागण इस तरह झूठे आश्वासन सत्ता प्राप्त करने के लिए देते हैं । जिस तरह ‘ महाभोज ‘ उपन्यास में सुकुल बाबू नाटकीय मुद्रा में कहा — “ आप लोग मुझसे नराज हुए —————हक था आपका । आप बदले में मैं भी नराजगी दिखाता तो गुनाह होता मेरा कैसे भूल सकता हूँ कि दा साहब तक आप लोगों का होकर रहा हूँ ————— आप लोगों के लिए खड़ा ————— हक है आप लोगों का मुझपर और अब हक अदायगी का अवसर आया है तो यह सुकुलवा चूकेगा नहीं । चूके तो मारिये मुँह पर । “¹

इस तरह से जनता के सामने अपने स्वर्थ को ना दिखाते हुए जनता के हितैसी बताते हैं जिस प्रकार इस उपन्यास में दा साहब अपने आप को जनता के हमर्दद बताते हुए कहते हैं कि “ जिस दिन अपने लोगों का विश्वास खो दूँगा —————उस दिन कुर्सी पर नहीं बैठूँगा । सबके विश्वास पर ही टिकी हुई है मेरी कुर्सी । सबसे सद्भाव पर ही जिन्दा हूँ मैं । “² इस तरह हरएक राजनीतिज्ञ अपने स्वार्थ पूर्ति के लिए राजनीति करते हैं । कुर्सीधारी व्यक्ति की सबसे



बड़ी विशेषता होती है कि कुर्सी पाने के पहले वह कुर्सी के लिए घर – घर वोटों की भीख मांगता है और मतदाताओं से तरह – तरह के वायदे करता है । इतना ही नहीं वह उनसे अपने आत्मीय संबंध स्थापित करता है । पुरानी पहचान बताता है । उनके पूर्व पुरुषों को नमन करता है किन्तु चुनाव जितने और कुर्सी प्राप्त करने पर उसकी दृष्टि बदल जाती है , जानते हुए भी वह लोगों को नहीं पहचानता । मदन डागा ठीक लिखते हैं –

“ कुर्सी पे बैठा जो , मुझे पहचानता नहीं ,
वोटों की गरज घर मेरे आया हुआ सो है “ ड

इस तरह सत्ता मिल जाने पर नेताओं का व्यवहार जनता के प्रति बदल जाता है । सिर्फ अपने स्वार्थ सिद्ध करते हैं ।

६. अखबार की भूमिका :—

अखबार राजनीति भ्रष्टाचारों को आश्रय देने के कारण अखबार भी दोषी होता है । आज का अखबार कही न कही राजनीति से जुड़ा हुआ है और अखबार सत्ताधारी के समर्थक होते हैं । उनके सिद्धांतों के प्रचार – प्रसार में लगे होते हैं । सत्ताधारी दल के अव्यवस्थाओं एवं अनियमितताओं को सुव्यवस्थिति एवं नियमबद्ध निरूपित होते हैं । अखबार जनता की पीड़ा और मांग को व्यक्त करने की अपेक्षा लूटपाट तथा पूंजीपतियों के समर्थक जैसे बातों का जिक्र

१. मन्नू भण्डारी महाभोज पृ . सं . ३६
२. मन्नू भण्डारी महोभोज पृ.सं . ९९
३. मदन डागा , यह कैसा मजाक है पृ.सं . ६५

करना अधिक उपयोगी समझते हैं । और तरह – तरह के सनसनीखेज खबरों पर ज्यादा दिलचस्प होता है । जिस तरह मन्नू जी की उपन्यास ‘ महाभोज ’ में दा सहाब कागज का कोटा बढ़ा देते हैं और उन्हें चेतावनी भरे स्वर में कहते हैं । आप के अखबारों को पूरा हक मिल गया , अब आप लोगों को भी पूरा पूरा कर्तव्य निभाना चाहिए , अपने देश के प्रति , समाज के प्रति , और खास कर के इस देश की गरीब जनता के प्रति । बहुत बड़ी जिम्मेदारी होती है

‘मशाल’ नामक अखबार के द्वारा लेखिका ने यह स्पष्ट किया है कि हमारे देश की अखबार अब जनता की आवाज बुलन्द न कर हमेशा शासकों के प्रशंसक बने हुए हैं और सत्ताधारी नेता अखबार नवासी को अपने पक्ष में करने में सफल रहे हैं । उन्हें विभिन्न प्रकार के प्रलोभन दिया जाता है और अखबार नेताओं के हाँ में हाँ मिलाते हैं । सच को झूठ और झूठ को सच साबित कर देते हैं । अखबार भी नेताओं के गलतियों पर पर्दा डालते हुए उनकी अच्छाईयों को प्रगट करता है ।

७. जनसामान्य की भावनाओं से खिलवाड़ :—

नेताओं की स्वार्थी प्रवृत्ति एवं जनसामान्य की भावनाओं से खिलवाड़ के कारण सामान्य जनता इन नेताओं की असलियत पहचान चुकी है । वोट प्राप्ति के लिए नेताओं द्वारा मतदाताओं को रिझाने हेतु दी जाने वाली वस्तुओं की असलियत आज प्रत्येक नागरिक जान चुका है । इसलिए ऐसी चीजों को वह ले तो लेती है किन्तु वोट अपनी इच्छानुसार ही देता है और अत्यन्त चालाकी से बांटले वाले से पूछ भी लेता है कि इस बार किसे वोट देना है। सत्ता प्राप्त करने के लिए वह जनता से बड़े – बड़े वादे करता है लेकिन जब उन्हें सत्ता मिल जाती है तो वे जनता को पूछना तो दूर उन्हें देखना पसंद नहीं करते हैं।

आज की राजनैतिक स्थिति यह है , जहां घटनाएं होती हैं वहां सहायता के पहले नेतागण पंहुच जाते हैं । वहां भी उनके भावनाओं से खिलवाड़ करते हैं । जिस तरह मन्नू



भण्डारी का उपन्यास ' महाभोज ' में जब बिसू की हत्या हो जाती है तो सबसे पहले नेतागण आते हैं । उसके बाद कार्यवाही की जाती है । इस उपन्यास में दा साहब भाषण में ग्रामीणों से कहते हैं — “ मैं जाकर किसी बड़े अफसर को बयान लेने के लिए भेजूंगा । चूकिए मत इस बार नहीं तो दोषी में नहीं , आप खुद होंगे । “ ¹ इस तरह से दा साहब जानते हैं कि हत्या कौन किया है ? फिर भी वह उनके दुखित मन को मरहम के बजाय उनके भावनाओं से खिलवाड़ करते हैं।

८. जेल में होने वाली अन्याय :-

जेल एक ऐसा स्थान है जहाँ अपराध को समाज से पृथक रखा जाता है और उसमें अपराध के प्रति पश्चाताप की भावना पैदा की जाती है । उसे यह महसूस करने का अवसर प्रदान किया जाता है कि समाज को उसने हानि पहुंचायी है उसके नियमों की अवहेलना पर व्यक्ति का कोई अस्तित्व नहीं है । अपराधियों को जेल में रखकर उनमें सुधार किया जाता है । तथा समाज ऐसे व्यक्तियों को उनकी श्रुति के कारण कही समाप्त न कर दें इसी वजह से उनकी रक्षा की जाते हैं । जेल , बन्दीगृह अथवा कारागार के नाम से जाना जाता है । आज

१. मन्नु भण्डारी महाभोज पृ.सं . ४४

२. मन्नु भण्डारी महाभोज पृ.सं. ४४

३. मन्नु भण्डारी महाभोज पृ.सं .९८

अपराधियों की संख्या निरंतर वृद्धि होती जा रही है और राजनीति उन्हें शरण देती है अपराध ज्यादा उच्च और निम्न वर्ग के लोगों द्वारा होता है । उच्च वर्ग के अपराधी व्यक्तियों को जेलों में रहने या जेल से निकालने का हाथ राजनीतिज्ञ करते हैं । लेकिन निम्न वर्ग के अपराधी को जेल में कठिनाईयों का सामना करना पड़ता है और ऐसा भी होता है कि निम्न वर्ग के लोगों को पुलिस वाले बिना अपराध किये जेल भेज दिया जाता है । जिस तरह महाभोज उपन्यास में “ बिसू को नक्सली करार देकर पुलिस गिरफ्तार कर लेती है । जेल में उसे विभिन्न तरह के यातनाएँ दी जाती है । उसके हाथ — पांव में बेड़ियाँ पहना रखी थी । हतकड़ियों की वजह से उनके हाथ और पांव में घाव हो गये । इस तरह बिसू के अमानुषिक अत्याचार किया गया । “ ²

इस तरह राजनीतिक संरक्षण में पल रहा अपराधी और निम्न वर्ग के अपराधी में काफी अन्तर है । वर्तमान जेल व्यवस्था में इतना भयावह नहीं है , कैदियों के लिए जेल योजना ने पर्याप्त सुविधा प्रदान किया जाता है लेकिन जो पुलिस विभाग में कार्यरत अधिकारियों , सिपाहियों , खाना बनाने वाले रसोईयाँ है । खाने के संबध में रमणिका गुप्ता बताती है कि “ हमारे कार्यकर्ताओं द्वारा चेक किये जाने के कारण जेलर खाने की मात्रा और क्वालिटी कम नहीं कर पाते थे । “ ² इस तरह अनुमानसिक अत्याचार कई रूपों में किया जाता है।

९. अयोग्य व्यक्तियों का राजनीति में प्रवेश :-

राजनीति में अयोग्य व्यक्ति भी सत्ता प्राप्त कर सकता है और सत्ता प्राप्त करने के लिए वह साम , दाम , दण्ड , भेद की नीति अपनाते हैं । नेतागण अपने स्वार्थ की पूर्ति के लिए सर्व साधारण जनता के दुख दर्द की अवेहलना कर हमारे नेता अपने हित को ही सर्वोपरि समझते हैं और उन्हें स्वयं तथा अपने आदमियों को ही अधिक से अधिक लाभ पहुँचाने का ध्यान रहता है चाहे वह अयोग्य ही क्यों न हो जैसे महाभोज में मुख्यमंत्री दा साहब ने अपने खास आदमी लखन को सरोहा गाँव में चुनाव के लिए खड़ा किया लखन अयोग्य होने के साथ —साथ उतावला भी है । दा साहब लखन को एक कुशल राजनीतिज्ञ होने का गुण बताते हुए कहते हैं कि “ आवेश राजनीति का दुश्मन है । राजनीति में विवेक चाहिए । विवेक और धीरज ! —————पद पर बैठोगे तो पद की जिम्मेदारी स्वयं सब सिखा देगी । “ ¹ ऐसे ही



आयोग्य व्यक्तियों के आने से राजनीति में भ्रष्टाचार उत्पन्न होता है और ये नेता गण सिर्फ अपने सुविधाओं को ही देखते हैं , जनता के दुख दर्द की परवाह नहीं होता है ।

१०. भाषण और आश्वासन :-

ये नेतागण जनता को झूठे भाषण तथा झूठे आश्वासन देते हैं । बड़े — बड़े शब्दों का प्रयोग कर जनता की भोली मानसिकता से छल करते हैं । जैसे मन्मथ भंडारी का उपन्यास महाभोज में सुकूल बाबू के भाषण का एक अंश — “ खड़ा हुआ हूँ आप लोगों के हक की लड़ाई लड़ने के लिए बिसू की मौत का हिसाब पूछने के लिए । बात केवल बिसू की मौत की नहीं है ————— यह आप सब लोगों के जिंदा रहने का सवाल है ————— अपने पूरे हक के साथ जिंदा रहने का । यह मौत कुछ हरिजनों की या एक बिसू की नहीं ————— आपके जिंदा रहने के हक की बात है । आपका यह हक थोड़े से स्वार्थ के लिए गाँव के धनी किसानों के हाथ बेच दिया गया है और यही हक मुझे आपको वापस दिलवाना है । जुलूम ने आप लोगों के होसले तोड़ दिए हैं , इसलिए मैं लड़ूँगा आप की लड़ाई । “ ²

१. इसी तरह तिलक राज गोस्वामी की कहानी ‘ अपना घर अपने लोग ‘ का नायक प्रमोद विवश होकर नेताओं के प्रति अपना आक्रोश इन शब्दों में भाषण और आश्वासन में अभिव्यक्त करता है — “ सारी समस्या इन साले नेताओं ने चौपट कर रखी है । यह निकम्मी सरकार गत तीस वर्षों में आवास: सामस्या का समाधान भी नहीं कर पायी है । इन स्वार्थी नेताओं को अपनी कुर्सियों से मतलब है । जनता जाये भाड़ में । वर्षों से सुनते आ रहे हैं कि ये शहरी आवासीय मकानों की सीमाबंदी करेंगे । किसी के पास निर्धारित सीमा से बड़ा मकान का भूभाग नहीं होता लेकिन ये सब कोरे आश्वासन के अपने बड़े — बड़े बंगले हैं , प्लॉट हैं । सीमा बंदी हो जाने पर उन्हें अपने भूखंड के छोटा हो जाने का डर रहता है । ये जमीनें कुछ नहीं करेंगे , खाली हवा में नारे उछालते रहेंगे , जनता को मूर्ख बनाते रहेंगे । “ ड

आज के युग में समाज के साथ — साथ राजनीति में आश्वासनों का बोलबाला है सच तो यह है कि आज राजनेता झूठे आश्वासनों के अभ्यस्त हो चुके हैं और ऐसे की आश्वासन जनता को सांत्वाना देते हैं । जैसे ‘ महाभोज ‘ उपन्यास में दा सहाब कहते हैं — “ मुझे तो ऐसे निर्भिक और उत्साही नवयुवकों की आवश्यकता है इस योजना के लिए चाहता हूँ कि इस योजना को आप लोग ही संभाल लें आप लोग ही चलाएं । “ इस प्रकार जनता से झूठे आश्वासन देते हैं ।

११. भ्रष्ट पुलिस प्रशासन:-

आज की पुलिस भ्रष्टाचार में दिल खोलकर असहाय , निर्बलों का खून चूस रहीं है । पुलिस नागरिकों की रक्षा के लिए है लेकिन व्यवहारिक दृष्टि से पुलिस आप आदमी की रक्षा नहीं करती वह उसे संकट में सहयोग देने के बजाय उसका हर प्रकार शोषण करती है जैसे पुलिस का कर्तव्य शोषकों की रक्षा के लिए है और तमाम कानूनों का उपयोग जनता के अधिकारों को कुचलने के लिए है वस्तुतः पुलिस व्यवस्था से ज्यादा शोषक की लठैत लगती है और कानून तो उनकी मुट्ठी में रखा हुआ खिलौना हो । पुलिस जमींदारों तथा साहूकारों को संरक्षण देती है ।

आज गुण्डे और पुलिस में कोई फर्क नहीं रह गया है । इस संबंध में दिनमान लिखते हैं “ पुलिस और गुण्डों में कोई फर्क नहीं है । दोनों जनता के दुश्मन हैं , उसे लूटते हैं , दोनों को सेठ साहूकार और नेता लोग पाले रहते हैं । जहाँ गुण्डे कमजोर पड़ते हैं वहाँ पुलिस काम करती है । कस्बों में आज भी पुलिस का राज है , निरंकुश है , भ्रष्ट है यदि कस्बों की नींद हराम है तो उसी के कारण । चोरी , डकैती , गुण्डागर्दी बढ़ रही है , हर कस्बों में पुलिस



राजा है , थानेदार , दरोगा वहां किसी नादिरशाह से कम नहीं है , बस उसका हुक्म और मर्जी चलती है । “ ¹ इनकी इस भूमिका को देख कर ऐसा लगता है कि जनता की रक्षक नहीं भक्षक है ।

आज पुलिस के संरक्षण में पैसों के बल पर गम्भीर से गम्भीर अपराध करने वाला व्यक्ति भी आज बिना किसी प्रकार की सजा पाये मुक्त हो जाता है । गरीब जनता की पुलिस थाने में आज कोई सुनवाई नहीं होती । यदि उनकी बात सुनी भी जाती है तो उसे रिपोर्ट के रूप में दर्ज तक नहीं किया जाता है जब तक कोई दबाव न हो ।

१. मन्नु भण्डारी महाभोज पृ.सं. २०
२. मन्नु भण्डारी महाभोज पृ.सं . ३३
३. तिलक राज गोसवामी अपना घर अपने लोग पृ.सं .१४
४. डॉ.ए.पी श्रीवास्तव , समास सास्त्र पृ .सं. २०३

चाहे यह दबाव राजनीति नेताओं का हो या धन का । कभी — कभी धन के अधार पर रिपोर्ट सही या गलत लिख ली जाती है , लेकिन राजनीति दबाव के कारण अथवा अत्यधिक धन प्राप्ति के लालच से उस पर कोई कार्यवाही नहीं की जाती है ।

इस प्रकार से सारे तथ्व सम्पूर्ण भारत की पुलिस व्यवस्था में व्याप्त है । यही कारण है कि आज जनता का भारतीय पुलिस व्यवस्था से विश्वास समाप्त होता जा रहा है । वास्तविकता यह है कि पुलिस को अपराध नियंत्रण के क्षेत्र में जिस प्रकार की भूमिका का निर्वाह करना चाहिए उस प्रकार की भूमिका का निर्वाह आज पुलिस व्यवस्था द्वारा नहीं किया जा रहा है । आज की पुलिस राजनीति संरक्षण में पल रहा है और साधारण व्यक्ति पर बिना जुर्म किये उसे सजा दी जाती है । जिस प्रकार मन्नु भण्डारी की ‘ महाभोज ‘ में बिन्दा को बिसू के हत्या के आरोप में उसे जेल बंद कर दिया जाता है । पुलिस की बातों और ठोकड़ों की बौछार के बीच बिन्दा कह रहा है “ मैंने बिसू को नहीं मारा ————— मैं बिसू मार नहीं सकता । मुझे तो उसकी आखरी इच्छा पूरी करनी है । “ ¹ लेकिन पुलिस उसे जबदस्ती जुर्म कुबुल करवाने का प्रयास करती है । पुलिस के इस तरह के अपराध पर नियंत्रण तभी संभव है जब वे स्वयं के स्वार्थ को त्याग कर समाजिक कल्याण को ध्यान में रखते हुए ईमानदारी और लगन के साथ अपने उत्तरदायित्व का निर्वाह करें तभी यह सम्भाव हो सकेगा ।

१२. राजनीति अत्याचार :—

वर्तमान में राजनीति का स्वरूप इतना वीभत्स हो गया है कि उसमें मानवीय जीवन , मूल्य महत्वहीन हो गये है । राजनेताओं ने सत्ता पर बने रहने के लिए वह कुछ कर सकती है । चाहे वह किसी भी अपराधियों को संरक्षण देना ही क्यों न पड़े । इसी वजह से अपराधियों की संख्या बढ़ती जा रही है । अत्याचारियों पर राजनीतिज्ञों का संरक्षण होता है । जैसे ‘ महाभोज ‘ उपन्यास में बिसू के हत्यारों को राजनीतिक शरण मिलने पर लोचन बाबू कहते है “ अत्याचारी को संरक्षण दो और पीड़ितों को कुचलो । यही थे हमारे आदर्श और सिद्धांत जिन्हें लेकर चले थे हम । “ ² लोचन बाबू आगे कहते हैं कि मजदूरों को सरकारी रेट पर मजदूरी न मिलना ————— ‘ आदमियों को जिन्दा जला दिया जाना दिन व दिन बढ़ते अत्याचार असुरक्षा ————— बिसू की मौत ————— इन सबसे तो चार चाँद लग रहे हैं न पार्टी की इमेज पर ? पार्टी का ध्यान ही किसे रह गया है आज ।“ ड इस प्रकार नेताओं ने अत्याचारियों को शरण देते है और सत्ता में बने रहते हैं ।

निष्कर्ष :—



उपरोक्त विवेचन से स्पष्ट है कि राजनीति का स्वरूप कितना वीभत्स और घृणित हो गया है कि उसमें मानव मूल्यों और मानव जीवन की कोई महत्ता नहीं रह गयी है। सत्य तो यह है कि अब राजनीतिज्ञों का मूल उद्देश्य सत्ता पर अपना अधिकार स्थापित करना है और राजनीतिज्ञ के सम्पूर्ण जीवन का एक मात्र ध्येय केवल राजनीतिक दांव पेंच एवं ईमानदारी का खिलवाड़ ही जान पड़ता है। जनता के आवाज कहे जाने वाले तथा प्रजातंत्र को बनाये रखने का दम भरने वाले अखबार भी अधिक से अधिक सुविधाएं प्राप्त करने तथा लालच के कारण नैतिकता को विस्मरण पर सत्ताधारियों के संकेतानुसार ही समाचार प्रकाशित करते हैं।

१. मन्नू भण्डारी महाभोज पृ.सं दृ १७६
२. मन्नू भण्डारी महाभोज पृ.सं दृ ५८
३. मन्नू भण्डारी महाभोज पृ.सं दृ ५९

आधार ग्रंथ

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**भारतीय किसान-कृषि की बढ़ती जनसंख्या एक मुद्दा और अनेक चुनौतियां****भारतीय संस्कृति व समाजनीति****डॉ. रोहताश जमदग्नि**

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भूमिका

'मदर इण्डिया' फिल्म महबूब खान ने बनाई थी। फिल्म अभिनीत राज कुमार नर्सिंग दाम्पत्य किसान व कृषि पर आधारित रहा। पेट की ज्वाला किसान द्वारा कृषि करने पर उपजाए गए अन्न से शान्त होती है। विधवा कैसे जीवन कृषि आधारित किसानी बनकर व्यतीत करती है, तमाम भारतवर्ष ने देखा है। आज 21वीं सदी में कोरोना कालखण्ड के दौरान एक अनुमान के अनुसार एक करोड़ लड़कियों की पढ़ाई बाधित हुई है। सामाजिक प्रथाएं एक ओर ही तलवारे हैं। इतना ही नहीं, इंटरनेशनल लेकर ऑर्गनाइजेशन के मुताबिक भारत में 18 से 24 साल की 48 प्रतिशत लड़कियां बेरोजगार, शिक्षा या प्रशिक्षण से जुड़ी नहीं है। आधी दुनिया इन हालातों में कृषि करके किसान होगी, वहीं आटोमेशन की आंधी में आधी दुनिया बेरोजगार होकर कृषि क्षेत्र में किसान की भूमिका अदा करके किसानों की चुनौतियां बढ़ाएंगी और कृषि को ज्वलंत मुद्दों में झोंक डालेंगी। एकजीक्यूटिव डायरेक्टर पापुलेशन फाउंडेशन ऑफ इण्डिया, नई दिल्ली की पूनम मुतरेजा कहती हैं विज्ञान पत्रिका लैंसेट में प्रकाशित अध्ययन के मुताबिक किशोरों के स्वास्थ्य एवं कल्याण पर खर्च बढ़ाकर तीन स्तर का लाभ लिया जा सकता है 1 लाभ तत्काल मिलेगा 2 लाभ भविष्य में स्वस्थ व्यस्क आबादी के रूप में मिलेगा 3 लाभ स्वस्थ अगली पीढ़ी के रूप में मिलेगा। 'इनपुट और आउटपुट' की अवधारणा यह कहती है कि जैसा बोया जाएगा-वैसा काटा जाएगा। भारत आज अनेक क्षेत्रों में स्वार्थ बो रहा है और स्वार्थ ही बोया गया था जिसके परिणामस्वरूप आज की परिस्थितियां प्रत्यक्ष गवाह हैं। भारत दो टांगों पर चल रहा है। दोनों टांगे पूर्व-पश्चिम तथा उत्तर-दक्षिण दिशा में शक्ति नुमाइश कर रही है। जिसका घर था उसे बेघर किए जाने के लिए अपने समुदाय आयातित किए जा रहे हैं। घरवाला पैदा कर रहा है। घरवाली पीस रही है और पकाकर खिला रही है। आयातित पशु संसाधनों को पका-पका कर निगल रहे हैं। चार से चालीस की प्रतिस्पर्धा में जन-सांख्यिकी बदल रहे हैं और मतदाता संख्या से राज-पाट हथिया रहे हैं। किसान बेचारा घरवाला वंशकुल एक दीपक जला रहा है और गाय-भैंसों को पाल रहा है। अतिरिक्त परवरिश किसान की चुनौती है तथा चारावाह पशुओं का गोबर कृषि का प्राण है जो न मिलना, कृषि का प्रमुख मुद्दा है क्योंकि आयातित पशुओं को अपना खाद्य पदार्थ बना रहे हैं।

घटते रोजगार-बढ़ते बेरोजगार बनाम किसान कृषि

एक जमाना था कि 1589 में विलियम ली नाम के पादरी ने लम्बे मोजे (स्टाकिंग) को तैयार करने का मशीनी तरीका खोजकर दुनिया को बताया व दिखाया। इस तरीके ने समय के साथ कई टेक्सटाइल मशीनों के बनने की राह खोली। ली के इस तरीके को एलिजाबेथ प्रथम ने पेटेंट नहीं किया क्योंकि यह तरीका मजदूरों का काम छीन रहा था। भाप से चलने वाली मशीनों ने मजदूरों के हाथ काटने का प्राथमिक सिलसिला शुरू किया। कृषि फसल हेतु बीज बुआई व कटाई मशीन द्वारा किए जाने से खेतीहर मजदूर बेकार हुए जिनकी बढ़ती आबादी अनाज चाहती थी। आटोमेशन के विरोध में इंग्लैण्ड में आंदोलन हुए। औद्योगिकीकरण होता गया। वो एक जमाना था मशीन आदमी चलाता था अब तो मशीन भी रोबोट चलाएगा, क्षेत्र चाहे कोई भी हो जैसे: 1 होम आटोमेशन 2 ऑफिस आटोमेशन 3 कस्टमर केयर आटोमेशन 4 अन्य सभी क्षेत्रों में आटोमेशन।



जानी-मानी अन्तरराष्ट्रीय सलाहकार संस्था प्राइस वाटर हाउस कूपर्स (पीडब्लूसी) के अनुसार 2035 तक दुनिया के एक तिहाई रोजगार आटोमेशन, एआई और नई तकनीक के हवाले होंगे क्योंकि प्रतिस्पर्धा में बने रहने के लिए दुनिया के साथ यहां भी आटोमेशन को बढ़ावा देना ही पड़ेगा। रोजगार रहेंगे नहीं, तो बेरोजगार पेट भरने के लिए अपने प्राथमिक व्यवसाय की ओर लौटेंगे ही। मानव का प्राथमिक व्यवसाय कृषि ही है। पढ़ा-लिखा अधिकारी व कर्मचारी वर्ग का नया-नया बेरोजगार कृषि क्षेत्र में किसान की भूमिका अदा करके पुश्तैनी किसानों के लिए एक चुनौती पेश करेगा। हर धनवान के पास सैकड़ों एकड़ कृषि भूमि है मगर किसान के पास पेट पालने के लिए भी कृषि भूमि नहीं है। विकट परिस्थितियों अर्थात् बहन-भाई की शादी व मां-बाप के इलाज हेतु किसान बेचारा कृषिभूमि बेच चुका है। एक सन्तान को पालन के लिए अपने ही पुश्तैनी जमीन में दूसरों के आदेशों का गुलाम किसान कृषि क्षेत्र में एक मुद्दा है।

बढ़ती जनसंख्या के अन्तर्गत हिन्दू समाज अपनी स्वचेतना से राष्ट्रहितैषी बनकर एक या दो बच्चा पैदा कर रहा है लेकिन मुस्लिम समाज चार से चालीस की पद्धति व अवधारणा के अनुयायी है। जितनी आबादी के लिए हमारे पास भौतिक व प्राकृतिक संसाधन मौजूद हैं उतनी ही हमें जनसंख्या बढ़ानी चाहिए। आज इस औद्योगिकीकरण व प्रौद्योगिकीकरण के संचालक रोबोट के युग में हम भारतीयों ने जनसंख्या नियन्त्रण करके अपने रोजगार बचाने होंगे, गर जनसंख्या भी बढ़ती गई रोजगार भी घटते गए तो कृषि भूमि बंजर होने में ज्यादा समय नहीं लेगी क्योंकि आज कृषि भूमि पर लगातार फसल होने के कारण प्रति एकड़ उपज कम होती जा रही, वहीं जनसंख्या बढ़ती जा रही है, इतना ही नहीं, आटोमेशन की आंधी से बेरोजगारों की फौज बढ़ती जा रही है।

घटती कृषि भूमि-बढ़ती मुस्लिम आबादी बनाम किसान-कृषि

अरब क्षेत्र में कुरैश नामक एक कबीला था। अरब पूर्व व पश्चिम का व्यापारिक केन्द्र था जो दोनों छोरों के व्यापारियों से कमाता था जैसे वह धनी तेल के कारण रहा है। तमाम अय्याशियां-शराब-सवाब-कवाब इस क्षेत्र की पहचान थी। कुरैश कबीले में अब्दुल्ला मतलीब हुए उनका पुत्र अब्दुल्ला हुआ। अब्दुल्ला की पत्नी आमीना हुई। अब्दुल्ला-आमीना के सन्तान थे-हजरत मुहम्मद साहब। हजरत की पैदाइश से पहले पिता, छः साल, आठ साल के बाद मां व दादा चल बसे। हनीमा नामक महिला ने हजरत को दूध पिलाया। हजरत के तीन चाचा अब्बू तालीब, हमजा व अब्बास थे। सीरिया को श्याम मुसलमान एक कहा करते थे। श्यामके दो शहर व्यापारिक केन्द्र थे: बसरा, बगदाद। हजरत 12 वर्ष की आयु चाचा अब्बू के साथ बसरा, बगदाद जाकर सफल व्यापारिक नियमों के संस्थापक बन गए: मजदूरी देने में देरी करना भी, व्यापारी का मुनाफा है जो हराम है। ईरानी-यूनानी आपसी ददागिरी में लड़े। ईरानी डेयरियस प्रथम ने यूनानियों को उजाड़ डाला मगर कालान्तर में यूनानी-सिकन्दर ने ईरानी डेयरियस द्वितीय को जमींदोज कर डाला। खदीजा विधवा एक धनी व्यापारी थी। हजरत के चाचा का व्यापार अगर एक रुपये का था तो खदीजा विधवा का दस रुपए का था। हजरत को खदीजा ने अपने व्यापार में लगा लिया। हजरत 25 का हुआ तो खदीजा विधवा 40 की दोनों ने शादी कर ली। मेहर रकम इस्लाम में यहूदी (हिबू) से आया है जो उन दिनों प्रचलन में था क्योंकि इस्लाम से पहले यहूदी मान्यताएं अरब में प्रचलित थीं। हजरत ने 500 मेहर रकम दी थी। हजरत ईसाई-यहूदियों से प्रश्न करने लगे-भगवान कहां है? हीरा गुफा में जाने के लिए हजरत ने 4-5 किलोमीटर चलना पड़ता था। 40 की आयु में हजरत को ज्ञान मिला। जबरीला (उर्दू) गैबरील (अंग्रेजी) में तथा कुरान सरीफ में गिबराइल नामक फरिश्ता भगवान ने ईसा-मसीह व हजरत मोहम्मद साहब के पास भेजा। फरिश्ते ने कहा-हजरत अल्ला भगवान का संदेश पढ़ो। हजरत ने कहा-मैं अनपढ़ हूं। फरिश्ते ने फिर कहा और हजरत ने पढ़ा सोती दुनिया को जगाओ-अज्ञान की चादर हटाओ। यह अल्लाह/भगवान का हजरत को पहला संदेश था। फरिश्ते ने हजरत को कहा कि भगवान/अल्लाह अब तुमसे सीधी बात करेंगे। इस प्रकार हजरत पैगम्बर नियुक्त हुए। पैगम्बर की नियुक्ति का



प्रमाण—पत्र हजरत की पत्नी खदीजा विधवा ने मुसलमान बनकर दिया जो पृथ्वी की पहली मुसलमान थी। दूसरा मुसलमान हजरत का दोस्त अबुबकर, तीसरा मुसलमान हजरत का मौसेरा—चचेरा भाई हजरत अली, चौथा मुसलमान हजरत का नौकर जैद बना था। कुरान सरीफ में दुनिया की उत्पत्ति का ब्यौरा इस्लाम का अपना नहीं है बल्कि यहूदी—हिबू में जो दुनिया की उत्पत्ति की जानकारी है वही कुरान सरीफ में दी गई है। इसके बाद इस्लाम का संविधान बनाया जाता है। चार—चालीस का फार्मूला हजरत के संविधान की देन है। जिसे धरती खाने—पाने के लिए घटती है और जनसंख्या बढ़ती है। अरबी मुसलमानों और हिन्दुस्तानी हिन्दू हिन्दुओं की प्रकृति में दिन—रात का अन्तर है। मुसलमान व्यापारी है। हिन्दू कृषक है। मुसलमान शादी को समझौता मानता है। हिन्दू शादी को सात जन्मों का साथ मानता है। मुसलमान मूर्ति विरोधी, हिन्दू मूर्ति पूजक है। मुसलमान जीव खाने वाला प्राणी है और हिन्दू अनाज उगाने वाला मानव है इसीलिए मुसलमान जनसंख्या बढ़ाकर धरती से कृषि व किसान के लिए चुनौती व मुद्दे परोस रहा है। देखिए: यहां ध्यान देने वाली बात यह भी है जब 1857 में भारत का क्षेत्रफल 83 लाख वर्ग किलोमीटर था, तब भारत की जनसंख्या मात्र 35 करोड़ थी। आज वर्तमान में भारत की जनसंख्या 138 करोड़ को पार चुकी है।

- 1 दुनिया की 18 प्रतिशत मानव आबादी भारत के पास है।
- 2 दुनिया की 2.4 प्रतिशत जमीन भारत के पास है।
- 3 दुनिया का 04 प्रतिशत पीने का पानी भारत में है।
- 4 दुनिया का 2.4 प्रतिशत वन क्षेत्र भारत में है।

भारत में जनसंख्या—संसाधन अनुपात असंतुलित है जो चिंतनीय विषय है। कृषि व किसान की समस्या बढ़ती आबादी है: हम 75 वर्षों में 75 प्रतिशत आबादी को स्वच्छ पानी व स्वच्छ हवा नहीं दे पाए:

- 1 122 देशों में 119वें स्थान पर भारत है, विश्व में भारत खराब पानी पीने वालों में तीसरा बड़ा देश है, जो किसानों के लिए एक चुनौती है।
- 2 30 सबसे प्रदूषित शहरों में 22 शहर भारत के हैं जो दुनिया में भारत की शुद्ध हवा का परचम लहरा रहे हैं जो किसान की खेती के लिए हानिकारक हैं।
- 3 मानव विकास सूचकांक 2020 में 189 देशों की सूची में भारत 131वें स्थान पर है।
- 4 वैश्विक भूख सूचकांक 2020 में 107 देशों की सूची में भारत 94वें स्थान पर है।
- 5 मानव पूंजी सूचकांक 2020 में 174 देशों की सूची में भारत 116वें स्थान पर है।

इसी असंतुलित परिप्रेक्ष्य में अश्विनी कुमार उपाध्याय ने उच्चतम न्यायालय में जनसंख्या नियन्त्रण कानून की याचिका दर्ज की, जिसमें कहा—देश में उपलब्ध प्राकृतिक संसाधन, कृषि, भूमि, पेयजल और अन्य मूलभूत जरूरतों की उपलब्धता की तुलना में जनसंख्या लगातार चिंताजनक स्थिति में बढ़ती जा रही है।

याचिका मांग करती है कि जनसंख्या नियन्त्रण समवर्ती सूची में है इसलिए सुप्रीम कोर्ट केन्द्र सरकार को निर्देश दे कि वह नागरिकों के गुणवत्तापरक जीवन के लिए कड़े और प्रभावी नियम, कानून और दिशा निर्देश तैयार करें। जिससे किसानों की समस्या व चुनौतियों पर अंकुश लगाया जा सके। आज चीन 141 करोड़ आबादी वाला देश है जो दुनिया में सबसे ज्यादा आबादी रखता है। यू.एन.—जून 2019 की रिपोर्ट में कहता है कि 2027 तक भारत सबसे ज्यादा आबादी वाला देश होगा। चीन का क्षेत्रफल भारत से तीन गुणा ज्यादा है। भारत का मुसलमान चार—चालीस के फेर में आकर अगले दशक में 1.5 अरब की आबादी कर डालेगा जिस प्रकार इसकी रफ्तार है: भारत की जनसंख्या 0.99 प्रतिशत की दर से बढ़ रही है जबकि चीन की जनसंख्या 0.39 प्रतिशत की दर से बढ़ रही है। किसान व कृषि के लिए एक संकट पैदा कर रही है: बढ़ती भारतीय जनसंख्या।

घटते संसाधन—बढ़ते षडयन्त्र बनाम किसान कृषि



संयुक्त अरब अमीरात (यूएई) अमीरों की तानाशाही वाला क्षेत्र रहा है। वहां निकलकर संसार में सल्तनत स्थापित करने वाले सुल्तान बने, बादशाहत स्थापित करके प्रजा को इस्लामिक बनाने वाले बादशाह कहलाए, रईसी के कारण अपनी रियासत स्थापित करते गए और खानत से खान मार्केट बनते हुए पुश्तैनी व्यापार में दिलचस्पी रखने वाले मुसलमान भारतीय संसाधनों को खाते-पीते रहे हैं तथा उसकी अदायगी इस्लाम के इस्लामीकरण को करते रहे। जिसका खामियाजा भारतीय किसानों को उठाना पड़ रहा है और कृषि भूमि बंजर होने के कगार पर है। इन्होंने षड़यन्त्रों का हिमालय खड़ा किया है:

1 बिहार में औवेसी की पार्टी को सफलता का क्या मिली कि इन्होंने कश्मीर घाटी के दुष्कर्मी को दोहराना शुरू कर दिया। उदाहरणतः बायसी विधानसभा के दलितों की बस्ती को ही जला डाला।

2 औवेसी के शहर हैदराबाद की स्थिति कश्मीर घाटी जैसी ही की जा रही है। उदाहरणतः 2001 में हैदराबाद में हिन्दू जनसंख्या 21,21,963 थी जो 2011 में घटकर 20,46,051 रह गई।

3 उत्तर प्रदेश का कैराना जिला प्रत्यक्ष उदाहरण है: कैराना में हिन्दू जनसंख्या वृद्धि दर राष्ट्रीय दर से आधी यानि 9.19 प्रतिशत तथा मुस्लिम जनसंख्या वृद्धि दर हिन्दुओं से तीन गुणा यानि 29.81 प्रतिशत मिली।

4 पश्चिमी बंगाल में एक अनुमान क अनुसार 2001 से 2011 के बीच बंगाल के करीब 35 लाख हिन्दुओं का बंगाल छोड़ना राष्ट्रीय चिन्ता का विषय है।

5 बांग्लादेश से बुलाए गए मुस्लिम घुसपैठियों को बंगाली मुसलमान ममता बनर्जी की सरकार बनवाकर आराम से बिहार, उत्तर प्रदेश में रोपित कर रहे हैं।

6 भारतीय मुसलमान पाकिस्तान के नुमाइन्दे हैं जो खाते हिन्दुस्तान की है और गाते पाकिस्तान की है उदाहरणतः पाकिस्तान की खुफिया एजेंसी आई.एस.आई. नेपाल के रास्ते उत्तर प्रदेश, बिहार व पश्चिमी बंगाल में सक्रिय हैं।

7 जून 2001 में आई एक रिपोर्ट में भारत-नेपाल सीमा पर युद्ध स्तर पर बन रहे मदरसों व मस्जिदों से सतर्क रहने की चेतावनी दी थी। मदरसे व मस्जिद जहां बनाए गए हैं जहां भारत की सामरिक तैयारियों को देखा जाए और भारत की राष्ट्रीय सुरक्षा पाकिस्तान के एक इशारे पर तहस-नहस की जा सके।

8 पाकिस्तान व बांग्लादेश को जोड़ने के लिए भारत के मुस्लिम षड़यन्त्रकारी भारत में एक मुस्लिम पट्टी-गलियारा तैयार करने की योजना में हैं। इसी कारण बांग्लादेश में मुस्लिम घुसपैठियों को बिहार, उत्तर प्रदेश, हरियाणा व पंजाब में बसाया जा रहा है।

9 असम को बर्बाद मुस्लिम घुसपैठियों व रोहिंग्या ने कर रखा है। भारत गंगा-सतलुज के मैदान पर इस्लामीकरण हावी है जो कृषि व किसान की जान है।

10 पंजाब, हरियाणा, उत्तर प्रदेश, बिहार व असम सतलुज, गंगा व ब्रह्मपुत्र का क्षेत्र भारतीय किसानों की कृषि भूमि है। मुस्लिमों के षड़यन्त्र-किसानों की चुनौती बन रहे हैं तथा कृषि क्षेत्र में एक मुद्दा स्थापित किया जा रहा है।

उत्तर प्रदेश में मुस्लिम आबादी की वृद्धि पूरे प्रदेश में बराबर नहीं है। 1 मुजफ्फरनगर 50.14 प्रतिशत 2 मुरादाबाद 46.77 प्रतिशत 3 बरेली 50.13 प्रतिशत 4 सीतापुर 129.66 प्रतिशत 5 हरदोई 40.14 प्रतिशत 6 बहराइच 49.17 7 गोंडा 42.20 प्रतिशत है। हरियाणा में मुस्लिम जनसंख्या वृद्धि दर 1981-1991 में 45.88 प्रतिशत के मुकाबले 1991-2001 में 60.11 प्रतिशत दर्ज की गई थी।

यह बढ़ता असंतुलित दायरा किस पर बोझ है? कृषि भूमि पर। किसानों की चुनौती बढ़ती मुस्लिम आबादी है। हरियाणा, पंजाब, उत्तर प्रदेश, बिहार व असम का किसान कितना उत्पादन करेगा? जितना कृषि भूमि पैदावार देगी। आबादी के बढ़ते अनुपात से कृषि भूमि थोड़ी बढ़ती है बल्कि दशक-दर-दशक कृषि भूमि घटती ही है। बर्मा से खदेड़े रोहिंग्या को पाकिस्तान, आफगानिस्तान, ईरान, ईराक आदि अन्य



मुस्लिम देश नहीं बसाते, फिर भारतीय मुस्लिम रोहिंग्या को भारत में बसाने का षडयन्त्र समझना जरूरी है जो किसान-कृषि के लिए मुद्दा व चुनौती है।

निष्कर्ष

किसान व कृषि मुद्दे व चुनौतियां सार्वभौमिक, सार्वलौकिक तथा सार्वकालिक हैं। किसान बाढ़ व सूखे की मार कालान्तर में सहता रहा है। अचानक आई बीमारियों ने किसान की फसल को फूस में भी बदला है। किसान का हौंसला नहीं टूटा और कृषि का साथ नहीं छूटा। औद्योगिकीकरण व प्रौद्योगिकीकरण ने किसान व कृषि के बीच दरार-खाई जरूर पाट दी है। पानी, बीज, खाद, कीटनाशक, जुताई, बुआई, निलाई, कटाई तक तो किसान कृषि करता गया मगर जब किसान का वास्ता आढ़ती व मण्डी से पड़ा है तो वह ठगा-सा महसूस करने लगा। किसान ने गुस्से में फल, सब्जी व अनाज को रोडो पर फेंक डाला है। किसान फसल को अपनी औलाद-सा प्यार-प्रेम करके पालता, पकाता तथा उठाता है। कोई अपनी औलाद को सड़क पर यूँ ही नहीं डालता, कुछ तो मजबूरियां रहीं होंगी, यूँ ही कोई बेवफा नहीं होता।

1 किसान पर प्राकृतिक आपदाओं की मार।

2 किसान पर मानवीय नियमों की धार।

तीनों कृषि कानूनों के विरोध में स्वशक्ति नहीं, परशक्ति प्रयोग की जा रही है। 1 कृषक उपज व्यापार और वाणिज्य 2 कृषि कीमत आश्वासन और कृषि सेवा करार 3 आवश्यक वस्तु संशोधन को अपनाइए तो, तभी परिणाम निकलेगा, आंदोलनरत् विदेशी शक्तियों की कठपुतलियां समझने-परखने को तैयार नहीं होते हैं। फंडिंग के पैसे से जीवन की राजनीतिक यात्रा को अंजाम देने में लगे हैं। आंदोलनजीवियों ने भी गले में सांप डाल लिया, पीछे हटने पर खालिस्तानी गोली मारेंगे, मोदी तो ढाक के तीन पात है। आज भारत में किसानों के मुद्दे व चुनौती मुख्यतः बढ़ती जनसंख्या का भार है। किसानों के लिए मुख्य चुनौती ये आंदोलनरत् विदेशियों की कठपुतलियां हैं जो इन तीन कानूनों का विरोध कर रहे हैं। एनसीईआरटी के पूर्व निदेशक पदमश्री प्रो. कृष्ण कुमार ने कहा है कि शिक्षक मां की भूमिका अदा करते हैं उन्हें कर्मचारी न बनाया जाए, उन्हें राष्ट्रनिर्माता ही रहने दें। आंदोलनजीवी समझे। किसान देश की मां है जो देश को पालते हैं उपद्रवियों को किसान आंदोलन न कहे, उन्हें अन्नदाता ही रहने दें।

सन्दर्भ ग्रन्थ:-

1. प्रतियोगिता दर्पण
2. 10.07.2021, दैनिक जागरण
3. 13.07.2021, दैनिक जागरण
4. 19.07.2021, दैनिक जागरण
5. महासागर-समसामयिकी

**शेतीविषयक पारीत विधेयक व शेतकरी आंदोलन****डॉ. संधिप बाळकृष्ण सातव,**

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सारांश :-

जून २०२० मध्ये भारत सरकारने संसदेत तिन कृषी विधेयके पारीत केलीत व ती भाजप शासीत प्रदेशामध्ये लागु सुद्धा केलीत. ज्या ठिकाणी विरोधी पक्षाची सरकारे आहेत त्या ठिकाणी ही विधेयके लागु झाली नाहीत. विरोधी पक्ष आणि सर्व भारतातील शेतकऱ्यांनी ह्या विधेयकांना विरोध केला व पंजाब, हरियाणा, उत्तर प्रदेश मधील शेतकऱ्यांनी ह्या विधेयकाविरोधात आंदोलन उभारले व गेल्या सहा महिन्यापासुन दिल्लीच्या सिमांवर आंदोलन कारी शेतकरी ढान मांडून बसले आहेत. मधल्या काळात केंद्र सरकारने आंदोलनाच्या बाबतीत तोडगा काढण्याचे उद्देशाने अनेक बैठका घेतल्यात परंतु या बैठकांमधून कुठलाही निष्कर्ष निघाला नाही. शेतकऱ्यांनी आपल्या मागण्या मान्य केल्या शिवाय आमचे आंदोलन संपणार नाही अशी कठोर भुमीका घेतली आहे. सरकारने आणलेले शेतकरी विरोधी तिनही कायदे मागे घ्यावेत अशी शेतकऱ्यांची प्रमुख मागणी आहे. सरकारने हे आंदोलन इतर मागिने सुद्धा संपविण्याचा प्रयत्न केला परंतु शेतकरी ठाम आहेत. आजपर्यंतच्या सरकारांनी शेतकऱ्यांसाठी अनेक कायदे आणलेत परंतु हे कायदे शेतकऱ्यांचा विकास करू शकले नाहीत. उलट ह्या कायद्यांद्वारे शेतकऱ्यांची लुट झालेली आहे. त्यामुळेच सरकारने आणलेल्या नविन कायद्यांवर शेतकऱ्यांचा विश्वास उरलेला नाही.

मलू वतके :-

शेतकरी विधेयके, छाठलक, किमान कृषी आधार मुल्य, कार्पोरेट, लकच, अल्पभुधारक.

संसोधनाची उद्दीष्टे :-

- १) शेतकऱ्यांनी उभारलेल्या आंदोलना संबंधाने चिकीत्सक अभ्यास करणे.
- २) शेतकऱ्यांच्या कमी होत जाणाऱ्या उत्पनाचा अभ्यास करणे.
- ३) शेतकऱ्यांच्या उत्पनात वाढ करण्यासाठी उपायाचा शोध घेणे.
- ४) शेतीविषयक कायद्यांविरोधात उभारलेल्या आंदोलनाच्या कारणांचा शोध घेणे.
- ५) भारतीय अर्थव्यवस्थेतील एक महत्वाचा घटक म्हणून शेती प्रश्नांवर चिकीत्सक अभ्यास करणे.
- ६) शेतीक्षेत्रात स्वातंत्र्यानंतर झालेल्या बदलांचा अभ्यास करणे.
- ७) सर्वांगीन विकासाचे धोरणात शेती क्षेत्राच्या प्राधान्य तत्वाचा अभ्यास करणे.

परिकल्पना :-

- १) देशविकासाची धोरणे आखतांना सर्वांगीन व संतुलीत विकासाची धोरणे, देशात शांती व सामाजिक स्वास्थ्य अबाधीत राखु शकतात.
- २) कोरोनाकाळात उद्वस्थ झालेल्या अर्थव्यवस्थेत शेती क्षेत्रात महत्व समजुन शेती सुधारणा घडवुन आणणे.

संशोधन पद्धती :-

शोधनिबंधात उपयोगात आणलेली साधन सामग्री दुयम सामग्रीच्या प्रकारातील आहे.

समस्येचे कथन :-

भारत सरकारने लोकसभेत पारीत करुण आणलेले तिन कृषीविधेयक खालीलप्रमाणे.



विधेयक :-

- १) 'शेतकरी उत्पादने, व्यापार व वाणिज्य कायदा २०२०'
- २) 'शेतकरी किंमत आश्वासन आणि कृषी सेवा करार कायदा २०२०'
- ३) 'अत्यावश्यक वस्तु कायदा २०२०'

वरील तिन्ही कृषी कायद्यामुळे शेतीव्यवसायावर चिरगामी परिणाम घडून येणार आहेत.

संशोधनात्मक विश्लेषण :-

भारतीय शेती ही प्रामुख्याने मोसमी पावसावर अवलंबून आहे. भारतीय लोकसंखेपैकी ६०: लोकसंख्या ग्रामीन भागात रहाते आणि ग्रामीन भागातील जनतेचा मुख्य व्यवसाय व उदरनिर्वाहाचे साधन शेतीच आहे. आणि म्हणून देशाच्या ६०:जनतेचा जिव्हाळ्याचा प्रश्न शेती व्यवसाय ठरतो आहे. कोरोनाकाळात भारतातील सर्व उद्योग व सेवा बंद होत्या त्या काळात देशाला शेतीक्षेत्रानेच तारले आहे. देशाचा जिडीपी शेतीनेच सावरला ही कमाल शेतीक्षेत्राने घडवून आणली हे निष्कर्ष सरकारी आकडेवारीवरून दिसून येतात.

टाज शेती क्षेत्राची सरकारी अनास्थेमुळे अधोगती झालेली आहे. जगाच्या तुलनेत भारतात सिंचनाच्या सोयी अपुऱ्या आहेत. भारताची सिंचन क्षमता ४०:तर महाराष्ट्राची सिंचन क्षमता फक्त १८:आहे. सिंचनाचे अभावी भारतीय शेती संपुर्ण मोसमी पावसावर अवलंबून आहे. पाऊस पडला तर शेती विकायची नाहीतर दुष्काळाचा सामना करावा लागतो. बेभरवशाची शेती आमच्या शेतकरी करीत आहे. आणि म्हणूनच आमचा शेतकरी कृषीविधेयकांना विरोध करीत आहे.

शेतीविधेयकांना शेतकरी विरोध करण्याची कारणे खालील प्रमाणे सांगता येतील.

शेतीविधेयकांना शेतकरी विरोधाची कारणे :-

१) **मोसमी पावसावर अवलंबून असणारी शेती :-** भारतीय शेती ही संपुर्ण मोसमी पावसावर अवलंबून आहे. आज देशात ८५:शेतकरी अल्पभूधारक आहे. ही अल्पभूधारकांची सर्व शेती मोसमी पावसावर अवलंबून आहे. पाऊस पडला तर शेती पिकायची नाहीतर दुष्काळाचा सामना करावा लागतो. पिकाची सरासरी काढल्यास पाच वर्षांतून फक्त एकदाच पुर्ण क्षमतेने शेतीमधून पिक येते. त्यामुळे अल्पभूधारक शेतकरी शेती असूनही त्याला मजुरी करावी लागते. बिहार, उत्तर प्रदेश, मध्यप्रदेश चा शेतकरी रोजगारासाठी संपुर्ण भारतभर भटकतो त्याला कारण हेच आहे. बेभरशाची शेती, शेतीमध्ये योग्य उत्पन्न मिळाले असते तर बिहार आणि मध्यप्रदेश च्या मजुरांना कोरोनाकाळात स्वताचे हाल करून घ्यावे लागले नसते.

२) **सिंचनाच्या अपुऱ्या सोयी :-** देशाची सिंचन क्षमता अजूनही ४०:एवढीच आहे. राज्यांची सिंचनक्षमता पाहिल्यास यापेक्षाही कमी आहे. महाराष्ट्राची सिंचनक्षमता १८:आहे. सिंचना अभावी शेतीला वर्षभर सिंचन होऊ शकत नाही. त्यामुळे भारतीय शेतकरी वर्षांतून मोसमी १ पीक काढतो व वर्षभर मजुरी करीत असतो. सरकारच्या धरसोड प्रवृत्तीमुळे देशात अजूनही सिंचन क्षमता वाढू शकली नाही. उदा. १९८५ मध्ये इंदिरा गांधीनी सुरू केलेला गोसीखुर्द सिंचन प्रकल्प ३० वर्षांनंतर सुद्धा अजूनही पुर्ण झाला नाही. गोसीखुर्द प्रकल्पचा सुरुवातीचा २५०० कोटीचा प्रकल्पीय खर्च आज त्याची किंमत २५००० कोटीवर पोहचला परंतु आमचे राज्यकर्ते अजूनही तो प्रकल्प पुर्ण करू शकले नाहीत. सरकारच्या धरसोड प्रवृत्तीमुळे आमची शेती सिंचनापासून वंचित राहिली.

३) **हवामानातील बदल :-** हवामान बदलाचा फटका सर्वात जास्त शेती क्षेत्राला बसतो. कधी महापूर, अतीवृष्टीमुळे शेतीपीक नष्ट होतात तर कधी दुष्काळामुळे पिक जळून जातात. हवामान बदलामुळे उष्णतेचे प्रमाण वाढलेले आहे. त्यामुळे अनेकप्रकारच्या रोगराईचा सामना करावा लागतो. सोयाबीन पिक तर भरतच नाही, कापसाला बोंड अळी, धानशेती सुद्धा पुर्वीसारखी राहिली नाही.



उत्पादनात भारी घट झालेली आहे. उत्पादनात घट परिणामी उत्पनात घट. शेतीच्या तुटपुंज्या उत्पनावर जगण्याची कसरत आमचा शेतकरी करीत आहे.

४) **खर्चीक शेती** :- पुर्वी शेतीमध्ये परंपरागत करीत आहे. वापर करून बैलाच्या साह्याने शेती केली जायची त्यामुळे शेतीचा लागवडी खर्च कमी असायचा परंतु आज संपुर्ण यांत्रिक पद्धतीने शेती करावी लागते. नागरनी, चिखलटी, मडणी ह्या सर्व गोष्टी यंत्रांच्या साह्याने करतात परिणामी शेतीचा खर्च मोठ्या प्रमाणात वाढलेला आहे. शेतीच्या खर्चात वाढझाल्यामुळे शेतकऱ्यांच्या उत्पन्नात घट झालेली आहे.

५) **शेतीमध्ये मनुष्यबळाची कमी** :- पुर्वीच्या काळात कुटुंबातील सर्व व्यक्ती शेतीच्या कामात मदत करायचे. परंतु आज शेतीला मजुर मिळणे कठीण झालेले आहे. आजचे तरूणवर्ग शेतीमध्ये काम करायला तयार नाहीत. वाटल्यास कारखाण्यात १२ तास गुगसारखे काम करतील परंतु शेती काम त्यांना खालच्या दर्जाचे व अपमानास्पद वाटायला लागले. परिणाम शेतीला मनुष्यबळ उपलब्ध होत नाही. कमी मनुष्यबळामुळे जास्तीची मजुरी द्यावी लागते त्यामुळे शेतीखर्चात वाढझालेली आहे.

६) **रासायनिक खतांचा अनिर्बंध वापर** :- पुर्वी शेणघत वापरून शेती केली जायची. परंतु शेतीच्या उत्पादनात वाढ करण्याचे उद्देशाने सरकारनेच आपल्या देशात रासायनिक खते आणली. या रासायनिक खते व किटकनाशकांचा वापर करून शेतीच्या उत्पादनात विशीष्ट मर्यादेपर्यंत वाढही झाली. परंतु अती जास्त उत्पन्नाच्या हव्यासापाटी रासायनिक खतांचा वापर मोठ्या प्रमाणात वाढला. शेतीची सुपीकता कमी झाली, जमीनी क्षारयुक्त झाल्यात, उत्पादनात घट व्हायला लागली आणि हेच घटते उत्पादन शेतकऱ्यांना मारक ठरलेले आहे. सरकार म्हणते आता सेंद्रीय शेतीकडे वडा परंतु आता सेंद्रीय शेती करणे शक्य राहिलेले नाही. कारण यांत्रिकीकरणामुळे गुरेदारे कमी झालीत त्यामुळे शेणखत मिळणे कठीण झालेले आहे. हा सर्व सरकारच्या धोरणांचाच परिणाम आहे.

७) **संशोधित बिटी बियांनाचा वापर** :- पुर्वी भारतामध्ये जुण्या परंपरागत देशी बियांनाचा वापर करून शेती केली जायची. त्यामुळे रासायनिक खते व किटकनाशकाचा फारसा वापर करावा लागत नव्हता. रोगराइचे प्रमाण नगण्य असायचे परंतु आज देशी बियाने जाउन संशोधित बिटी बियाने आलेत. हि बियाने एक वर्ष उत्पन्न देतात, दुसऱ्या वर्षात ह्या बियांनाची क्षमताच कमी होते. परिणाम दिवसेंदिवस उत्पादनात घट होत आहे. हि बिटी बियाने बदलत्या हवामानात टिकाव धरू शकत नाहीत. ज्याप्रमाणे सोयाबीनचे उत्पादन हद्दपार झाले तशीच अवस्था या बिटी बियांनांची होईल यात संशय नाही.

८) **शेतकऱ्यांचे घटते उत्पन्न** :- शेतीच्या उत्पादनात दिवसेंदिवस घट होत आहे. परिणामता शेतकऱ्यांच्या उत्पन्नातही घट होत आहे. शेती परवडेनाशी झाली आहे. नाबार्डच्या आकडेवारीनुसार ५२: शेतकऱ्यांवर कर्जाचे ओझो आहे. प्रत्येक शेतकऱ्यांचे सरासरी १ लाखाचे कर्ज आहे. भारतामध्ये शेतकऱ्यांचे सरासरी मासिक उत्पन्न २०१३ नुसार ६४२६ रू. आहे. हि आहडेवारी डोळ्यात अंजन घालनारी आहे. १ आक्टोंबर २०२० रोजी सरकारचा निर्णय आहे की. प्रत्येक मजुराला ४०० रू मजुरी दिलीच पाहिजे, सरकारी कर्मचाऱ्याला सातव्या वेतन आयोगानुसार चपराश्याचा पगार १८००० रू. दिला पाहिजे. सरकार कागदोपत्री निर्णय घेतात पण प्रत्यक्षात कुणाला काय मिळते याकडे कुणीही लक्ष द्यायला तयार नाही. त्यामुळे आमच्या देशात प्रतीदीन २८ शेतकरी आत्महत्या करतात आणि गेल्या पंचविस वर्षात ४ लाखाहून जास्त शेतकऱ्यांनी आत्महत्या केलेल्या आहेत. आणि हे सर्व शेतकऱ्यांच्या कमी होत जाणाऱ्या उत्पन्नामुळेच घडून येत आहे.



९) **शेतीचा विकास दर कमी :-** २०१९-२०२० चा भारताचा कृषी विकास दर २.५ टक्के आहे. देशाचा विकास दर ८.५२ टक्के असतांना शेतीचा विकास दर एवढा कमी का हाच फार मोठा संशोधनाचा विषय आहे. देशात उद्योगाचा जिडिपी मध्ये वाटा १७: आहे तर कृषीचा वाटा १३: आहे. उद्योगाच्या तुलनेत शेतीला गुंतवणुक कमी प्रमाणात केली जाते. अंदाजपत्रकात शेतीला मिळणारा वाटा नगण्य असतो. स्वातंत्र्यानंतर पं. जवाहरलाल नेहरूनी पंचवर्षीक योजनांच्या माध्यमातून देशाचा विकास करण्याचा प्रयत्न केला तेव्हा पहिल्या पंचवर्षीक योजनेत अंदाजपत्रकीय अनुदान शेतीक्षेत्रासाठी जास्त होत. लालबहादुर शास्त्रींनी सुद्धा जय जवान, जय किसान हा नारा दिला व शेतीक्षेत्रात भरघोस गुंतवणुक करून शेती विकास घडवून आणला. पंजाब आणि हरियानाची हरीत क्रांती हा त्याचाच परिणाम होता. परंतु नंतरच्या सरकारांनी शेतीकडे लक्ष दिले नाही. त्यामुळेच आज शेतीचा विकास दर फक्त २.५: आहे. जिथे विकासदरच कमी आहे तिथे विकास होइलच कसा. आणि हा सर्व आमच्या राज्यकर्त्यांच्या उदासीनतेचा परिणाम आहे. आमच्या देशात उद्योगापासून १७: रोजगार निर्माती होते तर शेतीमधून ६०: रोजगार निर्माती होते. सर्वात जास्त रोजगार देणाऱ्या क्षेत्राची आज ही अवस्था आहे.

१०) **शेती उत्पालनाला कमी मिळणारा बाजार भाव :-** भारतातील कृषीमाल बाजार व्यवस्था परिपूर्ण सरकारच्या आधीन आहे. उद्योगामध्ये उत्पादित होणाऱ्या मालाचा भाव सरकार ठरवितो. उद्योजक आपल्या वस्तुंच्या किमती अवाच्या सव्वा आकारून जनतेची लुट करतो. तर शेतीमालाच्या किमती सरकार ठरवून शेतकऱ्यांची लुट करतो. हा फार मोठा विरोधाभास आहे. आज देशात सरकारी कर्मचाऱ्यांचे पगार १५०-२०० पटीने वाढलेत परंतु शेतमालाचा किमती फक्त १९ पटीने वाढल्यात. आमच्यादेशाचे उपराष्ट्रपती वेंकया नायडू अग्रलेखात लिहितात की, २००६ पासून भारतात शेतकऱ्यांचे ४५ लाख कोटी रूपयांचे शोषण केलेले आहे. देशाचे उपराष्ट्रपती जबाबदार व्यक्ती मान्य करतात की आपल्या देशात मोठया प्रमानात शेतकऱ्यांचे शोषण होत आहे. परंतु ह्या गोष्टी आमच्या राज्यकर्त्यांना कुनालाही ऐकु येत नाहीत. आमच्या देशात शेतीमालाचे किमान आधार मुल्य सरकार जाहीर करते व ठरलेल्या किमतीवर सरकार शेतीमाल खरेदी करेल अशी काय ती व्यवस्था? धानाचे आधार मुल्य १८६० रू. व गव्हाचे आधार मुल्य १९७५रू. यामध्ये दरवर्षी वाढ किती केली जाते, १०५.२०रू. जास्तीत जास्त ५०रू. आणि सरकारने दिलेल्या अशाप्रकारच्या भरघोष वाढीमुळेच शेतकऱ्यांच्या शेतीमालाच्या किमती एवढ्या निम्म स्तरावर आहेत. सरकारी खरेदी फक्त एकुन उत्पादित मालाच्या ०६:एवढीच होते. बाकीचा माल व्यापारी शेतकऱ्यांना नाडवून कमी कीमतीत खरेदी करतांना त्यांना किमान आधार मुल्यही मिळत नाही. बिहारचा धान ८००रू. क्विंटल व गहु १०००रू. क्विंटल विकला जातो. हे आमच्या बाजारव्यवस्थेचे हाल आहेत. आणि यामध्ये सरकारने तीन कृषी कायदे आणले आहेत.

११) **माल साठवणुकीच्या अपुऱ्या सोयी :-** भारतात उत्पादित माल साठवणुकीसाठी असणाऱ्या सूविधा अपुऱ्या आहेत. सुगीच्या दिवसानंतर शेतमाल जेव्हा बाजारात येतो तेव्हा शेतकऱ्यांकडे साठवणुकीच्या सोयी नसल्यामुळे मिळेल त्या भावात आपला माल विकून मोकळे व्हावे लागते. साठवणुकीअभावी माल घरी ठेवता येत नाही. सरकार द्वारे खरेदी केलेला माल सुरक्षीत ठेवण्यासाठी सरकारी स्तरावर सुद्धा गोडावून, शितगृहे नाहीत. परिणामता सरकारने खरेदी केलेला माल सुद्धा उघड्यावरच पडलेला असतो. पाणीपाउस, उंदीर या पासून मालाची नासाडी होत असते. सरकारी आकडेवारीनुसार आपल्या देशात उत्पादित मालापैकी ३०: माल पाणी पाउस व उंदीर यामुळे खराब होत असतो याचे मुख्य कारन साठवणुकीचा अभाव.

१२) **शेतकरी मारक सरकारी धोरणे :-** सरकारने आखलेल्या धोरणांचा परिणाम थेट शेतकरी उत्पन्नावर होत असतो. ज्यावेळेस शेतीमध्ये बंपर पिक येते त्यावेळी शेतमालाची बाहेर देशात



निर्यात करून शेतकऱ्यांना चांगला भाव मिळवून द्यायला पाहिजे. परंतु सरकारी अनास्थेमुळे त्या मालाचे कमी उत्पादन येते त्यावेळेस आयात थांबवून शेतकऱ्यांच्या मालाला चांगला भाव कसा मिळवून देता येईल याचा विचार व्हायला पाहिजे पण तेव्हा तसे होत नाही. दुष्काळी परिस्थितीचा फायदा घेउन बंपर आयात केली जाते व शेतमालाचे भाव पाडले जातात. काँग्रेसच्या भाववाढीमुळे अटलजींचे सरकार गेले होते. हे सरकारच्या नितीचे उदाहरण होते. अशाप्रकारे आपल्या देशात शेतीक्षेत्राचा व शेतकऱ्यांचा विचारच होत नाही. याचा परिणाम शेतकऱ्यांनाच भोगावा लागतो. जास्त पीक द्या की कमी पीक द्या नुकसान शेतकऱ्यांचेच होणार हे निश्चित ठरलेले असते.

१३) **अकार्यक्षम शेतमाल बाजार समीत्या :-** शेतमालाच्या विपणनासाठी सरकारकडून सहकारी तत्वावर बाजार समीत्यांची व्यवस्था करण्यात आली. परंतु ह्याच बाजार समीत्या शेतकऱ्यांची लुटीची प्रमुख केंद्रे बनलेली आहेत. शेतमालाची खरेदी विक्री बाजार समीत्यांमधूनच व्हायला पाहिजे अशा प्रकारचे कायदे आहेत. परंतु ह्या बाजार समीत्यांमध्ये माल ठेवण्यासाठी सुरक्षित जागा नाही. समजा शेतकऱ्यांनी बाजार समीत्यांमध्ये विक्रीसाठी माल नेलाच तर त्याला मालाचे किमान आधारमुल्य मिळेलच याची शास्वती नाही. किमान आधारभावापेक्षा कमी भावाने मालाची खरेदी केली जाते. उदा. तुचीरे आधारमुल्य ६०००, चना— ५५०० परंतु प्रत्यक्ष खरेदी करतांना तुरी ५०००रू, चना ४००० रू भावाने खरेदी केला जातो. परंतु यावर कुनाचेही नियंत्रण नाही. सरकार किमान आधारभुत किंमती ठरवून मोकळे होतात. आणि ह्या बाजार समीत्यांमध्ये मोठ्या व्यापाऱ्यांना मैदान मोकळे करून दिले जाते. ह्या मोठ्या व्यापाऱ्यांना स्वस्त माल खरेदी करण्यासाठीच ह्या बाजार समीत्यांची स्थापना केलेली आहे की काय अशी शंका यायला लागते. आणि म्हणूनच एकंदर उत्पादीत मालापैकी फक्त ६: मालाची खरेदीच किमान आधारभुत किंमतीवर केली जाते व बाकीचा माल खुला बाजार कमी किंमतीने विकला जातो.

अशाप्रकारे अनेक कारने सांगता येतील की ज्यामुळे शेती क्षेत्र उद्ध्वस्त होत आहे.

शेतीक्षेत्राचा विकास घडवून आणण्यासाठी उपाय

- १) शेतीची सिंचन क्षमता वाढविणे.
- २) पिकांसाठी बारमाही पाण्याची व्यवस्था करणे.
- ३) हवामान बदलापासून शेतकऱ्यांचे संरक्षण करणे.
- ४) शेतीचा खर्च कमी करण्याचा प्रयत्न करणे.
- ५) बि. बियाने व खते यांच्या वापरावर नियंत्रण मिळविणे.
- ६) शेतकऱ्यांचे उत्पन्न वाढिसाठी प्रयत्न करणे.
- ७) सरकारी अंदाजपत्रकात शेतीला प्राधान्य देउन विकास दर वाढविणे.
- ८) शेतमालाचा निश्चित बाजारभावाची व्यवस्था करणे.
- ९) माल साठवणुकीची व्यवस्था करणे.
- १०) बाजारसमीत्यांची पुनर्रचना करून त्यावर कठोर नियंत्रण मिळविणे.
- ११) सरकारी धोरणांचा शेतकऱ्यांच्या उत्पन्नावर परिणाम होणार नाही यासाठी प्रयत्न करणे.

अशाप्रकारे अनेक उपाय करून शेतीव्यवस्था सुधारना घडवून आणणे महत्वाचे आहे.

चर्चा :- सरकारी पातळीवर पारीत केलेले कायदे कुणाच्या फायद्याचे असतात तर कुणाला उद्ध्वस्त करणारे असतात. ज्या कायद्यांमुळे फार माठ्या वर्गाला जरी लाभ होत असला तरी फार मोठा वर्ग त्याच कायद्यामुळे उद्ध्वस्त झालेला असतो. अन्न सुरक्षेच्या नावाखाली सरकारी कायदे करून अनेक शेती पिकांवर व त्यांच्या भावावर नियंत्रण मिळविण्याचा प्रयत्न करतात. परंतु त्याचा परिणाम असा झाला की शेती क्षेत्रच उद्ध्वस्त झाले. आपल्या देशात दाळी, तेलबिया यांचा तुटवळा असल्यामुळे आपल्याला तेल, दाळीचे आयात करावे लागतात.



भरमसाठ आयात करुनही देशाची गरज भागत नाही. उदा. तुवर,मुंग,उळीद,सोयाबीन,जवस,सुर्यफुल यांच्या उत्पादन वाढीसाठी आपल्या देशात प्रयत्नच झाला नाही. याचा परिणाम आपल्याला आज दिसतो. खाण्याचे तेल १५०रु. किलो व तुवर दाळ १२५ रु. किलो. हा सर्व सरकारच्या नाकर्तेपणाचाच परिणाम आहे. अनेक शास्त्रज्ञांनी इशारे दिले आहेत. हवामान बदलामुळे भविष्यात तुमच्या ताटावरून तांदुळ गायब होईल. त्याची सुरुवात झालेली आहे. भविष्यात शेती व्यवसाय फारच कसोटीचा ठरणार आहे. सरकारने काळाची पावले ओळखून आजच त्याचे नियोजन करायला पाहीजे, नाहीतर खाण्याचे तेल तोंडाला पुसायची वेळ येईल.

निष्कर्ष :- भारत सरकारने आणलेले तिन्ही ही कृषी कायदे शेतकऱ्यांच्या भल्यासाठी आणलेले आहेत. असे सरकार वारंवार सांगत आहेत. आणि त्या कायद्याचे फायदे शेतकऱ्यांना पटवून देण्याचा आटोकाट प्रयत्न सरकारकडून केला जात आहे. परंतु आजचा शेतकरी पुर्वीसारखा नाही तो सुशिक्षित आहे. त्यामुळे ह्या कायद्यांचे परिणाम काय होतील ते तो जाणतो. आजपर्यंत झालेल्या कृषीविषयक कायद्यांमुळे शेतकऱ्यांचा भ्रमनिरासच झालेला आहे. आणि आता तर हवामान बदलामुळे शेतकऱ्यांची दैनावस्था होत आहे. ह्यात परिस्थितीचा अभ्यास करुनच शेतकरी आंदोलन करीत आहे. विनाकारण घरदार सोडून दिल्लीच्या सिमेवर येऊन बसायला तो मुर्ख नाही. परंतु सरकारच त्यांना आंदोलन करण्यासाठी भाग पाडत आहे, असे म्हणायला हरकत नाही. नवीन कृषी कायद्यामुळे कृषीमालाचे आधार मुल्य संपणार, कार्पोरेट शेतीमुळे भारतीय शेती कार्पोरेट घराण्याच्या घशात जाणार, मालाच्या साठवणुकीचा मक्ता दिल्यामुळे भरमसाठ मालाची साठवणुक करुन तोच माल आपल्याला चढया भावाने विकुन आपलीच लूट करणार. शेती क्षेत्र म्हटल तर ते फार महत्वाचे क्षेत्र आहे. सर्व जनतेच्या भरण पोषणावर परिणाम करणारे क्षेत्र आहे. त्यामुळे सरकारने कायदे करतांना शेती क्षेत्र व शेतकरी उध्वस्त होणार नाही याची काळजी घेणे महत्वाचे आहे. कुठलेही नवीन कायदे करुन नवीन धोरणे राबवितांना सामाजिक स्वाथावर त्यांचा परिणाम होणार नाही, देशात अशांती निर्माण होणार नाही याची दक्षता घेणे महत्वाचे असते. देशाच्या सर्वांगीण विकासासाठी सामाजिक स्वास्थ अबाधित ठेवुन परिवर्तन घडवुन आणणे महत्वाचे असते. परिवर्तन ही काळाची गरज आहे. परंतु होणारा बदल जनतेच्या पचनी पडणारा असावा. नाहीतर देशाची वाटचाल अशांतीकडे झाल्यावाचुन राहणार नाही, हेच खरे.

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५ जून २०२० ला केंद्र सरकारने शेती क्षेत्राशी संबंधित तीन अध्यादेश आणले होते. १४ जून २०२० ला भारतीय किसान युनियनने या कायद्यावर आक्षेप नोंदविला. १४ ते २० जून २०२० या काळात पंजाब सहित विविध राज्यात शेतकऱ्यांच्या आंदोलनाला सुरुवात झाली. १७ सप्टेंबर २०२० ला केंद्र सरकार मध्ये असलेल्या भाजप पक्षाच्या बऱ्याच काळापासून साथीदार असलेल्या शिरोमणी अकाली दलाच्या एकमेव केंद्रीय मंत्री हरसिमरत कौर यांना या विधेयका विरोधात आपला राजीनामा द्यावा लागला. १४ सप्टेंबर २०२० रोजी पंजाब मधील शेतकऱ्यांनी तीन दिवसीय रेल रोक्याचे आंदोलन सुरू केले. किसान मजदूर संघर्ष समितीने या आंदोलनाची सुरुवात केली होती, ज्याला नंतर अनेक संघटनांनी पाठिंबा दिला. मात्र एवढ्या विरोधानंतरही २७ सप्टेंबर २०२० रोजी राष्ट्रपती रामनाथ कोविंद यांनी या विधेयकावर स्वाक्षरी करत त्यांना कायद्याचे रूप दिले. त्यामुळे ३ नोव्हेंबर २०२० रोजी शेतकऱ्यांनी एक दिवसीय चक्काजाम आंदोलन केले. २८ नोव्हेंबर २०२० रोजी शिंदेली चलोश आंदोलनाला प्रतिसाद देत पंजाब आणि हरियाणा मधील हजारो शेतकरी ट्रॅक्टर आणि ट्रॉली मधून दिल्लीच्या सिमेवर धडकले. हरियाणा, पंजाब, महाराष्ट्र, गुजरात, आणि इतर काही राज्यांमधील शेतकऱ्यांनी दिल्ली महामार्गावर आंदोलन सुरू केले. त्यामुळे या मार्गावरील दिल्ली कडे जाणारी वाहतूक पूर्णपणे ठप्प झाली होती. दिल्लीतील विपरीत हवामान, अपघात आणि आत्महत्या अशा विविध कारणामुळे सहाशेच्या वर शेतकऱ्यांचा बळी गेला आहे. १२ जानेवारी २०१९ रोजी सर्वोच्च न्यायालयाने तीनही कृषी कायद्यावर स्थगिती लागू केली आणि एक लुट्टपुट्टी समिती स्थापन केली. शेतकऱ्यांनी २६ जानेवारी रोजी ट्रॅक्टर मार्च काढला. त्याला बदनाम करण्याकरिता कट रचला गेला, जो समाज माध्यमांमुळे उघड झाला. सरकार व शेतकरी दरम्यान चर्चेच्या बारा फेर्या पार पडल्या. परंतु आत्तापर्यंतच्या सर्व चर्चांमधून कोणताही तोडगा समोर आला नसून हे कायदे केंद्राने रद्द करावी आणि शेतकऱ्यांच्या शेतमालाला किमान आधारभूत किमती देण्याचा कायदा तयार करावा या मागणीवर शेतकरी ठाम आहेत. आणि मागील नऊ महिन्यांपासून दिल्लीत बसले आहेत.

या कायद्यातील प्रमुख तरतुदी अशा आहेत.

पहिला कायदा: शेतकरी उत्पादने व्यापार व वाणिज्य(प्रोत्साहन व सुविधा) कायदा २०२०. शेतकऱ्यांना चांगली किंमत मिळावी आणि त्यांच्या मालाला लवकरात लवकर गिराईक मिळावा. यासाठी या सुविधा केल्या जात असल्याचे सरकारचे म्हणणे आहे.

दुसरा कायदा: शेतकरी (सशक्तीकरण आणि संरक्षण) किंमत आश्वासन आणि कृषी सेवा करार कायदा २०२०. हा कायदा कंत्राटी शेती बद्दल बोलतो. शेतकऱ्यांना ते घेत असलेल्या विकासाठी आगाऊ स्वरूपात करार करता येण्याची तरतूद यात केलेली आहे.

तिसरा कायदा: अत्यावश्यक वस्तू (दुरुस्ती) कायदा २०२०. सरकारने अनेक अत्यावश्यक वस्तूंच्या यादीतून डाळी, कडधान्य, तेलबिया, कांदा, बटाटे अशा वस्तूंना अत्यावश्यक वस्तूंच्या



यादीतून वगळले आहे. त्यामुळे या वस्तूंचा साठा करण्यावरनिर्बंध राहणार नाही. याला अपवाद युद्ध सदृश्य असामान्य परिस्थिती व आणीबाणी.

केंद्र सरकारने या शेतीविषयक कायद्याच्या समर्थनात अनेक बाता केल्या असल्या तरी शेतकऱ्यांनी या कायद्यांना कडाडून विरोध केलेला आहे. शेतकऱ्यांचे या कायद्याच्या विरोधात जे आक्षेप आहेत ती अशी. .

- एपीएमसी बाहेर विक्री झाल्यास बाजार शुल्क न मिळाल्याने राज्याच्या नुकसान होईल.
- बाजार समित्या हद्दपार झाल्यास मध्यस्थ, अडते यांचे काय होणार.
- किमान आधारभूत किमतीची यंत्रणा यामुळे मोडकळीस येईल.
- कंत्राटी व्यवस्थेत शेतकरी सक्षम पणे वाटाघाटी करू शकतील का.
- अनेक लहान-लहान शेतकऱ्यांशी करार करण्यात व्यावसायिक रस दाखवतील का.
- मोठ्या कंपन्या वाटेल तेवढा साठा करू शकतील.
- शेतकऱ्यांना कंपन्यांच्या सांगण्याप्रमाणे उत्पादन करावे लागेल. आणि किंमत मिळण्याची ही भीती राहिल.

या सर्व पार्श्वभूमीवर डॉ. बाबासाहेब आंबेडकर यांची शेती व शेतकऱ्यांविषयी भुमिका पाहणे आवश्यक आहे.

शेती हा डॉ. बाबासाहेब आंबेडकरांचा अत्यंत जिव्हाळ्याचा विषय होता. सात दशकापूर्वी डॉ. बाबासाहेब आंबेडकरांनी शेती व्यवसायाच्या सुधारणेसाठी जे लिहून ठेवले, शासन दरबारी ज्या मागण्या केल्या, ज्यासाठी आंदोलने केलीत त्या शेतीविषयक सुधारणा आजही किती महत्त्वाच्या आहेत हे प्रत्ययास येते. डॉ. बाबासाहेब आंबेडकर यांचे शेतीविषयक विचार आजचे राजकारणी, नियोजनकार, शेतीतज्ञ यांनी अभ्यासला पाहिजे. अनेकांना बाबासाहेब आंबेडकर हे शेतकऱ्यांचे कैवारी होते ते अजूनही माहित नाही. त्यांचे शेती विषयक विचार आत्मसात करण्यास राजकारण्यांची उदासीनता प्रकर्षाने दिसून येते. ही खूप मोठी शोकांतिका आहे. डॉ. बाबासाहेब आंबेडकरांनी ज्या महात्मा ज्योतिराव फुले यांना गुरुस्थानी मानले आहे त्या ज्योतीरावांनी तत्कालीन इंग्रज सरकारला एक निवेदन सादर करून कृषी क्षेत्राच्या प्रगतीसाठी आणि शेतकरी, शेतमजूर यांना हलाखीच्या आर्थिक परिस्थितीतून बाहेर काढून त्यांची उन्नती साधण्यासाठी योग्य उपाययोजना करण्याची मागणी केली होती. स्वातंत्र्यापूर्वी व स्वातंत्र्यानंतर त्यांचे मानस शिष्य असलेल्या डॉ. बाबासाहेब आंबेडकरांनी कृषी क्षेत्राच्या विकासासाठी आणि शेतकरी व शेतमजुरांच्या आर्थिक उन्नतीसाठी अत्यंत मौलिक स्वरूपाचे विचार व्यक्त केले आहेत. योजना सुचविली आहेत, आणि भारतीय संविधानातही तशी तरतूद करून ठेवली आहे. तथापि डॉ. बाबासाहेब आंबेडकर यांच्या मृत्यूनंतर त्यांना दलितांचे कैवारी, धर्मांतर करणारे, आणि धम्मक्रांतीचे प्रणेते एवढ्यापुरता मर्यादित ठेवण्याचा जाणीवपूर्वक प्रयत्न केल्या गेला आहे. परंतु ते तेवढ्या पुरते मर्यादित नव्हते. त्यांनी भारतातील कृषी क्षेत्रासाठी, कृषि प्रगतीसाठी, शेतकरी शेतमजुरांच्या आर्थिक कल्याणासाठी अशा योजनांचा आग्रहच धरला नव्हता तर शेतकरी, शेतमजुरांचे प्रश्न हाताशी धरून आपल्या हयातीत अनेक आंदोलनेही केली होती.



कृषि व औद्योगिककरण: डॉ. बाबासाहेब आंबेडकरांच्या आर्थिक तत्त्वज्ञानाच्या उद्देश सामाजिक न्याय हाच आहे. डॉ. आंबेडकरांनी १९१८ मध्ये श्भारतातील लहान धारण क्षेत्रे आणि त्यावरील उपायश या लेखात भारताच्या शेती समस्यावरील अत्यंत मुलभूत प्रश्नावर प्रकाश टाकला आहे. यामध्ये डॉ. बाबासाहेब आंबेडकर लिहितात, श्भारतातील कृषी क्षेत्रातील समस्यावरचा एक उपाय औद्योगिककरण हे आहे. तुकड्य तुकड्यत असलेले कृषीक्षेत्र एकत्रित करावे. अशा कृषी क्षेत्राजवळ औद्योगिककरण करावे. त्यातून येणारा पैसा कृषी क्षेत्रासाठी उपयोगात आणावा. असे करून कृषी आणि औद्योगिककरण यांची सांगड घालावी. यामुळे कृषी उत्पादन आणि जमीन दोन्हीच्या मूल्यांमध्ये वाढ होऊन कृषी वर अवलंबून असलेल्या लोकांच्या जीवनातील आर्थिक समस्या संपवण्यासाठी मदत होईल. ष कृषी क्षेत्राजवळ औद्योगिककरण करून कृषी क्षेत्राचा विकास साधण्याचा उपाय सांगणारे डॉ. बाबासाहेब आंबेडकर हे पहिले भारतीय होते.

भारताची शेती ही किफायतदार होत नसल्याची कारणे अल्पभूधारक एकसंघ सुधारणा नसून वेगळी असल्याचे ते नमूद करतात. भारत हा कृषिप्रधान देश आहे. जगामधील शेतीची तुलना करता या शेतीची उत्पादकता सर्वात कमी आहे. त्यापैकी एक कारण भारतात शेतीवर अवलंबून असणारी लोकसंख्या ७१. ०५ टक्के एवढी आहे. इंग्लंडमध्ये ही संख्या १५. ३ तर अमेरिकेमध्ये ३६. ३ एवढी आहे. जगातील कुठल्याही देशातील लोकसंख्येचा विचार केला तर भारतातील ही संख्या प्रचंड आहे. हा शेतीवर बोजा आहे. हा जादा बोजा कमी केल्याशिवाय शेती ही किफायतशिर वा आर्थिक दृष्ट्य परवडण्यासारखी होणार नाही. म्हणून ही जादाची लोकसंख्या बिगर शेती उद्योगात वापरली पाहिजे. त्यासाठी भारतात औद्योगिककरणची गरज आहे. यासाठी उपजीविकेचे दुसरे साधन सरकारने उपलब्ध करून दिले पाहिजे. त्यासाठी सुनियोजित विकास आराखडा बनवून तो अमलात आणला पाहिजे. ष

खोत व्यवस्थेविरुद्ध आंदोलन: शेती व शेती व्यवसायाकडे डॉ. बाबासाहेब आंबेडकर यांनी खूप गांभीर्याने बघितले. शेतकरी व शेतमजूर यांच्या समस्या डॉ. बाबासाहेब आंबेडकरांनी जवळून बघितल्या होत्या. शकसेल त्याची जमीनश या न्यायाने आपल्याकडे भरमसाठ जमीन ताब्यात ठेवणाऱ्या खोत व सावकारी विरोधात डॉ. बाबासाहेब आंबेडकर यांनी कोकणात फार मोठे आंदोलन उभे केले . सतत दोन दशकापर्यंत हे आंदोलन चालले. या आंदोलनातील महत्वपूर्ण बिंदू म्हणजे आजूबाजूच्या तब्बल पंधरा गावांनी सतत दोन दशकापर्यंत खोत व सावकारी प्रथेविरोधात प्रदीर्घ संप केला. डॉ. बाबासाहेब आंबेडकरांनी भूधारकाच्या शोषणाला मूठमाती देण्यासाठी खोती पद्धती व सावकारी विरुद्ध बंड करून १७ सप्टेंबर १९३६ रोजी मुंबई कायदेमंडळात खोती पद्धत रद्द करण्याविषयी विधेयक सादर केले. शेती व शेतीच्या प्रश्नावर सरकारने गांभीर्याने विचार करावा यासाठी १० जानेवारी १९३८ रोजी मुंबई येथे आझाद मैदानात कोकण, सातारा, नाशिक जिल्ह्यातील शेतकऱ्यांचा मोर्चा घडवून आणला. मुंबई सरकारच्या मंत्रिमंडळापुढे डॉ. बाबासाहेब आंबेडकर यांनी शेतकऱ्यांच्या १३ मूलभूत मागण्या सादर केल्या. शेतकऱ्यांच्या पिळवणुकीला जबाबदार असलेल्या सर्व परंपरा व कायदे रद्द करून कायद्यात बदल घडवून शेतकऱ्यांची खोत आणि सावकारी पासून कशी सुटका होईल या अनुषंगाने सरकारपुढे तातडीच्या मागण्या केल्या. गरीब व दारिद्र्य शेतकरी वर्गाची शोषणातून मुक्तता करून शेतकरी स्वाभिमानाने जीवन कसे जगू शकतील या सर्व गोष्टींचा विचार करून त्यांना न्याय मिळवून देण्याचा प्रयत्न केला.



त्रिसूत्री कार्यक्रम: शेती हा डॉ. बाबासाहेब आंबेडकरांचा अत्यंत जिवाळ्याचा विषय होता. शेतकऱ्यांनी निव्वळ पारंपरिक शेतीवर अवलंबून राहून उदरनिर्वाह करणे शक्य नाही. असे डॉ. बाबासाहेब आंबेडकरांचे ठाम मत होते. देशातील ७३ टक्के शेतकरी अल्पभूधारक आहेत. साधारण एक ते दोन एकर शेती असलेले शेतकरी आधुनिक पद्धतीची शेती करू शकत नाही. शेतीचे लहानलहान तुकडे झालेल्या शेतीच्या तुकड्यावर शेती किफायतशीर होणे शक्य नाही, हे डॉ. बाबासाहेब आंबेडकर जाणून होते. शेतकरी गरीब आहे, त्यांच्याकडे शेतीसाठी लागणाऱ्या गुंतवणुकीला पैसे उरत नाहीत, शेती करण्यासाठी पुरेशी अवजारे नाहीत, सिंचनासाठी पाणी विकत घेऊ शकत नाही, शेतीला लागणाऱ्या विजेचा बिल त्याला परवडत नाही, चांगल्या प्रतीचे बियाणे खरेदी करू शकत नाही या सर्व कारणांमुळे शेतकरी हा शेतीची उत्पादकता वाढवू शकत नाही. यावर उपाय म्हणून डॉ. बाबासाहेब आंबेडकरांनी त्रिसूत्री सुचविली होती. यामध्ये डॉ. बाबासाहेब आंबेडकरांनी काही उपाय सुचविले आहेत.

- १) शेतीसाठी लागणारी अवजारे आधुनिक असली पाहिजे. पारंपरिक पद्धतीने केलेली शेती कधीच समृद्धी आणू शकणार नाही.
- २) आधुनिककरण करण्यासाठी जमिनीच्या छोट्या-छोट्या तुकड्यांचे एकत्रीकरण होणे आवश्यक आहे.
- ३) शेतीला दर्जेदार बी-बियाणांची गरज आहे त्याशिवाय शेती चांगली होऊ शकत नाही.

शेती इंडस्ट्री: शेती हीच मुख्य इंडस्ट्री म्हणून ती जगविणे व वृद्धिंगत करणे ही भारतातील मानवी समाजाला आवश्यक आहे असे विचार प्रस्तुत करून डॉ. बाबासाहेब आंबेडकर पुढे म्हणतात की शेतीला फायदा पोहचवण्यासाठी, शेतीला किफायतशीर शेती बनविण्यासाठी, शेती उत्पादनाची किंमत ठरविण्यासाठी उत्पादनखर्च, नफा = किंमत ही व्यवस्था शेतकऱ्यांच्या हातात आल्याशिवाय भारतीय शेतकरी सुखी होऊ शकणार नाही. त्यासाठी शेती हा उद्योग आहे व त्याच्या उत्पादनाची किंमत ठरेल अशी एक बाजार व्यवस्था निर्माण करावी लागेल. पाणी, बियाणे, पाऊस यामुळे परावलंबी झालेला शेतकरी आणखी कंपन्यांवर अवलंबून झाल्याने त्याचे स्वावलंबन नष्ट झाले आहे.

वणीकरणाची गरज: डॉ. बाबासाहेब आंबेडकरांनी वनीकरण, जलसंधारण आणि सिंचनाच्या बाबतीत देखील महत्वपूर्ण विचार मांडले आहेत. शेती जर चांगली व्हावी असे वाटत असेल तर पावसाची गरज आहे. या देशात बहुतांश भागात पावसाच्या पाण्यावर स्थिती अवलंबून आहे. पाऊस हवा असेल तर जंगल क्षेत्र निर्माण करणे गरजेचे आहे. जेवढे जास्त जंगलक्षेत्रे असतील तेवढ्या जास्त प्रमाणात पाऊस उपलब्ध होईल. त्यासाठी सरकारने वणीकरणाचा कार्यक्रम तातडीने हाती घेण्याची गरज आहे.

सिंचनासाठी नदीजोड प्रकल्प: शेतीला मुबलक प्रमाणात पाणीपुरवठा व्हावा म्हणून डॉ. बाबासाहेब आंबेडकरांनी नदीजोड प्रकल्प सांगितलेला आहे. भारतातील काही नद्या वर्षभर वाहणाऱ्या तर काही नद्या कोरड्या आहेत. अशा वर्षभर वाहून जाणाऱ्या नद्यांचे पाणी साठविण्याची आणि त्यातून कोरड्या नद्यांमध्ये पाणी सोडणाऱ्या योजनांची आखणी सरकारने करावी. या माध्यमातून नद्यांचं वाहून जाणारा पाणी साठविण्याची आणि त्यातून कृषी क्षेत्रात जलसिंचन करण्यासाठी परिणाम कारक योजनांची आखणी करावी. महानदीच्या पाण्याचे योग्य पद्धतीने जलसंधारण केलं आणि कृषी क्षेत्राच्या जलसिंचन करिता त्याचा उपयोग केल्यास पाण्याचा उपयोग वीज निर्मितीसाठी करून



कृषिक्षेत्रात माफक दरात वीजपुरवठा केल्यास शेतकऱ्यांच्या शेतीची परिस्थिती बदलण्यास हातभार लागेल.

राज्य समाजवाद: डॉ. बाबासाहेब आंबेडकरांनी १९४६ ला ऑल इंडिया शेड्यूल कास्ट फेडरेशनच्या वतीने घटना समितीला एक मसुदा सादर केला होता. तो श्राज्य आणि अल्पसंख्यांकश या नावाने प्रसिद्ध आहे. डॉ. बाबासाहेब आंबेडकरांनी या मसुद्यात शेतीविषयक अतिशय महत्त्वपूर्ण विवेचन केले आहे. यामध्ये त्यांनी राज्य समाजवादाची योजना मांडली आहे. यामध्ये ते सुचवितात की, ष्शेती हा शासकीय उद्योग असावा. सरकारने सर्व जमीन आपल्या ताब्यात घ्यावी. सरकारी तत्त्वावर वा सामुदायिक तत्त्वावर शेती केली जावी. ती यंत्राच्या सहाय्याने अधिक चांगल्या रीतीने करता येईल. शिवाय बाजारात अधिक किंमत देणारा उत्पादन घेता येऊन त्यामुळे शेतकऱ्यांना अधिक आर्थिक लाभ मिळेल. त्यामुळे शेतकऱ्यांच्या आर्थिक उत्पन्नात भर पडून त्यांच्या राहणीमानात बदल घडेल. ष डॉ. बाबासाहेब आंबेडकर लोकशाहीला फक्त शासनाचा एक प्रकारच मानत नाही तर तिला विशिष्ट जीवन शैली म्हणतात. लोकशाही ही स्वातंत्र्य, समता, बंधुत्व, आणि न्याय या मुद्द्यावर आधारित आहे. हे मानवतावादी मूल्य समाजाचे समाजपण आणि राष्ट्राचे राष्ट्रपण टिकविण्यास आवश्यक आहेत. राज्य समाजवादाची संकल्पना ही सामाजिक लोकशाहीच्या दृष्टीने देखील तितकीच महत्त्वाची होती. कारण डॉ. बाबासाहेब आंबेडकरांना श्रम आणि श्रमिकांची केलेली विभागणी नामंजूर होती. ही विभागणी सामाजिक लोकशाहीसाठी अत्यंत मारक होती. ग्रामीण भागातील सामाजिक वातावरणात जात श्रेष्ठत्वाच्या आक्रमणामुळे सामाजिक व्यवहारात जाती मानसिकतेचा प्रभाव होता. परिणामी कृषी क्षेत्राशी संबंधित एक मोठा वर्ग मानवी हक्क अधिकारापासून वंचित होताच शिवाय त्याला माणूस म्हणूनही वागणूक मिळत नसे. ही वर्णव्यवस्था आणि जातीव्यवस्थेनी निर्माण केलेली जातीय मानसिकता आणि तिची तीव्रता कमी करण्यास सरकारी तत्त्वावर अथवा सामुदायिक तत्त्वावर शेती फायदेशीर ठरली असती.

स्वातंत्र्यानंतर भारतातील सहकारी चळवळ किती फायदेशीर ठरली आहे, आणि सामाजिक लोकशाही साठी किती उपयुक्त ठरली हे आधुनिक भारताच्या सामाजिक परिस्थितीचा अभ्यास केला असता लक्षात येते. सहकारी साखर कारखाने, सहकारी सूत गिरण्या, सहकारी फलोत्पादन, सहकारी दुग्ध व्यवसाय, सहकारी मत्स्य पालन, सहकारी कुक्कुटपालन यासारख्या सरकारी तत्त्वाच्या संस्था मधील एकूण कायदेशीर रचनामुळे जातीय मानसिकता सोडूनच काम करावं लागतं. शिवाय या संस्थांचा काम परस्पर चर्चा आणि विनिमय या नुसार होत असल्याने भागधारकांचे कल्याण हे अंतिम उद्दिष्ट असल्याने तिथे जाती उतरंडीचे महत्त्व नाही. परिणामी सामाजिक सामंजस्याचे वातावरण निर्माण होण्यास मदत झाली आहे. तथापि या देशाचे दुर्दैवच म्हणावे लागेल की या देशातील सर्वात मोठ्य लोकसंख्येत समाविष्ट असलेल्या जनतेच्या विकासाच्या योजना व संकल्पना इमाने इतबारे राबविण्यात आल्या नाहीत.

आजही शेतकऱ्यांना त्यांच्या शेतमालाला योग्य भाव मिळावा म्हणून संघर्ष करावा लागतो आहे. आजही कर्जाच्या डोंगराखाली दबून शेतकऱ्यांना आत्महत्या कराव्या लागत आहेत. आजही शेती समोर अनेक प्रश्न उभे आहेत. यांचा विचार केला तर आजही डॉ. बाबासाहेब आंबेडकरांचे शेतीविषयक कार्य व विचार शेतकऱ्यांसाठी किती मोलाची आहे हे अधोरेखित होते. आजही डॉ. बाबासाहेब आंबेडकर यांचा शेतीसाठी अधिनियम असावाश आणि श्राज्य समाजवादश शेतकऱ्यांसाठी किती महत्त्वाचा आहे हे लक्षात येते. आज जर सरकारने डॉ. बाबासाहेब आंबेडकर यांच्या शेती विषयक सुधारणांची व विचारांची अंमलबजावणी केली तर निश्चितच शेती व ग्रामीण



भागातील शेतकऱ्यांचे परिवर्तन घडेल. पण आता तर देशाची संपूर्ण अर्थव्यवस्था भांडवलशाहीच्या ताब्यात घालण्याचे सरकारी तत्वावर प्रयत्न सुरू झालेले आहेत आणि त्या विरोधात दिल्ली व संपूर्ण भारतात जी शेतकऱ्यांची आंदोलने सुरू आहेत. अशा आंदोलित शेतकऱ्यांना आणि प्रामाणिक राजकारण्यांना डॉ. बाबासाहेब आंबेडकर यांचे शेती विषयक विचार निश्चितच प्रेरणादायी ठरतील.

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जय जवान जय किसान असे श्री. लालबहादूर शास्त्री म्हणाले होते, पण याच शेतकऱ्याची व्यथा ऐकून मन दुःखी झाल्याशिवाय राहणार नाही. याच जगाच्या पोशिंद्याला आज आत्महत्या करण्याची वेळ का आली? स्वतः दिवस रात्र शेतात राबणारा माझा शेतकरी प्रेमाने, मनापासून संपूर्ण बळ एकवटून पीक घेतो. कधी दुष्काळ, कधी अतिवृष्टि, ही निसर्गनिर्मित संकटे त्याच्यापुढे कायम आधिपासून उभे राहतात तरी मझा शेतकरी ढगमगत नाही तो सहयाद्री प्रमाणे कणखर उभा असतो, या संकटावर मात करून तो मायेने लावलेले, जपलेले पिक घेतो पण अजून त्याची परीक्षा संपलेली नसते. शाळेत शिकणाऱ्या मुलाला देखील वर्षात फक्त दोनदाच परीक्षेला सामोरे जावे लागते पण शेतकऱ्याला प्रत्येक क्षणाला परीक्षेला सामोरे जावे लागते. एक समस्या सुटली की दुसरी त्याच्यासमोर आ वासून उभी असते. शेतमालाला हमीभाव नाही. त्याने घेतलेल्या पिकाला योग्य भाव मिळत नाही. या अवस्थेस शेतकरी काय करणार?

शेतीची सुरुवात केली तेव्हा डोंगर टेकड्यावर लाकडाच्या सहाय्याने शेती करून त्यापासून धान्याची पैदास केली जायची. काही काळानंतर मानव एक जागी स्थित झाला, त्यानंतर त्याने अधिक प्रमाणात क्षेत्रावर शेती करण्यास सुरुवात केली. कालांतराने, भारत देशामध्ये हरितक्रांती झाल्यानंतर देशाच्या धान्य उत्पादन क्षमतेमध्ये खूप मोठे बदल झाले. अन्न धान्याची उत्पादन क्षमतेमध्ये मोठी वाढ झाली, परंतु त्या काळी प्रश्न होता तोच की, उत्पादित केलेले धान्य साठवण्याची पुरेशी व्यवस्था नसल्यामुळे तसेच वाटपाचे नियोजन नसल्यामुळे त्या उत्पादनापेक्षा जास्त प्रमाणात धान्याची नासाडी अधिक होत असे, देशातील गरिबांना हे धान्य मिळतही नव्हते. व्यवस्थित न साठवल्याने त्याची मोठी नासाडी होत असायची. आज आपल्या देशातील शेतकरी हा जास्तीत जास्त प्रमाणात खेड्यापाड्यात राहतो, आणि हा शेतकरी शेती पूरक व्यवसाय म्हणून गाई, म्हशींचे संगोपन करतो, त्यापासून मिळणारे दूध यापासून तो दैनंदिन जीवन जगण्यासाठी काही प्रमाणात उदरनिर्वाहासाठी त्याची विक्री करून पैसे मिळवतो. परंतु पूर्वीपासून उत्पादित फळभाज्या, पालेभाज्या, फळे, यांना जास्तीत जास्त दिवस कसे टिकवता येईल या गोष्टी शेतकऱ्यांना माहित नाहीत. धान्य हे काही दुधासारखे नाशवंत नसते, म्हणून धान्याची नासधूस दुधाच्या प्रमाणापेक्षा कमी होत असते. आपल्या देशात या तीन नाशवंत मालाचे जेवढे उत्पादन होते त्याच्या ४० ते ५० टक्के एवढे उत्पादन वाया जाते, नासते आणि कुजते व्यर्थ जाते.

भारताच्या भाज्या आणि फळांच्या उत्पादनात दुसरा क्रमांक आहे. भारताने ठरवले तर निम्म्या जगाला दुध आणि भाज्या पुरवू शकतो. तेवढे उत्पादन आपल्याकडे घेतले जाते परंतु ते जगाला न पुरवता आणि त्यातला जवळपास निम्मा माल नासवून, कुजवून उकिरड्यावर फेकतो. त्यामुळे मालाची तर नासाडी होतेच पण उकिरड्यावर टाकल्याने त्याच्या दुर्गंध उठून रोगराई पसरते. निर्माण झालेला हा माल साठवण्याच्या पुरेशा सोयी सुविधा नसल्याने शेतकऱ्यांना नुकसान सहन करावे लागत आहे. आपले हे नुकसान ४४० अब्ज डॉलर एवढे प्रचंड आहे. ते रूपयात मोजायचे झाल्यास साधारण २४ लाख कोटी रूपये इतके आहे. आपण उत्पादन वाढवण्याचा प्रयत्न भारतातील शेतकरी वर्गाने केला आहेत परंतु त्यांना साठवण्याची योजना आखली नाही. त्याचा आपल्याला हा परिणाम भोगावा लागत आहे. ही उत्पादने अशी नासून आपले हे मोठे नुकसान टाळावे यासाठी त्यांना गोदामे आणि कोल्ड स्टोरेज उपलब्ध करून दिले पाहिजेत परंतु सध्या तरी यावर एक मार्ग आहे, तो म्हणजे या मालावर प्रक्रिया करणे. त्यामुळे नासाडी तर टळतेच पण प्रक्रिया केलेल्या मालाला जास्त भाव मिळून शेतकऱ्यांना जास्त पैसे मिळतात.

कृषि प्रधान देशातच शेतकऱ्यांच्या आत्महत्या?



आज महाराष्ट्रात शेतकरी आत्महत्या करतोय. पिकांचे योग्य मूल्य न मिळाल्यामुळे आणि कर्जबाजारी झाल्यामुळे आज शेतकरी शेती विकून दुसरे काम करायला विवश झाले आहेत. कोणी युवक शेती करायला मागत नाही. शेतकरी खरंतर स्वतःचा मालक असतो, पण आजकाल त्याला कर्ज घेऊन सुद्धा फायदा नाही होत. कृषिप्रधान म्हणून ओळखल्या जाणाऱ्या देशात शेतकऱ्यांची अशी दशा लज्जास्पद आहे. शेतकऱ्यांच्या कोणत्याच पिकाला हमी भाव दिला जात नाही, त्यामुळे दलाल शेतकऱ्यांकडून शेतीमाल कमी भावाने घेऊन शहराच्या ठिकाणी कितीतरी अधिक भावाने विकतात. शेतमालाची बाजार पेठ शेतकऱ्यांच्या हातात नाही तिथे मारवाडी किंवा इतर लोक असतात. भारतात कोणत्याही वस्तूची फिक्स किंमत आहे तर मग शेती मालाचिच का नाही.

शेती आणि शेतकऱ्यांच्या आत्महत्या

भारतात १२.५६ कोटी मध्यम व छोटे शेतकरी आहेत. त्यांच्याकडे सरासरी जास्तीत जास्त जमीन दोन हेक्टर आहे. बहुतेक शेतकरी भुसार पिक काढतात, कोरडवाहू शेती करताना सरासरी शेतकऱ्याचा उत्पादन खर्च (दोन हेक्टरसाठी) १० हजार रूपये होतो. त्याच सरासरी उत्पन्न २०,४०० रूपये होतं. म्हणजे वर्षाकाठी त्याला सुमारे १० हजार रूपये खर्चायला मिळतात. त्यामध्ये त्यानं शिक्षण, आरोग्य, लग्न, सण, करमणूक इत्यादी गोष्टी सांभाळायच्या. मशागत, पेरणी, कापणी बी-बियाणं खतं, जंतुनाशकं इत्यादी साठी पैसे लागतात. घर चालवताना जीव मेटाकुटीला येतो, पैसे उरत नाहीत, कर्ज घ्यावं लागतं, सहकारी बँक, शेती बँक, कमर्शियल बँक कर्ज देते. कर्ज मिळण्यात अडचणी येतात, अनेकांकडं तारण नसतं, अनेकांचं आधीचं कर्ज थकलेलं असतं. बँकांच्या अटी अव्यावहारिक असतात. बँक म्हणजे की फक्त उत्पादनासाठी कर्ज देणार. शेतकरी म्हणतो, की त्याला जगण्यासाठी ही पैसे हवेत, शिक्षणासाठी, लग्नासाठी पैसे हवेत. बँकांच्या नियमात ते बसलेच असं नाही. नाना अडचणी पार करून शेतकरी कर्ज घेतात.

रिझर्व बँकेचे आकडेवारी सांगते, की १२ कोटी शेतकऱ्या पैकी ५ कोटी शेतकऱ्यांची कमर्शियल सरकारी बँकात खाती आहेत, २० टक्के शेतकरी खजगी, महाग, कर्ज घेतात. अध्यापिका अधिक शेतकरी कर्जबाजारी आहेत. त्यांच्यावर सरासरी ४७ हजार रूपयाच्या कर्ज आहे. शेती करून कसंबसं जगलं, तरीही पैसे उरत नाहीत म्हटल्यावर कर्ज फेडणार कसं? आत्महत्या होते. पन्नासेक कोटी माणसं जगण्या मरण्याच्या संकटात आहेत. त्यातून वाट कशी निघणार? देशभरची राज्य आणि केंद्र सरकार शेतकऱ्यांना सुखी करण्यासाठी अनेक योजना जाहीर करतात. त्यांचा परिणाम होताना दिसत नाही. शेतकऱ्यांचे उत्पन्न दुप्पट करायचं असेल, तर त्याचं शेतमालाचं उत्पन्न वाढयला हवं. शेतमालाचं उत्पादन आणि दर एकरी उत्पादन क्षमता वाढायला हवी. उत्पादन वाढवण्याचा एकच सिद्ध झालेला मार्ग म्हणजे रासायनिक खतांचा वापर.

कृषी कायद्याने हित कुणाचे

संसदेत तीन कृषी सुधारणा विधेयके पारित होताच देशातील कृषी क्षेत्रसाठी एक नवीन सुरुवात झाली. ही तिन्ही विधेयके केंद्रीय कृषी मंत्रालया अंतर्गत येत असली तरी वेगवेगळी आहेत. एक विधेयक हे कृषी उत्पादन व्यापार आणि वाणिज्य (प्रोत्साहन व सहाय्य) विधेयक आहे, हे कृषी उत्पन्न बाजार समिती (एपीएमसी) ला पर्यायी व्यवस्था देणाऱ्या कायद्याचे आहे. दुसरे विधेयक हे शेतकरी (सबलीकरण व संरक्षण) हमीभाव करार व कृषी सेवा विधेयक (कॉन्ट्रॅक्ट फार्मिंग) संदर्भातले आहे. तर तिसरे विधेयक हे अत्यावश्यक वसू (सुधारणा) विधेयक हे कृषिमाल साठवण मर्यादा संदर्भातले आहे. या तिन्ही विधेयकांची वेगवेगळी विशेषता व वेगवेगळ्या तरतुदी आहेत. मात्र या सुधारणा विधेयकातून शेतकऱ्यांचे हित जपले जाईल का? असा प्रश्न उपस्थित होतं आहे. या कायद्याला विरोध म्हणून दिल्ली सीमेवर पंजाब, उत्तर प्रदेश सह देशातील शेतकरी आंदोलनावर बसले आहे. ज्यांच्या हातात सत्ता आहे, त्यांना या देशातल्या कष्टकरी, शेतकरी बांधवांबद्दल आस्था नाही. साठ दिवस झाले, उन्हातान्हाचा, थंडीचा विचार न करता शेतकरी रस्त्यावर बसला आहे. देशाच्या पंतप्रधानांनी त्यांना विचारपूस केला का? पंजाब म्हणजे पाकिस्थान आहे का? स्वातंत्र्याच्या संघर्षात जबरदस्त योगदान देणारा, स्वातंत्र्यानंतरही खलिस्थान चळवळी विरुद्ध पेटून उठणारा, १३० कोटी जनतेला दोन वेळचं अन्न देणारा बळीराजा प्रामुख्याने पंजाबातला आहे. पश्चिम उत्तर प्रदेशाला आहे. नाकर्तेपणाची भूमिका सरकारने घेतली आहे.



त्यामुळे देशभर संताप व्यक्त होत असताना लोकशाही भारतात जनता राजा की नेते अशी विचित्र परिस्थिती निर्माण झाली आहे.

शेतकऱ्यांच्या जेवढ्या समस्या पाहिल्यात तेवढ्या कमीच आहे. आज शेतकऱ्यांची दशा आणि व्यथा पाहता कोण यातून सोडवेल हा प्रश्नच आहे. शेतकऱ्यांना निसर्गाने तर मारलेच आहेत त्यात सरकार आसूड ओढून राहिलेले कातडे देखील काढून घेण्यास कमी करीत नाही.

शेतकरी वर्गासाठी काहीच गोष्टी शासना तर्फे झाल्या तरी बळीराजा सुखावेल. मुख्या म्हणजे शाळेपासून शेती हा विषय मुख्य असायला पाहिजे. शेतकऱ्यां करीता साठवणूकीची केंद्रे मोफत किंवा अतिशय माफक दरात असायला हवीत. साठवणुकीची केंद्रे वेगवेगळ्या पठडीतील असावी त्यात प्रामुख्याने प्रत्येक पिकानुसार त्याची साठवणूक व्हायला हवी. प्रत्येक गावात असे गोदाम केंद्रे हवेत. यात प्रामुख्याने शीतगृहे हवीत म्हणजे कोणताही माल नाश पावणार नाही. शेतकऱ्यांना साठवणुकीचा प्रश्न असल्यामुळेच पीक निघाले की ते विकावे लागते. जर या प्रकारे गोदाम असतील तर शेतकरी आपला माल त्यात साठवून ठेवू शकेल. माल साठवून शेतकरी ठेवू शकला तर योग्य दरात आपला माल विकू शकेल. अर्थात यामुळे त्याला त्याचे कष्टाचे चिज करता येईल. शेती पूरक व्यवसाय शेतकरी पूर्वी काळापासून करीत आहे. त्याचा देखील त्याला उपयोग योग्य पध्दतीने होईल. शेतकऱ्यांना अन्नप्रक्रिया हा घटक त्यासोबत संबंधित छोट्या मशनरी आणि त्याच्याशी संबंधित शिक्षण दिले तर आणखी बदल घडून येणार. शेतकरी स्वतःच्या हातात पैसा खेळवू शकणार.

कोणताच शेतकरी कर्जमाफी मागत नाही. पण प्रत्येक शेतकऱ्याला मनापासून एकच वाटते त्याच्या शेतमालाला हमीभाव भेटावं. तेवढा मिळाला तरी शेतकरी खुश होणार. आत्महत्तेनंतर ५ लाख देण्यापेक्षा हंगामाच्या सुरुवातीलाच २५ हजार द्या शेतकरी त्यातूनच शेतीतून सोनं उगवून दाखवेल. संसदेत आलेले तीन कायदे रद्द व्हावे.

ज्या शेतकऱ्यांनी भारताची भूक भागवली त्यांनाच सरकार असे वाऱ्यावर उभे करत असेल तर जनता कधीच माफ करणार नाही. भारत परत एकदा सुजलाम सुफलाम हवा असेल तर बळीचे राज्य यायलाच हवे.

ग्रंथसंपदा

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**चंद्रपूर जिल्ह्यातील जबराण जोत शेतकऱ्यांच्या कृषीचे प्रादेशिकीकरण****डॉ. राकेश झि. सरादे**

श्रेनूका महाविद्यालय नागपुर

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सारांश:

कृषी क्षेत्र हे कृषीजमिनीच्या वापराची गुणवत्ता आणि त्याच्या पीक पद्धतीचे प्रतिनिधित्व करते. हे साधारणपणे पिकवलेल्या पिकांचे स्वरूप, त्यांच्या संयोजनाची पद्धत, लागवडीची पद्धत, सरासरी निविष्टांचे प्रमाण आणि शेतीविषयक उपक्रमांची दिशा यांमध्ये समानता दर्शवते. कृषीसमानता मुख्यतः भौतिक आणि कृषी - हवामान परिस्थिती आणि सामाजिक, सांस्कृतिक वैशिष्ट्यांच्या सुसंगततेमुळे उद्भवते. कृषीक्षेत्रे ठरवताना तापमान, उंची, पर्जन्यमान, माती हे घटक विचारात घेतले जातात. नवीन कृषी तंत्रज्ञानाच्या आविष्काराने, शेती दुष्काळी पुरावा बनते आणि क्षेत्रीय वाढ अधिक संतुलित होते. असे म्हटले जाऊ शकते की, पीक पद्धती आणि इतर संरचनात्मक बदल, कृषी - हवामान परिस्थितीचा घटक, अंमलात आणण्याचा कितीही प्रयत्न केला तरी दुर्लक्ष केले जाऊ शकत नाही.

कृषीप्रदेश ही एकप्रकारची गतीशिल संकल्पना आहे, ते स्थळानुसार व वेळेनुसार परावर्तीत होत राहते. कृषीप्रदेश असे विस्तृत क्षेत्र असते की, जेथे पिकांचे वेगवेगळे प्रकार व त्यांच्या उत्पादन विधित समानतेसोबत कृषीप्रदेशाच्या उपयोगात एकप्रकारची विशिष्टता व समानता दिसून येते.

विजशब्द: पिक क्षेत्र, पिक विविधता निर्देशांक, पिक संयोजन, पिकांचे प्रकार व उत्पादन निर्देशांक

प्रस्तावना:

कृषी भूगोल मानव भूगोलाची एक शाखा आहे, कृषीभूगोलात प्रामुख्याने कृषीपद्धतीचा व त्यातून भागणाऱ्या मानवाच्या गरजांचा अभ्यास केला जातो. भारत हा एक कृषीप्रधान देश आहे. येथिल ७० टक्के लोकसंख्या कृषीव्यवसाय करून आपली उपजिविका चालवितात. मानवाच्या विविध गरजांमध्ये अन्न, वस्त्र, निवारा, या तीन महत्वाच्या मूलभूत गरजा आहेत. या तिन्ही गरजांची पूर्तता शेती व्यवसायातून होत असते. त्यामळे शेती उत्पादकतेवर या तिन्ही गरजांच्या पूर्ततेचे यश अवलंबून असते. शेतित पिकणाऱ्या पिकामूळे खाद्यान्न मिळते तर कापसापासून वस्त्रनिर्मिती आणि निवाऱ्यासाठी विशेषतः गोरगरीबांना लाकूडफाटा मिळतो. दिवसेंदिवस लोकसंख्या वाढीबरोबर या गरजांची वाढ होत असते. त्यामूळे अधिक प्रमाणात उत्पादनाची आवश्यकता असते. मात्र वाढत्या लोकसंख्येमुळे शेतचे क्षेत्र दिवसेंदिवस कमी कमी होत जात आहे. परिणामतः मानवाचे जबराण जोतदारिच्या प्रमाणात वाढ होत चालले आहे. पण हे कोणत्याही प्रकारचे जबराण जोत नसून तो गरीब आपल्या कुटुंबाचा उदरनिर्वाह चालविण्यासाठी या प्रकारची शेती करतो.

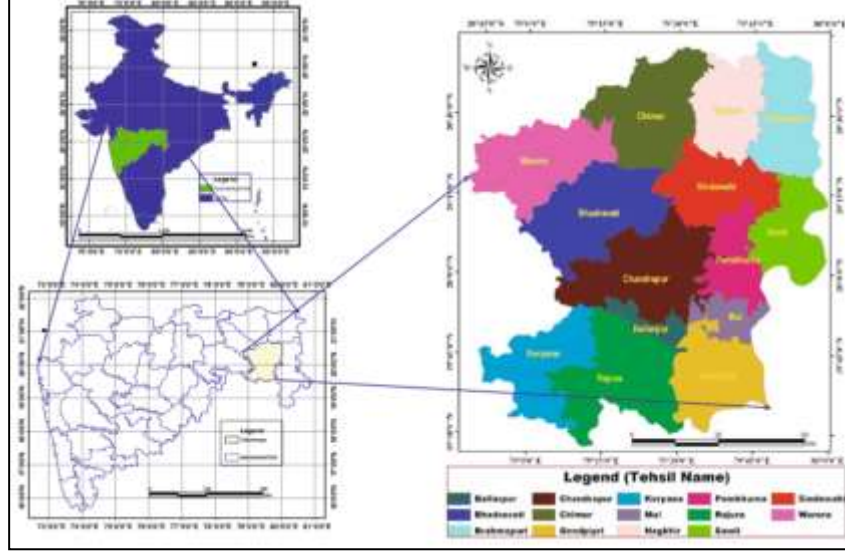
अभ्यासक्षेत्र - चंद्रपूर जिल्हा

चंद्रपूर जिल्हा हा फार प्राचीन काळातील असून हे शहर १४ व्या शतकातील आहे. याचे भौगोलिक स्थान १८°४' ते २०°०५' उत्तर अक्षांश ते ७८°५' ते ८०°६' पूर्व रेखांशांत स्थित आहे. जिल्हाचे एकूण क्षेत्रफळ ११४४३ चौ.कि.मी. असून ३५१९ चौ.कि.मी. क्षेत्र वाणाखाली आहे एकूण क्षेत्रफळाच्या ३०.७५ टक्के क्षेत्र वाणाखाली आहे. चंद्रपूर जिल्ह्याची समुद्रसपाटी पासूनची उंची १८९ मी. आहे. या क्षेत्रात जाबराण-जोतदाराचे ४१.५९ हेक्टर क्षेत्र झाले आहे.



येथील हवामान उष्ण विषम व कोरडे आहे. उन्हाळा अधिक कडक व तापमान ४६° से. व हिवाळा थंड असते, वार्षिक पर्जन्यमान मध्यम स्वरूपाचे असून १४० सेमी. पाउस पडतो. या जिल्ह्यात एकूण १५ तालुक्यांचा समावेश आहेत.

चंद्रपूर जिल्हा स्थान व विस्तार



नकाशा क्र. १

Source: https://www.researchgate.net/figure/Study-area-depicting-the-different-tehsils-of-Chandrapur-district-of-Maharashtra-India_fig1_226916178

चंद्रपूर जिल्ह्यातील जबरान जोत शेतकऱ्यांच्या पिकाच्या प्रकाराचे विश्लेषण

चंद्रपूर जिल्ह्यातील जबरान जोत शेतकऱ्यांच्या पिकाचे वर्गीकरण प्रामुख्याने एकेरी पिके व दुहेरी पिके अशी आहेत. चंद्रपूर जिल्ह्यात सर्वात जास्त जबरान जोत शेतकरी एकेरी प्रकारची पिके घेत असून त्याची टक्केवारी ९७ टक्के इतकी असून फक्त २ टक्के शेतकरी दुहेरी प्रकारचे पिके घेतात. जिल्ह्यातील तालुक्यानुसार चंद्रपूर, भद्रावती पोंभुर्णा व जिवती सोडले तर इतर सर्व तालुक्यातील शेतकरी १०० टक्के एकेरी प्रकारची पिके घेतात. दुहेरी पिके सर्वात जास्त भद्रावती येथे ३१ टक्के शेतकरी घेत असून सर्वात कमी जिवती येथे ३ टक्के शेतकरीच घेतात.

टेबल क्र. १

चंद्रपूर जिल्ह्यातील पात्र जबरान-जोतदार शेतकऱ्यांच्या पिकांच्या प्रकाराचे वितरण

अ.क्र.	तालुके	एकूण	पिकांचे प्रकार		टक्केवारी	
			एक पीक	दुहेरी पीक	एक पीक	दुहेरी पीक
1	चंद्रपूर	25	23	2	92	8
2	भद्रावती	16	11	5	68.75	31.25
3	वरोरा	15	15		100	
4	चिमूर	19	19		100	
5	सिंदवाही	12	12		100	
6	नागभोड	22	22		100	
7	ब्रह्मपुरी	24	24		100	
8	सावली	21	21		100	
9	मूल	29	29		100	
10	पोंभुर्णा	24	21	3	87.5	12.5
11	गोंडापिपरी	27	27		100	
12	बल्लारपूर	14	14		100	
13	राजुरा	25	25		100	
14	कोरपना	25	25		100	
15	जिवती	25	24	1	96	4
एकूण		323	312	11	96.59	3.4



चंद्रपूर जिल्ह्यातील जबरण जोत शेतकऱ्यांच्या पिक क्षेत्राचे विश्लेषण

चंद्रपूर जिल्ह्यातील जबरण जोत शेतकरी प्रामुख्याने तांदूळ, सोयाबीन, कापूस, ज्वारी, मका, हरभरा, जवस, मूग, तीळ, मोहरी, इत्यादी पिके घेतात चंद्रपूर जिल्ह्यात सर्वात जास्त क्षेत्राखाली तांदूळ पिकाचे क्षेत्र ४९.५० टक्के असून त्यापाठोपाठ कापूस १२.६८ टक्के, सोयाबीन ११.२८ टक्के, तूर ९.४५ टक्के, ज्वारी ७.९१ टक्के, तर इतर पिके ०.८२ टक्के, मूग ०.४९ टक्के, जवस ०.३४ टक्के, तीळ ०.२६ टक्के, हरभरा ०.२४ टक्के, मका व मोहरी ०.१६ टक्के क्षेत्र आहे. जिल्ह्यातील तालुक्यानुसार चंद्रपूर जिल्ह्यात तांदळाचे सर्वात जास्त क्षेत्र मूल येथे ९७.६५ टक्के असून सर्वात कमी बल्लारपूर येथे १६.१७ टक्के इतकी असून सिंदेवाही व सावली येथे समानता दिसून येते. तसेच सोयाबीन पिकाचे सर्वात जास्त क्षेत्र वरोरा येथे ३६.६२ टक्के असून सर्वात कमी बल्लारपूर येथे २.९४ टक्के इतकी असून राजुरा व जिवती येथे समानता दिसून येते. कापसाचे सर्वात जास्त क्षेत्र कोरपना येथे ६१.८ टक्के असून सर्वात कमी बल्लारपूर येथे ५.८८ टक्के इतकी आहे. ज्वारीचे सर्वात जास्त क्षेत्र बल्लारपूर येथे २२.५ टक्के असून सर्वात कमी नागभीड येथे १.५३ टक्के क्षेत्र असून भद्रावती व कोरपना येथे समानता दिसून येते. तुरीचे सर्वात जास्त क्षेत्र पौर्णा येथे ३१.४६ टक्के असून सर्वात कमी मूल येथे २.३४ टक्के असून सावली व मूल येथे समानता दिसून येते

टेबल क्र. २ चंद्रपूर जिल्हा जबरण जोत शेतकऱ्यांच्या पिकाच्या क्षेत्राचे वितरण

अनु क्र.	तालुके	एकूण जमीन	शेतकऱ्यांची											
			तांदूळ	सोयाबीन	कापूस	ज्वारी	तूर	हरभरा	मका	जवस	मूग	तीळ	फरसो	इतर
1	चंद्रपूर	103.2	35.07	7.75		11.62	6.78	2.9		4.06	2.9		1.93	1.93
2	भद्रावती	61	16.66	32.78	60.65	3.27								
3	वरोरा	17.2		36.62	58.72									
4	चिमूर	52.2	78.92	13.4										
5	सिंदेवाही	49	89.79											
6	नागभीड	65.2	85.88			1.53	6.13							
7	ब्रह्मपुरी	56	96.42											
8	सावली	52.3	89.86			5.73	2.48							
9	मूल	85.2	97.65				2.34							
10	पौर्णा	89	60.89				31.46							4.49
11	गोंडपिंपरी	114.3	88.62				4.54							
12	बल्लारपूर	68	16.17	2.94	5.88	22.05	27.94		2.94		0.29			1.47
13	राजुरा	190	38.42	22.1		18.94	11.57				1.57	1.57		1.57
14	कोरपना	91.1		25.57	61.8	3.51	9.11							
15	जिवती	122.3		22.89	37.77	19.62	14.71							
एकूण		1216	49.5	11.28	12.68	7.91	9.45	0.24	0.16	0.34	5.49	0.26	0.16	9.71

पीक विविधता:

पीक विविधता म्हणजे एखाद्या देशात प्रदेशात पिकाची संख्या भरपूर असणे हे होय म्हणजेच जेवढी पिकाची संख्या जास्त तेवढी पीक विविधता जास्त याउलट जेवढी पिकाची संख्येत कमी तेवढी पिकांची विविधता कमी असते. पीक विविधता ठरवितांना विशिष्ट प्रदेशातील वेगवेगळ्या प्रदेशातील वेगवेगळ्या पिकाखालील क्षेत्र व एकूण पिकाची संख्या याच्या गुणोत्तरावरून ठरवली जाते.

पिक प्रारूपाची विविधता म्हणजे लागवड योग्य जमिनीसाठी पिकाच्या विविध जातीची वाढ करणे. म्हणजे लागवडीयोग्य विशिष्ट क्षेत्रात विशिष्ट वेळेला विविध पिकाचे उत्पादन घेणे होय. एकंदरीत विशिष्ट क्षेत्रात पिकाची संख्या जास्त असते त्या वेळी विशेषीकरणाकडे म्हणजे त्या प्रदेशात पिकाचे केंद्रीकरण झालेले दिसून येते.

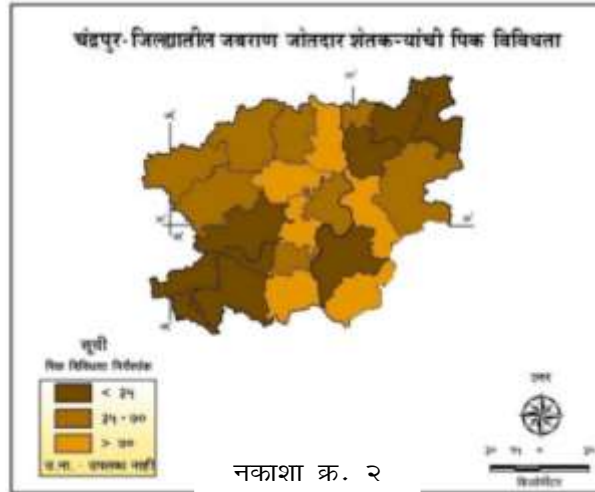
चंद्रपूर जिल्ह्यातील पात्र जबरण जोत शेतकऱ्यांच्या पीक विविधतेचे विश्लेषण



जेथे पीकांची संख्या कमी आढळून येते तेथे पीक विविधता ही कमी आढळून येते, व जिथे पिकाची संख्या जास्त आहे तिथे पीक विविधता जास्त आढळते. पिकाखालील क्षेत्र व एकूण पीकांची संख्या यांच्या गुणोत्तरावरून पिकांची विविधता ठरविली जाते. ज्या भागात जास्त किंवा भरपूर पीक असतात तेथील पिकामधील स्पर्धा जास्त असल्यामुळे तेथे पिकांचे विकेंद्रीकरण झाल्याचे दिसून येते, चंद्रपूर जिल्ह्यातील बल्लारपूर, चंद्रपूर, राजुरा व जिवती तालुक्यातील पीक विविधता ही सर्वात जास्त दिसून येते तेथे पीकांची संख्या चार आहे. त्यापाठोपाठ भद्रावती, वरोरा, चिमूर, नागभीड, सावली, पोंभूर्णा व कोरपणा येथील पीक विविधता निर्देशांक जास्त दिसून येतो. यात दोन ते तीन पिके दिसून येतात. सिंदेवाही, ब्रह्मपुरी व गोंडपिपरी येथे पीक विविधता सर्वात कमी दिसून येते, पीकांची संख्या फक्त एकच दिसून येते.

टेबल क्र. ३ चंद्रपूर जिल्ह्यातील पात्र जबरान जोत शेतकऱ्यांच्या पीक विविधतेचे विश्लेषण

अनु क्र.	तालुके	एकूण टक्के	पिकांची संख्या	पीक विविधता
1	चंद्रपूर	61.22	4	15.3
2	भद्रावती	110.09	3	36.69
3	वरोरा	95.34	2	47.67
4	चिमूर	92.32	2	46.16
5	सिंदेवाही	89.79	1	89.79
6	नागभीड	92.01	2	46
7	ब्रह्मपुरी	96.42	1	96.42
8	सावली	95.59	2	47.79
9	मूल	97.65	1	97.65
10	पोंभूर्णा	92.35	2	46.17
11	गोंडपिपरी	88.62	1	88.62
12	बल्लारपूर	72.04	4	18.01
13	राजुरा	91.03	4	22.75
14	कोरपणा	96.48	3	32.16
15	जिवती	94.99	4	23.74



पीक संयोजन

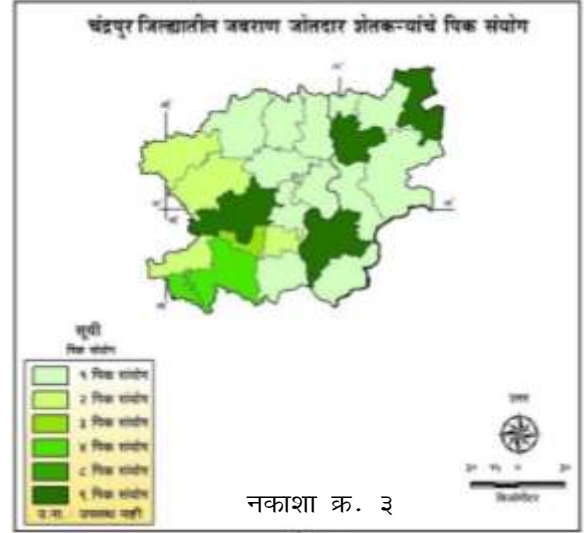
पीक संयोजनाची संकल्पना शास्त्रीय स्वरूपाची आहे आणि त्यामध्ये कृषी बघून व भूमी उपयोजन यामध्ये या संकल्पनेला पीक सहचर्य याविषयी अधिक माहिती जाणून घेण्यासाठी महत्त्वाची आहे. पीक घनता आणि पीक विविधता या दोन्ही कृषी विभाग पाडण्याच्या पद्धतीत एकमेकांकडे झुकलेल्या आहेत त्यांच्यातील हा दोष दूर करण्यासाठी पीक संयोजन ही पद्धत अस्तित्वात होतात. या पद्धतीनुसार जे पीक प्रकार पाडले जातात ते अभ्यासाला व दिसायला सोपे



वाटत असले तरी ते प्रत्यक्षात क्लिष्ट असतात. अशा प्रदेशात एकच पीक असले तरी त्या प्रदेशात इतर विविध पिके घेतली जातात, एकच पीक घेउन अभ्यास करणे अधिक फायदेशीर ठरते यासाठी पीक नियोजन ही पद्धत जास्त उपयुक्त ठरते.

चंद्रपूर जिल्ह्यातील जबरण जोत शेतकऱ्यांच्या पीक संयोजनाचे विश्लेषण

जबरण जोत शेतकऱ्यांच्या पीक संयोजनाची माहिती घेउन पुढील तालुक्यात ही छाया पद्धतीने दर्शवली आहे. चंद्रपूर जिल्ह्यातील चंद्रपूर तालुक्यात सर्वात जास्त नउ पिकाचे संयोजन झाल्याचे आढळते यात तांदूळ, ज्वारी, सोयाबीन, तूर, हरभरा, मूग, मका, तीळ, जवस या पिकाचे संयोजन झाले व त्यानंतर राजुरा व जिवती तालुक्यात चार पिकाचे संयोजन झालेली दिसते ते मध्यम प्रकारचे आहे कापूस, सोयाबीन, तूर व ज्वारी पिकाचे संयोजन चालले आहे. नंतर बल्लारपूर तालुक्यातील पिकांची संयोजन झालेले दिसून येते ते तांदूळ ज्वारी व तूर पिकाचे संयोजन झालेले दिसून येते भद्रावती, वरोरा येथे दोन पिकाचे संयोजन दिसून येते, ते कापूस व सोयाबीनचे आहेत, नंतर सिंदेवाही, नागभीड ब्रह्मपुरी, सावली, मूल तालुक्यात एकाच पिकाचे संयोजन झालेले दिसते त्यात फक्त तांदूळ याचे पिकाचे उत्पादन झालेले आहे पीक संयोजन असे दर्शविते की त्या त्या तालुक्यात ज्या ज्या पिकांच्या उल्लेख झाला आहे त्या तालुक्यात या पिकांचे प्राबल्य जास्त आहे व इतर पिकेही घेतली जातात परंतु त्याचे स्थान नगण्य आहे. विकास योजनांमध्ये आपल्याला कोणत्या तालुक्यात कोणती पिके घेतली जातात व तेथे किती पिकाचे संयोजन झाले आहे हे दर्शविण्यात येते.



टेबल क्र. ४ चंद्रपूर जिल्ह्यातील जबरण जोत शेतकऱ्यांचे पीक संयोजन

अनु क्र.	तालुके	पीक संयोजन निर्देशांक	पीक प्रकार	पीक संयोजन
1	चंद्रपूर	13.24	R,JW,SO,T,JA,H,MU,S,OT	9
2	भद्रावती	14.38	C,SO	2
3	वरोरा	11.58	C,SO	2
4	चिमूर	14.53	R	1
5	सिंदेवाही	0	R	1
6	नागभीड	8.2	R	1
7	ब्रह्मपुरी	0	R	1
8	सावली	8.39	R	1
9	मूल	2.35	R	1
10	पोभूर्णा	15.22	R,T	2
11	गोंडपिपरी	4.89	R	1
12	बल्लारपूर	8.26	T,JW,R	3
13	राजुरा	10.31	R,SO,T,JW	4
14	कोरपना	19.18	C,SO	2
15	जिवती	9.05	C,SO,JW,T	4

कृषी उत्पादकता निर्देशांक (Agricultural Productivity Index)



उत्पादकता आणि त्याच्या पूर्ततेसाठी लागणार्या मापणाला कृषी उत्पादकता असे म्हणतात. अर्थात हे लागत - आगतच्या मध्य अनुपात असतो. पारंपारिक रित्या याच्या मापनाचा अनेक भूगोल विद्वानांनी व अर्थशास्त्रज्ञांनी श्रम व भांडवलीसारखा लागताना लक्षात ठेवले आणि सामाजिक आणि पर्यावरण विषयक खर्च जे कृषी लागत पशुपालनासाठी खर्च केली जाते यामुळे त्याकडे लक्ष जात नाही. आजकाल कृषी उत्पादकता मापणामध्ये मृदेला सुपीक बनविणे त्यातील पारिस्थितिक संतुलन व्यवस्था आणि सामाजिक घटकासारख्या कारणावर खर्च पण महत्वपूर्ण मानली जाते.

कृषी उत्पादकतेच्या मापन क्रियेचा एक फायदा आपण असा पण आहे की, ते आपल्या सभोवतालच्या क्षेत्राच्या तुलनेत अभ्यास क्षेत्रातील कमी उत्पादनाची माहिती उपलब्ध करून देते. यामध्ये कमी, मध्यम व उच्च उत्पादकता निर्देशांक काढली जाते आणि प्रादेशिक असमानता दूर करण्यासाठी योजना निर्माण करण्यास मदत होते. या क्रियेमध्ये कृषीतील मागासलेल्या क्षेत्राची माहिती आणि ते मागासलेले असल्याची कारणे माहित करणे संभव होते.

चंद्रपूर जिल्ह्यातील शेतकऱ्यांच्या तांदूळ पिकांच्या उत्पादकतेचे विश्लेषण

दिलेल्या नकाशा क्रमांक ४ च्या आकडेवारीवरून चिमूर, ब्रह्मपुरी, सिंदेवाही, सावली, मूल, पोंभूर्णा, गोंडपिंपरी येथे तांदूळ या पिकाच्या उत्पादकतेच्या निर्देशांक उच्च स्वरूपाच्या दिसून येते. यावरून असे लक्षात येते की या तालुक्यात तांदूळ या पिकाचा उत्पादन निर्देशांक जास्त दिसून येते. तसेच चंद्रपूर येथे तांदूळ या पिकाच्या उत्पादकतेचा निर्देशांक माध्यम स्वरूपाच्या दिसून येतो.

भद्रावती, बल्लारपूर व राजुरा येथे तांदूळ या पिकाच्या उत्पादकतेचा निर्देशांक १ पेक्षा कमी असून निम्ण प्रकारचा आढळून येतो.

चंद्रपूर जिल्ह्यातील जबरण जोत शेतकऱ्यांच्या कापूस पिकाच्या उत्पादकतेचे विशेषण

दिलेल्या नकाशा क्रमांक ५ च्या आकडेवारीवरून वरोरा, कोरपना व जिवती या तालुक्यातील पिकांच्या उत्पादकतेच्या निर्देशांक १ पेक्षा जास्त असून तो उच्च स्वरूपाच्या दिसून येतो, यावरून असे लक्षात येते की, या तालुक्यात कापूस या पिकाच्या उत्पादन निर्देशांक जास्त दिसून येतो.

तसेच बल्लारपूर येथे कापूस या पिकाच्या उत्पादकतेचा निर्देशांक एक पेक्षा कमी असून तो प्रकाशच्या आढळून येतो.

चंद्रपूर जिल्ह्यातील जबरण जोत शेतकऱ्यांच्या सोयाबीन पिकाच्या उत्पादकतेचे विश्लेषण दिलेल्या नकाशा क्रमांक ६ च्या आकडेवारीवरून भद्रावती येथे सोयाबीन या पिकाच्या उत्पादकतेच्या निर्देशांक सर्वाधिक दिसून येतो यावरून असे लक्षात येते की या तालुक्यात सोयाबीन पिकाची उत्पादकता वाढत्या स्वरूपाचे दिसून येते.

तसेच वरोरा, कोरपना व चिमूर येथे सोयाबीन या पिकाच्या उत्पादकतेच्या निर्देशांक मध्यम स्वरूपाच्या दिसून येतो.

तसेच चंद्रपूर, बल्लारपूर व राजुरा येथे सोयाबीन या पिकाच्या उत्पादकतेच्या निर्देशांक १ पेक्षा कमी असून तो अति निम्न प्रकारचा आढळून येतो.

चंद्रपूर जिल्ह्यातील जबरण जोत शेतकऱ्यांच्या ज्वारी पिकाच्या उत्पादकतेचे विश्लेषण



दिलेल्या नकाशा क्रमांक ७ च्या आकडेवारीवरून बल्लारपूर, राजुरा व जिवती येथे ज्वारी या पिकाच्या उत्पादकतेच्या निर्देशांक उच्च स्वरूपाच्या दिसून येतो.

तसेच चंद्रपूर, आरमोरी, येथे ज्वारी या पिकाच्या उत्पादकतेच्या निर्देशांक मध्यम स्वरूपाच्या दिसून येतो.

तसेच भद्रावती, चिमूर, सावली, कोरपना येथे ज्वारी या पिकाच्या उत्पादकतेच्या निर्देशांक १ पेक्षा कमी असून तो निम्न स्वरूपाच्या आढळून येतो.

चंद्रपूर जिल्ह्यातील जबरान जोत शेतकऱ्यांच्या तुर पिकाच्या उत्पादकतेचे विश्लेषण

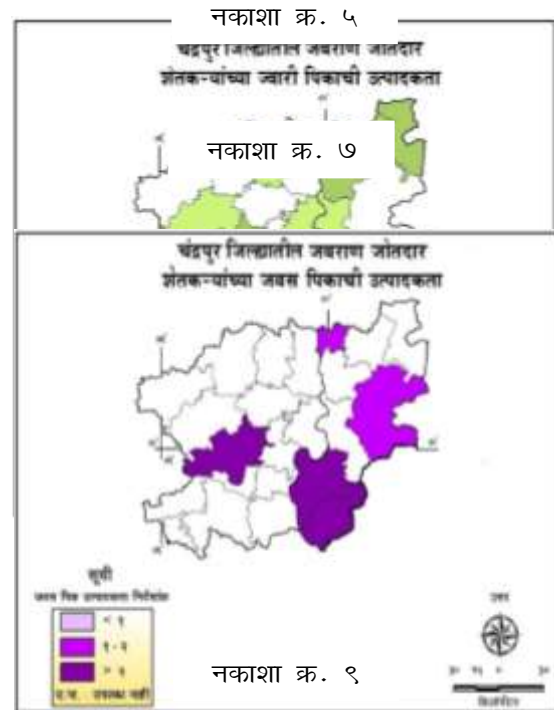
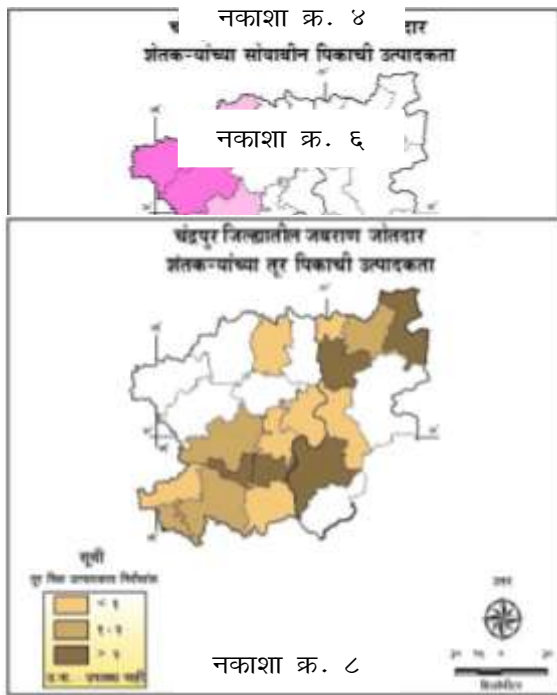
दिलेल्या नकाशा क्रमांक ८ च्या आकडेवारीवरून बल्लारपूर, पोंभूर्णा, चामोर्शी येथे तुरीच्या पिकाच्या उत्पादन निर्देशांक उच्च स्वरूपाच्या दिसून येतो.

तसेच चंद्रपूर, राजुरा व जिवती येथे तुरीच्या पिकाच्या उत्पादकतेच्या निर्देशांक मध्यम स्वरूपाच्या आहे.

तसेच नागभीड, कोरपना, मूल व सावली येथे तुरीच्या पिकाच्या उत्पादकतेच्या निर्देशांक १ पेक्षा कमी असून तो निम्न स्वरूपाचा आढळून येतो.

टेबल क्र. ५ चंद्रपूर जिल्ह्यातील जबरान जोत शेतकरांच्या कृषी उत्पादकता निर्देशांक

अ क्र.	तालुके	कृषी उत्पादकता निर्देशांक											
		तांदूळ	सोयाबीन	कापूस	ज्वारी	तूर	हरभरा	मका	जवस	मुंग	तीळ	मोहरी	इतर पिके
1	चंद्रपूर	1	0.83		2	1	16.66		16.66	8.33		16.66	3.33
2	भद्रावती	0.02	2.8	4.8	0.4								
3	वरोरा		4	6									
4	चिमूर	.7	1.25										
5	सिंदेवाही	2.33											
6	नागभीड	1.8			0.2	0.6							
7	ब्रह्मपुरी	2											
8	सावली	1.75			0.75	0.28							
9	मूल	1.85				0.14							
10	पोंभूर्णा	1.28				3.5							5.71
11	गोंडपिंपरी	1.77				0.44							
12	बल्लारपूर	0.45	0.35	0.65	3.75	4		25			1.75		2.5
13	राजुरा	0.75	1.87		2.31	1.18				3.12	5.75		1.87
14	कोरपना		2.12	4.5	0.41	0.9							
15	जिवती		2	3	2.4	1.5							



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**शेतकऱ्यांच्या आत्महत्या : कारणे व उपाय****डॉ. दिलीप पांडुरंग महाजन**

प्रोफेसर तथा अर्थशास्त्र विभाग प्रमुख

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जि.बुलडाणा (म.रा.) ४४३२०१

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सार :- भारतीय शेती अर्थव्यवस्थेचा पाया आहे. सुर्या विना सृष्टी नाही, तर शेतकऱ्यांविना देश नाही. शेतकरी अर्थव्यवस्थेचा कणा आहे. भारत हा शेतीप्रधान देश असून शेती हा भारतीयांचा परंपरागत व्यवसाय आहे. भारतातील ६५ टक्के पेक्षा अधिक लोक प्रत्यक्ष अप्रत्यक्ष शेतीवर अवलंबून आहे. शेती लोकांची जीवन जगण्याची पध्दती आहे. २१ व्या शतकाच्या उंबरठ्यावर भारत जागतिक महासत्ता बनण्याची स्वप्ने पाहतानाच भौगोलिक क्षेत्राच्या एकुण ४३ टक्के शेती हिस्सा, १३.९ टक्के स्थूल देशांतर्गत उत्पन्न कृषी उत्पादनातून मिळेल. शेती व शेती व्यवसाय मात्र आर्थिक अरिष्टातून जात आहे. २० व्या शतकाच्या सुरुवातीला रॉयलकमिशनने भारतीय शेतकऱ्यांच्या आर्थिक परिस्थितीत कर्जबाजारी पणाबद्दलचे विधान आजही शेतकऱ्यांना लागू पडते. स्वांत्र्योत्तर हिरक महोत्सवीवर्षाला सामोरे जातांना शेतकऱ्यांची परिस्थिती अत्यंत वाईट बनून जगाचा पोशिंदा शेतकरी आत्महत्या करित आहे. या स्थितीला आस्मानी संकटाबरोबरच सुलतानी कारभारही जबाबदार आहे. शेतकऱ्यांच्या आत्महत्येच्या प्रश्नाकडे लक्ष देण्यास सरकार वा राजकारण्यांना वेळ नाही. नुसती आश्वासने देऊन मतांच्या राजकारणात शेतकऱ्यांचा भुलभुलैय्या केला जात आहे.

प्रस्तावना :-

महाराष्ट्रात पहिली शेतकरी आत्महत्या १९ मार्च १९८६ रोजी शेतकरी कुटूंबाने केली असून साहेबराव करपे या शेतकऱ्याने स्वतः, पत्नी व ४ मुले यांच्या जेवणात विष कालवून आत्महत्या केली होती. दिवसेंदिवस यात वाढझाली.

भारतातील १३५ कोटी पेक्षा जास्त लोकांचा पोशिंदा व अन्नदाता कर्जाच्या विळख्यात सापडून दारिद्र्याच्या दुष्ट चक्रामुळे जगण्याची इच्छा हरविल्याने २१ व्या शतकाच्या पूर्वसंध्येला त्याने अत्यंत सोपा व सरळ असा आत्महत्येचा मार्ग स्विकारला आहे. भारतातील शेतकरी पत नसलेला कर्जबाजारी प्राणी आहे असे म्हटले जाते. भारतीय बळीराजा मात्र कर्जातच जन्मतो. कर्जातच जगतो व कर्जातच मरतो हे वास्तव आहे. भारत हा कृषिप्रधान देश असून ग्रामीण लोकसंख्येचा प्रमुख व्यवसाय शेती हाच आहे. म्हणूनच या प्रश्नाकडे लक्ष देण्याच्या हेतुने या संशोधनपर शोधनिबंधातून शेतकऱ्यांच्या आत्महत्या : कारणे व उपाय संशोधकाने या प्रश्नावर थोडक्यात प्रकाश टाकण्याचा प्रयत्न केला आहे. ७५ टक्के ग्रामीण लोकसंख्या शेतीवरच अवलंबून आहे. २००५-२००६ मध्ये भारताच्या स्थूल देशांतर्गत उत्पादनात शेती व संलग्न क्षेत्राचा वाटा १८.५ टक्के होता. १८३० ते १९०९ तसेच ब्रिटीश काळात २२ दुष्काळ पडले मात्र शेतकऱ्यांनी आत्महत्या केली नाहीत. मात्र अलिकडील १९९५ ते २००७ या काळात भारतातील ४ लाखांपेक्षा जास्त शेतकऱ्यांनी आत्महत्या केल्यात त्यापैकी ९० हजार म्हणजे ६० टक्के आत्महत्या महाराष्ट्र, आंध्रप्रदेश, कर्नाटक, मध्यप्रदेश, छत्तीसगडसह यातील आहेत. नॅशनल काईम रेकॉर्डस ब्युरो हा आत्महत्यासंबंधी आकडेवारीचा प्रमुख स्रोत त्यामार्फत आत्महत्या



मृत्युदराची माहिती मिळते. आत्महत्यामृत्युदर म्हणजे प्रति १ लाख व्यक्तींमागे आत्महत्यांमुळे झालेल्या मृत्यूंची संख्या होय. या माहितीनुसार १९९६ ते २००५ या काळात पुरुष शेतकऱ्यांच्या बाबत आत्महत्या मृत्युदराचा वार्षिक वृद्धीदर ४.८ टक्के होता. भारतातील पुरुष शेतकऱ्यांच्या बाबत आत्महत्यादर १९९६ मध्ये १२.३, २००४ मध्ये १९.२ व २००५ मध्ये १८.२ होता. भारतातील शेतकऱ्यांच्या एकूण आत्महत्यांपैकी पुरुष शेतकऱ्यांचे प्रमाण ८९ टक्के आहे. तर एकूण शेतकरी आत्महत्यांपैकी ५४ टक्के आत्महत्या आंध्रप्रदेश, कर्नाटक, केरळ, महाराष्ट्रात झाल्यात. पुरुष शेतकऱ्यांबाबत उच्च आत्महत्यादर असलेल्या राज्यात केरळ—१९५, महाराष्ट्र—५१, छत्तीसगड — ४५, कर्नाटक ४१, आंध्रप्रदेश ३३, तामिळनाडू—३२ व पश्चिम बंगाल २० यांचा समोवशा आहे.

वर्ष	कृषी विकास दरातील घट	वर्ष	भारताच्या जीडीपीत शेतीचा हिस्सा
१९९१—९२	— १३ टक्के	१९५०—५१	५५.४ टक्के
२०१३—१४	— १२.३ टक्के	१९६०—६१	५२.५ टक्के
२०१४—१५	— उणे १०.७ टक्के	१९७०—७१	४४.५ टक्के
२०१५—१६	— उणे ३.२ टक्के	१९८०—८१	३८.१ टक्के
२०१६—१७	— २२.५ टक्के	१९९०—९१	३०.९ टक्के
२०१७—१८	— उणे ८.३ टक्के	२०००—०१	२४.२ टक्के
		२००९—१०	१४.२ टक्के

विषयाचा परिचय व महत्व :-

भारतात शेतीप्रधान व श्रमाधारीत अर्थव्यवस्था लागू असून भारताचा आर्थिक विकास शेती क्षेत्राच्या विकासावरच अवलंबून आहे. भारतातील सव्वा अब्जापेक्षा अधिक लोकसंख्येला अन्नधान्य पुरविणारा अन्नदाता, कृषीदेव मात्र जुगारी मान्सुनचा बळी ठरत असल्याचे दिसून येते. भारत खेड्यांचा देश असून खेड्यात शेती हा प्रमुख उपजीविकेचे साधन व जीवन पध्दती आहे. अलीकडे शेतकऱ्यांच्या आत्महत्येचे प्रमाण दिवसेंदिवस वाढत असल्याचे चित्र आहे. ही एक राष्ट्रासमोरील गंभीर समस्या बनत चालल्याचे दिसून येते. जागतिकीकरणानंतरच्या काळात शेतीचा विकास दर ३.२ टक्के वरून १.३ टक्के पटीत घटला आहे. शेतीत कुंठितावस्था निर्माण झाली आहे. हरितक्रांती घडूनही अपेक्षित लाभ समाजातील सर्व घटकांना मिळाले नाहीत. भारतीय शेतकरी सुखी नाही. म्हणून शेतकऱ्यांच्या आत्महत्या वाढत आहे. ग्रामीण कर्जबाजारीपणा हे त्यातील प्रमुख कारण म्हणून ह्या गंभीर प्रश्नाकडे लक्ष देण्याच्या उद्देशाने संशोधकाने शेतकऱ्यांच्या आत्महत्या कारणे व उपाय या विषयावर थोडक्यात प्रकाशझोत टाकण्याचा प्रयत्न केला आहे. शेतकऱ्यांच्या आत्महत्याचा कारणे व उपाय ह्या गंभीर समस्येची सुरुवात सर्वप्रथम केरळ मध्ये झाली. त्यानंतर हे प्रमाण हळूहळू सर्व देशात वाढू लागले. १९९६ ते २००५ ह्या काळातील पुरुष शेतकऱ्यांच्या बाबतीतील आत्महत्या मृत्युदराचा वार्षिक वृद्धीदर ४.८ टक्के होता. १९९६ मध्ये १२.३ टक्के तर २००४ मध्ये हा दर १९.२ टक्के तर २००५ मध्ये आत्महत्यादर १८.२ टक्के होता. ५४ टक्के आत्महत्या आंध्रप्रदेश, कर्नाटक, केरळ, महाराष्ट्रात झाल्या आहेत. देशात दररोज ४० ते ५० शेतकरी आत्महत्या करतात. आजपर्यंत देशात जवळपास ४ लाखांच्यावर शेतकऱ्यांनी आत्महत्या केल्या आहेत. तर महाराष्ट्रातील ७० हजार शेतकऱ्यांनी आत्महत्या केल्या आहेत. मात्र हिमाचल प्रदेश, जम्मू—कश्मीर, झारखंड, मिझोराम, नागालॅंड, उत्तराखंड या राज्यांत एकाही शेतकऱ्याची आत्महत्या झालेली नाही. म्हणून महाराष्ट्राच्या दृष्टीने ह्या विषयाच्या अभ्यासाचे महत्व अधिक आहे.

अभ्यासाची गृहीतके :-



1. भारतातील वाढत्या लोकसंख्येमुळे अपखंडन व आंतर विभाजनाने शेतीचे तुकडीकरण होत आहे.
2. शेतकरी अनियमित मान्सूनमुळे सावकारी व इतर कर्जांच्या सापळ्यात अडकत चालला आहे.
3. भारतीय शेती अधिकांश प्रमाणात कोरडवाहू स्वरूपाची असून त्यातून मिळणारे उत्पादन व उत्पन्न अनिश्चित स्वरूपाचे आहे.
4. गेल्या काही वर्षात शेतकरी आत्महत्येत वेगाने वाढ होत आहे.
5. शेतकऱ्यांची आर्थिक परिस्थिती व आत्महत्या यांचा जवळचा संबंध आहे.
6. दुष्काळ व शेतकरी आत्महत्या यांचा जवळचा संबंध आहे.
7. शेतकरी आत्महत्येचा प्रश्न सर्वत्र सारखा नाही.

शोधनिबंधाच्या अभ्यासाची उद्दीष्ट्ये :-

1. शेतकऱ्यांच्या आत्महत्या होण्याच्या कारणांचा अभ्यास करणे / शोध घेणे.
2. शेतकरी आत्महत्या आकडेवारीचा तुलनात्मक अभ्यास करणे.
3. शेतकऱ्यांच्या आत्महत्यांमुळे होणाऱ्या परिणामांचा अभ्यास करणे / शोध घेणे.
4. शेतकऱ्यांच्या आत्महत्या कमी होण्यासाठीच्या उपाययोजना, साधनांचा अभ्यास करणे.

अभ्यासाची संशोधन पध्दती :-

ह्या संशोधनपर शोध निबंधासाठी मिळविलेली माहिती पुर्णपणे दुय्यम साधन सामग्रीवर आधारलेली असून त्यासाठी विविध संदर्भग्रंथ, पुस्तके, विविध अहवाल, वार्षिकांक, मासिके, साप्ताहिके व देनंदिन वृत्तपत्रांमधून सदरची सांख्यिकीय व विश्लेषणात्मक माहिती तसेच इतर आवश्यक आकडेवारी करून, संदर्भ घेऊन सदरचा संशोधनपर शोध निबंध तयार करण्यात आला आहे.

भारतातील शेतकऱ्यांच्या आत्महत्या (२००१)

राज्य	शेतकऱ्यांच्या आत्महत्या प्रकरणांची संख्या	एकुण आत्महत्यांच्या संख्येत शेतकऱ्यांच्या आत्महत्यांचे प्रमाण
महाराष्ट्र	३५३६	२४.२
कर्नाटक	२५०५	२१.१
आंध्रप्रदेश	१५०९	१४.३
छत्तीसगड	१४५२	३६.१
मध्यप्रदेश	१३७२	२०
पश्चिम बंगाल	१२४६	९.१
केरळ	१०३५	१०.८
तामीळनाडु	९८५	८.७
उत्तरप्रदेश	७०९	१८.५
गुजरात	५९४	१२.४
राजस्थान	५०५	१५.८
ओरिसा	१४५	७.२
पॉडीचेरी	९१	१७.२
बिहार	८८	१०.३
पंजाब	४५	६.९
त्रिपुरा	४१	४.८



हिमाचलप्रदेश	२२	७.२
गोवा	१८	७
जम्मू—कश्मिर	१५	९.८
भारताचे एकुण प्रमाण	१६४१५	१५.२

संदर्भ : के.नागराज (२००८) भारतीय शेतकऱ्यांच्या आत्महत्या (अहवाल)

भारतातील विविध राज्यांतील शेतकऱ्यांच्या आत्महत्या :-

राज्य / वर्ष	२०१०	२०१३	२०१४	२०१५
महाराष्ट्र	१५९६४	१६६२२	४००४	४२९१
छत्तीसगड	११२६		७५५	९५४
कर्नाटक	२५८५	११२६६	७६८	१५६९
तामीळनाडू		१६६२२		
आंध्रप्रदेश	२५२५	१४६०७	६३२	९१६
मध्यप्रदेश	१२३७	१०९०	११९८	१२९०
पश्चिम बंगाल	९९३	१३०५५		
केरळ	८९५			
तेलंगणा			१३४७	१४००

भारतातील विविध राज्यांची कर्जाची आकडेवारी

राज्य	शेतकरी कुटूंबावरील सरासरी कर्ज (रु.)	कर्ज असणाऱ्या शेतकरी कुटूंबाचे प्रमाण (:)	२०१५—१६ सालातील अन्नधान्य उत्पादन (टनात)	२०१३—१५ या काळात झालेल्या शेतकरी आत्महत्या
महाराष्ट्र	५४७००	५७.३	८०६७०००	११४४१
कर्नाटक	९७२००	७७.३	९९६९०००	३७४०
तामीळनाडू	११५९००	८२.५	११९४१०००	१६०६
आंध्रप्रदेश	१२३४००	९२.९	१०५७२०००	३५६२
तेलंगणा	९३५००	८९.१	५०२५०००	२७४७ (२०१४ व २०१५)
ओरिसा	२८२००	५७.५	६५९००००	३०२
पश्चिम बंगाल	१७८००	५१.५	१७७७६०००	२३०
छत्तीसगड	१०२००	३७.२	६९५९०००	१७०९
मध्यप्रदेश	३२१००	४५.७	३०२१३०००	३५७८
हरियाणा	७९०००	४२.३	१६३८२०००	६८५
पंजाब	११९५००	५३.२	२८४०८०००	२७१
राजस्थान	७०५००	६१.८	१८१०१०००	७४१

१९९७ ते २००२ या काळात कर्नाटक, महाराष्ट्र, आंध्रप्रदेश, केरळ या राज्यातील ३९२६२ शेतकऱ्यांनी आत्महत्या केल्या. त्यातील २८९११ आत्महत्या महाराष्ट्रातील शेतकऱ्यांच्या होत्या. २००६ ते २०१३ काळात महाराष्ट्रात १६६२२ शेतकऱ्यांनी आत्महत्या केल्या. १९९५ ते २००३ या काळात देशात एकुण १३८३२२ शेतकऱ्यांनी आत्महत्या केल्या तर १९९६ ते २००५ काळात भारतात १९९२०४ शेतकऱ्यांनी आत्महत्या केल्या.



महाराष्ट्रातील शेतकऱ्यांच्या आत्महत्या : सद्यस्थिती

वर्ष	महाराष्ट्र राज्य	मराठवाडा क्षेत्र	विदर्भ क्षेत्र	प.विदर्भ विभाग	बुलडाणा जिल्हा	चिखली तालुका
१९९५	१०८३					
१९९६	१९८१					
१९९७	१९१७					
१९९८	२४०९					
१९९९	२४२३					
२०००	३०२२					
२००१	३५३६		५२	४९		३
२००२	३६९५		१०४	८०		२
२००३	३८३६		१४८	१३४	१४	५
२००४	४१४७		४४८	४१९	८५	१४
२००५	३९२६		४४५	४१९	८१	२४
२००६	४४५३		१४४९	१२९५	३०६	५७
२००७	४२३८		१२४७	१११९	१९३	३८
२००८	३८०२		१३८७	१०६१	१९५	३६
२००९	२८७२		१००५	९०५	१०३	७
२०१०	३१४१	११२	११७७	१०५१	१३७	११
२०११	३३३७	७३	९९९	८८६	१२६	१५
२०१२	३७८६	११२	९५१	८४२	१५३	२
२०१३	३१४६	११९	८८२	७०५	१११	७
२०१४	४००४	४३८	११२८	९६३	११०	१३
२०१५	४२९१	८३१	१५७०	११८४	११६	२२
२०१६	३०६३	७५९	१४७७	११०३	२१७	
२०१७	२९७१	७७९	१३४४	१०६६		
२०१८	२७६१	४८९	१२९७	१०४९		
२०१९	२५७२		१२२७	१०५८		
२०२०	२९१२		१३५७	१२०६	२६०	
२०२१						

शेतकरी आत्महत्येची कारणे :-

मान्सून/निसर्गावर अवलंबित असणारे ७० टक्के शेतकरी आहेत.

पिकांबाबत विविधता - अन्नधान्यात ३/४ शेतीचा हिस्सा आहे.

अल्पभूधारक शेतकऱ्यांचे मोठे प्रमाण/विषमतेचे मोठे प्रमाण

१ हे. पेक्षा कमी ५१ टक्के शेतकरी १० हे. पेक्षा कमी जमीन ९६ टक्के शेतकरी आहेत.

१ ते ४ हे. ३४ टक्के शेतकरी १० हे. पेक्षा जास्त जमीन ०.४ टक्के शेतकरी आहेत.

एकुण धारण क्षेत्रापैकी ८५ टक्के धारण क्षेत्र ४ हे. पैक्षा कमी आहे.



लहान आकाराची/अकार्यक्षम धारण क्षेत्र—७५ टक्के आत्महत्या, २ ते १२.५ एकर जमीन असणाऱ्या शेतकऱ्यांच्या आहेत, पाणिपुरवट्याच्या पध्दती कमी, पाणीपुरवट्याचे स्रोत कमी, भुधारणेचा आकार लहान

शेतकऱ्यांमधील वाढता कर्जबाजारीपणा, कर्जाचा अनुत्पादक वापर, सावकारांकडून पिळवणूक आणि सावकारीचे वाढते प्रमाण, शेतमालाच्या किंमतीतील चढउतार/योग्य भाव न मिळणे, बियाणे, खते, किटक नाशकांच्या वाढत्या किंमती, चूकीचे सरकारचे धोरण — २०१३ मध्ये सोयाबीनचे भाव सर्वोच्च शिखरावर गेले असतांना शासनाने सोयातेल आयात केल्याने भावात घट झाली. कांदा आयात, साखर आयात, तेल आयात २०१६, २०१७ मध्ये ४६२७१० टन तुर आयात यामुळे भाव घट झाली.

भारतातील ६० टक्के तर महाराष्ट्रातील ८२ टक्के क्षेत्र कोरडवाहू आहे. शासनाने ग्रामीण विकास खर्चात घट केली. कृषी व्यवस्थेचे बदलते स्वरूप, विजेचा अपूरा पुरवठा, पुरक उद्योगांची कमतरता, जमीनीचा अतिरिक्त वापर, वित्त पुरवठ्याच्या उपलब्धतेतील अडचण, परंपरागत उत्पादन पध्दतीचा वापर, दुष्काळ, महापूर, अवेळी येणारा पाउस, वादळ इ. नैसर्गिक आपत्ती, निकृष्ट बियाणे, शिक्षणाचा अभाव, जमिनी विषयक वाद, कुटूंबातील भांडणे, कुटूंबातील विवाह, शेतकऱ्यांचे आजारपण, शेतीतील गुंतवणूक तोट्याची ठरणे, सामाजिक सुरक्षिततेच्या उपाययोजनांचा अभाव, पिकविम्यांचा अभाव, उत्पादनांच्या पर्यायी साधनांचा अभाव, नैसर्गिक आपत्तीत सरकारकडून योग्यवेळी व पुरेशी मदत न मिळणे, शेतकऱ्यांची फसवणूक, दिर्घकालीन विज पुरवठा नाही, अल्पभूधारकांना कर्ज मिळण्यात अडचण, चंगळ वादामुळे गरजांत वाढझाली, उत्पादन खर्चात वाढझाली, दारीद्र्याचे दुष्ट चक्र वाढले, आत्मविश्वासाचा अभाव निर्माण झाला, जागतीक व्यापार धोरण कारणीभूत ठरले, शेती अनुदाने कमी केलीत, २००३ मध्ये जपान ने एकुण उत्पादनाच्या ७२.५ टक्के अनुदाने दिली, अमेरिकेत २९ टक्के अनुदाने दिली, चिनमध्ये ३४ टक्के अनुदाने दिली, तर भारतात मात्र ३ टक्के अनुदाने दिली गेली, वाढदिवस, विवाह, मुंज, बारसे इत्यादी सामाजिक प्रतीष्ठेत अवाजवी खर्च होतो, अशिक्षित, दैववादी, निरक्षरता, अज्ञानी, अंधश्रद्धा, कोरडवाहू शेती, दारिद्र्याचे दुष्टचक्र, बचत कमी, गुंतवणूक कमी, कृषी भांडवलाचा अभाव, ६५ टक्के जनता शेतीवर अवलंबून, राष्ट्रीय उत्पन्नात शेतीचा वाटा १७.२ टक्के मात्र असून त्यासाठी तरतुद २.५ टक्के तर सिंचनासाठी ०.३५ टक्के तरतुद दिली जाते. शेतकरी आत्महत्येच्या प्रश्नाला उग्र स्वरूप धारण करण्याचे कारण शेतमालाला दिली जाणारी नगण्य किंमत वाढही आहे. २०२१—२२ मध्ये किमान हमीभावात क्विंटल मागे मात्र ७२ ते ४२५ रुपयांची वाढ केली आहे. एकीकडे नोकरदारांना दिल्या जाणाऱ्या महागाई भत्यांचा विचार करता ही वाढ नगण्य आहे. खते, किड रोग निवारक औषधे, विजदर डीझेल पेट्रोलच्या किमती कृषी कर्जावरील व्याजदर जोखीम व इतर आदानांच्या व मजुरीच्या दरातील वाढीमुळे कृषी उत्पादन खर्चात २० ते ३० टक्के वाढ तुटपूंजी झाली आहे. त्यांच्या तुलनेत हमीभाव १ ते ६.५९ टक्के इतकेच वाढले आहेत.

केंद्राने जाहीर केलेल्या आधारभूत किमती (प्रति क्विंटल)

अ. क्र.	पिक	२०२०—२१ चे दर (रुत)	२०२१—२२ चे दर (रुत)	शेकडा वाढ
१	धान (अ)	१८८८	१९६०	३.८१
२	धान (ब)	१८६८	१९४०	३.८५
३	ज्वारी	२६२०	२७३८	४.५०
४	बाजरी	२१५०	२२५०	४.६५



५	रागी	३२९५	३३३७	१.२७
६	मका	१८५०	१८७०	१.०८
७	तुरडाळ	६०००	६३००	५
८	उडीद	६०००	६३००	५
९	मुग	७१९६	७२७५	१.१०
१०	तीळ	६८५५	७३०७	६.५९
११	शेंगदाणा	५२७५	५५५०	५.२१
१२	सुर्यफुल	५८८५	६०१५	२.२१

संदर्भ :- अर्थदृष्टी - डॉ.संजय तुपे - दै.पुण्यनगरी

निवडक पिकांबाबत आंतरराष्ट्रीय तुलना (२००४-०५)

शेतजमीनीची कमी उत्पादकता (दर हेक्टरी उत्पादन मेट्रिक टन मध्ये)

देश	तेलबीया	गहु	तांदुळ	उस	शेंगदाणे	मका	कापूस
इंग्लंड		८.०४३					
भारत	०.८६	२.७८५	२.९६४	६८.०४९	१.०८६	१.१८	४.६४
इजिप्त			९.८३५				
इजिप्त				११९. ८९३			
अमेरिका					३.३९३	९.१६	
चिन							११.१०
जर्मनी	४.०७						

वनतबम म्बवदवउपब म्मतअमल २००६.०७

भारत सरकारचे पॅकेज :-

१९९० मध्ये १०००० रुपयांची सरकट कर्जमाफी साडेचार कोटी शेतकऱ्यांना केंद्राने दिली. २००८-०९ मध्ये ६०००० को.रु. (१ ते २ हेक्टर दरम्यान जमीन असणाऱ्या शेतकऱ्यांना सरसकट कर्जमाफ तर २ हे. पेक्षा अधिक जमीन असणाऱ्या कर्जदार शेतकऱ्यांना कर्ज रकमेत २५ टक्के सुट)

२००७-०८ च्या अंदाजपत्रकात शेतकऱ्यांसाठी एनडीए सरकारने ७१००० को.रु. चे कर्जमाफी पॅकेज जाहीर केले.

शेतकऱ्यांसाठी महाराष्ट्र सरकारने दिलेली पॅकेजेस :-

- २००२ १०७५ को.रु.
- २००३ ७६३ को.रु. (विदर्भासाठी)
- २००५ १०७५ को.रु. (आत्महत्या रोखण्यासाठी)
- २००६ ३७५० को.रु.
- २००६ ३५०० को.रु. (मराठवाड्यासाठी)
- २००८ ९८६८ को.रु. (कर्जमाफीसाठी)
- २००८ ६००० को.रु. (लाभ न झालेल्या शेतकऱ्यांसाठी)
- २००९ ६५०० को.रु. (खान्देशासाठी)



२००९	५२३२ को.रु. (कोकण विकासासाठी)
२००९	५००० को.रु. (मराठवाड्यासाठी)
२०१०	१००० को.रु. (फयान वादळग्रस्तांसाठी)
२०११	२००० को.रु. (कापूस, सोयाबीन धानसाठी)
२०१२	१२०० को.रु. (अवकाळी पाऊस)
२०१३	४५०० को.रु. (दुष्काळ व प्राण्यांसाठी)
२०१४	७००० को.रु. गेल्या १० वर्षात ६० हजार को.रु. ची पॅकेजेस देण्यात आलीत.
२०१७	२२००० को.रु.

२४ जुन २०१७ ३४००० को.रु. कर्जमाफीने ४० लाख शेतकऱ्यांचा उतारा कोरा होवून १.५० लाख रु.पर्यंतचे कर्ज सरसकट माफ केले. याचा फायदा ८९ लाख शेतकऱ्यांना झाला.

महाराष्ट्रातील कर्जमाफीचे जिल्हानिहाय लाभार्थी शेतकरी

विदर्भ ११४६७६८			
बुलडाणा	२४९८१८	चंद्रपूर	९९७४२
गडचिरोली	२९१२८	गोंदिया	६८२९०
नगपूर	८४६४५	यवतमाळ	२४२४७१
वाशीम	४५४१७	अमरावती	१७२७६०
अकोला	१११६२५	भंडारा	४२८७२
मराठवाडा १०८३९३२			
औरंगाबाद	१४८३२२	नांदेड	१५६८४९
लतूर	८०४७३	उस्मानाबाद	७४४२०
बीड	२०८४८०	हिंगोली	५५१६५
जालना	१९६४६३	परभणी	१६३७६०
उत्तर महाराष्ट्र खादेश ४३९६१९			
नाशीक	१३६५६९	नंदुरबार	३३५५६
जळगांव	१९४३२०	धुळे	७५१७४
पश्चिम महाराष्ट्र ७३९१४८			
अहमदनगर	२००८६९	सोलापूर	१०८५३३
पुणे	१८२२०९	कोल्हापूर	८०९४४
सांगली	८९५७५	सातारा	७६०१८
कोकण १०१७५३			
रत्नागिरी	४१२६१	ठाणे	२३५०५
सिंधुदुर्ग	२४४४७	मुंबई	६९४
पालघर	९१८	मुंबई उपनगर	११९
रायगड	१०८०९		

उपाय :-

शासकीय योजनांची माहिती गरजुंपर्यंत पोहोचवणे. शेतकऱ्यांची मानसिकता बदलणे, मानसिक संतुलन राखणे, परिस्थितीतुन वाट काढणे, संस्थात्मक स्वरुपाच्या वित्तपुरवठ्यात वाढ करणे, द्वारिद्वय निर्मूलन कार्यक्रमाची प्रभावी अंमलबजावणी करणे, त्यात एकात्मिक ग्रामीण विकास कार्यक्रम, दुष्काळपिडीत क्षेत्र कार्यक्रम, किमान गरजा कार्यक्रम, खेडे विकास कार्यक्रम, अंत्योदय अन्न योजना, पंतप्रधान ग्रामोदय योजना, पिकविमा कर्जमाफी योजनांच्या अंमलबजावणीत



पारदर्शकता हवी. भ्रष्टाचार दुर करणे, कृषी कर्ज पुरवठ्याचा विस्तार करुन पिककर्ज व्याजदर ४ टक्क्यांवर आणणे. रोजगार निर्मिती कार्यक्रमांची प्रभावी अंमलबजावणी करुन राष्ट्रीय ग्रामीण रोजगार कार्यक्रम, स्वर्णजयंती ग्राम स्वरोजगार योजना, जवाहर रोजगार योजना, रोजगार हमी योजना, संपूर्ण ग्रामीण रोजगार योजना, स्वर्णजयंती शहरी रोजगार योजना, राष्ट्रीय ग्रामीण रोजगार कार्यक्रम, शेतमालास उत्पादन खर्चावर आधारीत भाव देणे, कर्जमाफी, कमी व्याजदरावर सहज व पुरेशे कर्ज देणे. योग्य हमी भावात उत्पादन खर्च वजा जाता ५० टक्के अधिक असावा. शेतकऱ्यांच्या उत्पन्नात स्थैर्य आणावे. सर्वच पिकांसाठी पिकविमा योजनेत प्रभावी अंमलबजावणी करावी. (अतिवृष्टी, अनावृष्टी, हवामानातील बदल, पिकांवरील रोग, निकृष्ट बियाणांमुळे पिक न येणे या सर्व बाबींसाठी पिकविमा विचारात घ्यावा. पिकांवरील रोग, किड्यांचा बंदोबस्त याबाबत मार्गदर्शन करावे. पिकविमा भरपाई त्वरीत द्यावी. मार्फत किंमतीत बी—बीयाणे तसेच किटकनाशके उपलब्ध करुन द्यावे. जलसिंचन सुविधेत वाढ करुन सिंचनाची बारमाही व्यवस्था व्हावी. कृषी संशोधन शेतकऱ्यांपर्यंत पोहोचवणे आवश्यक आहे. शेतीचे आधुनिकीकरण करुन कृषिपूरक व्यवसायांचा विकास करावा. दुग्धव्यवसाय, कुक्कुटपालन, मेंढीपालन, पशुपालन, मत्स्यपालन, शेळीपालन सरकारने विनापरवाना सावकारांवर कडक कार्यवाही करावी. शेतीवरील लोकसंख्येचा भार कमी करावा. स्वावलंबीवृत्ती वाढवणे गरजेचे आहे. लोकसंख्या नियंत्रण करुन दारिद्र्य, बेकारी, धारण क्षेत्राचा घटता आकार विचारात घ्यावा. शिक्षणाचा प्रचार व प्रसार करतांना फी भार कमी करावा. कृषी आदानांच्या किंमतीत घट करावी. त्यासोबत रोख अनुदान द्यावे. सिंचन व्यवस्था वाढवावी. बोगस बियाणांवर कडक नियंत्रण आणुन उत्पादक व विक्रेत्यांवर कडक कारवाई करण्यात यावी. सेंद्रीय शेतीचा विकास करावा. जमीनीची पोत, हवामानाची अनुकूलता, आदानांची उपलब्धता यावरुन उत्पादकता ठरवावी. शेती क्षेत्रातील गुंतवणूक वाढवावी. शेतकऱ्यांच्या आरोग्य विम्याची तरतुद करावी. कृषीमुल्य आयोगाच्या कृषीची परिपूर्ण माहिती असावी. मृदासंवर्धन सुपीकता तपासणी याची अंमलबजावणी करणे आवश्यक आहे. शेती उत्पादकता, नफा व शाश्वतता वाढीचे प्रयत्न व्हावेत. ग्रामीण शेती कर्ज पुरवठ्यात वाढ करावी. अस्थिर आंतर राष्ट्रीय बाजारपेठेपासुन शेतकऱ्यांचे संरक्षण करावे. कोरडवाहू, किनारपट्टीलगत व डोंगराळ जमीन शेतीयोग्य बनवणे, शेतमालाचा दर्जा व किंमत यांची आंतरराष्ट्रीय बाजारपेठेशी सांगड घालावी.

सारांश :-

स्वातंत्र्योत्तर हिरक महोत्सवी काळात शेतीवर अवलंबून असणारी लोकसंख्या २०५ पटीने वाढली.अन्नधान्याचे उत्पादन ५ पटीने वाढले. देशाच्या सकल राष्ट्रीय उत्पादनातील शेतीचा वाटा ५७ टक्के वरुन १४ टक्के इतका कमी झाला.

दुष्काळ व शेतकरी आत्महत्येचा जवळचा संबंध आहे. तसेच कोरडवाहू शेती व आत्महत्यांचा ही जवळचा संबंध आहे. पुरुषांचे आत्महत्येचे प्रमाण जास्त असुन महिला शेतकऱ्यांचे आत्महत्येचे प्रमाण कमी आहे. हवामान बदल, नैसर्गिक आपत्ती, सरकारची चुकीची धोरणे, कमी उत्पादन, अस्थिर बाजारपेठ, कमी उत्पादकता, तोट्याची कृषी पध्दत, अयोग्य जमीन धारण क्षमता, बिगरकृषी क्षेत्रातील रोजगारीचा अभाव, देशांतर्गत कृषीची उत्पादकता ही असमान आहे. पंजाबचे प्रति हे. तांदुळ तो सध्या २ टक्के हून कमी आहे. जीडीपीतील ४० टक्के हिस्सा सध्या १३ टक्के आहे. म्हणून कृषी विकासासाठी योग्य व परिणामकारक सरकारी धोरणे अत्यावश्यक आहेत. म्हणून कृषी विकासासाठी योग्य व परिणामकारक सरकारी धोरणे अत्यावश्यक आहेत. सुधारीत बियाणे, संशोधक, सिंचनसुविधा, योग्य वित्तपुरवठा या सरकारी उपाययोजनांच्या बळावर हरीत क्रांती झाली. जागतीकीकरणानंतर सरकारचा अर्थव्यवस्थेमधील हस्तक्षेप कमी झाला. कृषी संकटाचे हे मुख्य कारण आहे. १९९० च्या दशकाच्या सुरुवातीला ६७



टक्के असणार कृषीदर दशकाच्या शेवटी २९ हून खाली आला यामुळे कृषी क्षेत्राला पुन्हा सुगिचे दिवस आणण्यासाठी सरकारच्या सक्रीय हस्तक्षेपाला पर्याय नाही. शेतीपुरक व्यवसाय करणाऱ्या शेतकऱ्यांचे आत्महत्त्येचे प्रमाण कमी आहे. शासकीय मदती बरोबरच शासकीय आधाराने शेतकरी आत्महत्त्येचा प्रश्न सुचण्यास अधिक मदत होणार आहे.

कृषी उत्पादनांना मानाची आधार किंमत देवून कृषी अनुदानात वाढ करून, सिंचन क्षेत्रात वाढझाल्यास व मुबलक पाणी, वीज कर्ज सुविधा उपलब्ध करून दिल्यास भारत ह्या गंभीर समस्येतुन बाहेर येवू शकेल त्यासाठी कर्ज व्याजदराने शेतकऱ्यांना कर्जे उपलब्ध करून देणे ही काळाची गरज आहे त्यासाठी राजकर्त्यांना व शासनाला सुबुद्धी योवे हीच सदिच्छा.

सारांश

भारतीय शेती अर्थव्यवस्थेचा पाया आहे. सुर्या विना सृष्टी नाही, तर शेतकऱ्यांविना देश नाही. शेतकरी अर्थव्यवस्थेचा कणा आहे. भारत हा शेतीप्रधान देश असून शेती हा भारतीयांचा परंपरागत व्यवसाय आहे. भारतातील ६५ टक्के पेक्षा अधिक लोक प्रत्यक्ष अप्रत्यक्ष शेतीवर अवलंबून आहे. शेती लोकांची जीवन जगण्याची पध्दती आहे. २१ व्या शतकाच्या उंबरठ्यावर भारत जागतिक महासत्ता बनण्याची स्वप्ने पाहतानाच भौगोलिक क्षेत्राच्या एकूण ४३ टक्के शेती हिस्सा, १३.९ टक्के स्थूल देशांतर्गत उत्पन्न कृषी उत्पादनातून मिळेल. शेती व शेती व्यवसाय मात्र आर्थिक अरिष्टातून जात आहे. अलिकडील १९९५ ते २००७ या काळात भारतातील ४ लाखापेक्षा जास्त शेतकऱ्यांनी आत्महत्या केल्यात त्यापैकी ९० हजार म्हणजे ६० टक्के आत्महत्या महाराष्ट्र, आंध्रप्रदेश, कर्नाटक, मध्यप्रदेश, छत्तीसगडसह यातील आहेत. नॅशनल क्राईम रेकॉर्ड्स ब्युरो हा आत्महत्यासंबंधी आकडेवारीचा प्रमुख स्रोत त्यामार्फत आत्महत्या मृत्युदराची माहिती मिळते. आत्महत्यामृत्युदर म्हणजे प्रति १ लाख व्यक्तींमागे आत्महत्यांमुळे झालेल्या मृत्यूंची संख्या होय. या माहितीनुसार १९९६ ते २००५ या काळात पुरुष शेतकऱ्यांच्या बाबत आत्महत्या मृत्युदराचा वार्षिक वृद्धीदर ४.८ टक्के होता. भारतातील पुरुष शेतकऱ्यांच्या बाबत आत्महत्यादर १९९६ मध्ये १२.३, २००४ मध्ये १९.२ व २००५ मध्ये १८.२ होता. भारतातील शेतकऱ्यांच्या एकूण आत्महत्यांपैकी पुरुष शेतकऱ्यांचे प्रमाण ८९ टक्के आहे. तर एकूण शेतकरी आत्महत्यांपैकी ५४ टक्के आत्महत्या आंध्रप्रदेश, कर्नाटक, केरळ, महाराष्ट्रात झाल्यात. पुरुष शेतकऱ्यांबाबत उच्च आत्महत्यादर असलेल्या राज्यात केरळ-१९५, महाराष्ट्र-५१, छत्तीसगड - ४५, कर्नाटक ४१, आंध्रप्रदेश ३३, तामिळनाडू-३२ व पश्चिम बंगाल २० यांचा समोवशा आहे.

अभ्यासाची गृहीतके :-

8. भारतातील वाढत्या लोकसंख्येमुळे अपखंडन व आंतर विभाजनाने शेतीचे तुकडीकरण होत आहे.
9. शेतकरी अनियमित मान्सूनमुळे सावकारी व इतर कर्जांच्या सापळ्यात अडकत चालला आहे.
10. भारतीय शेती अधिकांश प्रमाणात कोरडवाहू स्वरूपाची असून त्यातून मिळणारे उत्पादन व उत्पन्न अनिश्चित स्वरूपाचे आहे.
11. गेल्या काही वर्षात शेतकरी आत्महत्त्येत वेगाने वाढ होत आहे.
12. शेतकऱ्यांची आर्थिक परिस्थिती व आत्महत्या यांचा जवळचा संबंध आहे.
13. दुष्काळ व शेतकरी आत्महत्या यांचा जवळचा संबंध आहे.
14. शेतकरी आत्महत्त्येचा प्रश्न सर्वत्र सारखा नाही.

शोधनिबंधाच्या अभ्यासाची उद्दीष्ट्ये :-



5. शेतकऱ्यांच्या आत्महत्या होण्याच्या कारणांचा अभ्यास करणे / शोध घेणे.
6. शेतकरी आत्महत्या आकडेवारीचा तुलनात्मक अभ्यास करणे.
7. शेतकऱ्यांच्या आत्महत्यांमुळे होणाऱ्या परिणामांचा अभ्यास करणे / शोध घेणे.
8. शेतकऱ्यांच्या आत्महत्या कमी होण्यासाठीच्या उपाययोजना, साधनांचा अभ्यास करणे.

अभ्यासाची संशोधन पध्दती :-

ह्या संशोधनपर शोध निबंधासाठी मिळविलेली माहिती पुर्णपणे दुय्यम साधन सामग्रीवर आधारलेली असून त्यासाठी विविध संदर्भग्रंथ, पुस्तके, विविध अहवाल, वार्षिकांक, मासिके, साप्ताहिके व देनंदिन वृत्तपत्रांमधून सदरची सांख्यिकीय व विश्लेषणात्मक माहिती तसेच इतर आवश्यक आकडेवारी करून, संदर्भ घेऊन सदरचा संशोधनपर शोध निबंध तयार करण्यात आला आहे.

लहान आकाराची/अकार्यक्षम धारण क्षेत्र—७५ टक्के आत्महत्या, २ ते १२.५ एकर जमीन असणाऱ्या शेतकऱ्यांच्या आहेत, पाणिपुरवट्याच्या पध्दती कमी, पाणीपुरवट्याचे स्रोत कमी, भुधारणेचा आकार लहान शेतकऱ्यांमधील वाढता कर्जबाजारीपणा, कर्जाचा अनुत्पादक वापर, सावकारांकडून पिळवणूक आणि सावकारीचे वाढते प्रमाण, शेतमालाच्या किंमतीतील चढउतार/योग्य भाव न मिळणे, बियाणे, खते, किटक नाशकांच्या वाढत्या किंमती, चूकीचे सरकारचे धोरण — २०१३ मध्ये सोयाबीनचे भाव सर्वोच्च शिखरावर गेले असतांना शासनाने सोयातेल आयात केल्याने भावात घट झाली. कांदा आयात, साखर आयात, तेल आयात २०१६, २०१७ मध्ये ४६२७१० टन तुर आयात यामुळे भाव घट झाली.

दुष्काळ व शेतकरी आत्महत्येचा जवळचा संबंध आहे. तसेच कोरडवाहु शेती व आत्महत्यांचा ही जवळचा संबंध आहे. पुरुषांचे आत्महत्येचे प्रमाण जास्त असून महिला शेतकऱ्यांचे आत्महत्येचे प्रमाण कमी आहे. हवामान बदल, नैसर्गिक आपत्ती, सरकारची चुकीची धोरणे, कमी उत्पादन, अस्थिर बाजारपेठ, कमी उत्पादकता, तोट्याची कृषी पध्दत, अयोग्य जमीन धारण क्षमता, बिगरकृषी क्षेत्रातील रोजगारीचा अभाव, देशांतर्गत कृषीची उत्पादकता ही असमान आहे. पंजाबचे प्रति हे. तांदुळ तो सध्या २ टक्के हून कमी आहे. जीडीपीतील ४० टक्के हिस्सा सध्या १३ टक्के आहे. म्हणून कृषी विकासासाठी योग्य व परिणामकारक सरकारी धोरणे अत्यावश्यक आहेत. म्हणून कृषी विकासासाठी योग्य व परिणामकारक सरकारी धोरणे अत्यावश्यक आहेत. सुधारीत बियाणे, संशोधक, सिंचनसुविधा, योग्य वित्तपुरवठा या सरकारी उपाययोजनांच्या बळावर हरीत क्रांती झाली. जागतीकीकरणानंतर सरकारचा अर्थव्यवस्थेमधील हस्तक्षेप कमी झाला. कृषी संकटाचे हे मुख्य कारण आहे. १९९० च्या दशकाच्या सुरुवातीला ६७ टक्के असणार कृषीदर दशकाच्या शेवटी २९ हून खाली आला यामुळे कृषी क्षेत्राला पुन्हा सुगिचे दिवस आणण्यासाठी सरकारच्या सक्रीय हस्तक्षेपाला पर्याय नाही. शेतीपुरक व्यवसाय करणाऱ्या शेतकऱ्यांचे आत्महत्येचे प्रमाण कमी आहे. शासकीय मदती बरोबरच शासकीय आधाराने शेतकरी आत्महत्येचा प्रश्न सुचण्यास अधिक मदत होणार आहे.

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**शेतकरी आत्महत्या : कारणे व उपाययोजना****विकास नामदेव लोडे**

रा. नवरगांव पो. सुकनेगांव ता. वणी जि. यवतमाळ — ४४५३०४

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प्रस्तावना :

भारत हा कृषीप्रधान देश म्हणून जगभरात प्रचलित आहे. देशात ७० टक्के लोकांचा मुख्य व्यवसाय शेती हाच असून तो भारतीय अर्थव्यवस्थेचा कणा आहे. देशातील जनतेचा आधार जनतेला जीवन देणारी जीवनवाहीनी आहे. शेतकरी आपल्या कुटुंबासाठी, देशासाठी अविरत घाम गाळत असतो. रक्ताचे पणी करतो. शेतात राब—राब राबतो व देशातील आपल्या कुटुंबातील जनतेला पोसतो, देशाची प्रगती करतो. असे दिसून येतेकी, शेतकऱ्यांचा जन्म दुसऱ्यांना जगविण्यासाठीच झाला तो स्वतःसाठी काहीही करित नाही म्हणूनच त्याला दुसरे नाव अन्नदाता ही आहे.

आजपावेतो हा अन्नदाता नुसते दुसऱ्यासाठी जगून नुसते पुण्य कमवतो कि, काय! असे चित्र डोळ्यासमोर उभे राहते. आणि तो खरच नुसते पुण्याचे काम करतो त्याला ह्या देशात कोणी ही वाली दिसत नाही देशातील राज्यकर्ते तर लक्ष देतच नाही. असे आजच्या घडीला घडताना दिसते. तर असे का? वाटते. त्याची दरिद्री अवस्था, पिळवणूक, जीवन जगण्याची अनास्था यातून दिसून येते. कधी—कधी शेतकऱ्यावर निसर्ग कोपतो. शासनकर्ते पिळवणूक करतात व शेतकरी देशोधडीला जातो. म्हणूनच तो जीवन संपवीण्याचा मनात विचार करतो व तो पुर्णत्वास नेतो आज तेच घडत आहे भारतात दिवसेंदिवस शेतकऱ्यांच्या आत्महत्या खुप वाढत आहे. हे पाहून असे वाटते की, शेतकरी संपनार व जनता भुकेने तळपणार असे चित्र दिसते.

भारतासारख्या कृषीप्रधान देशात शेतकऱ्यांना कुणीही वाली नसते. म्हणजे शेतकऱ्यांची विटंबना अपमान, यातना सहण करणारा ठेकेदार ह्या राज्यकर्त्यांनी त्याला बनविले आहे. आजचे राज्यकर्ते फक्त सत्ता भोगण्यात मशगुल आहे. शासन फक्त ज्या व्यवसायातून जास्त कर मिळतो म्हणजे औद्योगिक क्षेत्राकडे लक्ष देतात त्यामुळे उद्योगपती हे श्रीमंत आणि ऐशोआरामात जीवन जगतांना दिसतो तर शेतकऱ्यांची हेळसांड होतांना अनुभवास येत आहे. आताच २०१९—२० मध्ये शेतकऱ्यासाठी नवीन काळा कायदा पास केला. त्या कायद्याबद्दल देशातील शेतकऱ्यांना कोणत्याही प्रकारची माहिती व जनतेला हरकती मागीतल्या नाही. तर वेगळ्या दरवाज्यातून तो कायदा एका दिवशी पास करून घेतला आणि त्या विरोधात शेतकरी आजही आंदोलन करित आहे. कित्येक शेतकऱ्यांनी जीवही गमावला म्हणूनच ह्या परिस्थितीकडे राज्यकर्त्यांनी जातीने लक्ष देऊन काहीतरी तोडगा काढायला पाहिजे.

शेतकरी आत्महत्येचे कारणे :**१) मुख्य समस्येकडे दुर्लक्ष :**

भारतात मुख्य व्यवसाय शेती आहे. त्यामुळे उपजिवीकेचे साधन म्हणून शेतीकडे पाहीले जाते. प्रत्येक राज्यात वेगवेगळे पिके घेतल्या जाते त्यामध्ये महाराष्ट्रात सर्वात जास्त कापूस घेतला जातो. गेल्या काही काळापसून या पिकाबाबत फार मोठी अनिश्चितता आहे. पिकाचा खर्च अवाढव्य वाढत आहे. व भावाचा प्रश्न आहेत मिहालेल्या भावाचे पैसे एकावेळेस येत नाही विकण्यासही कठीण समस्या निर्माण होतात अशा अनेक कारणांनी विदर्भातील शेतकरी त्रस्त आहे. फार काळापासून त्याची आर्थिक कोंडी व मानसीक त्रास वाढत आहे.



शेतकऱ्यांना परवडेल असा हमी भाव. त्याच्या हातात एकरकमी दाम खरेदीची योग्य व्यवस्था किमान ह्यानुसार जरी कार्य केले असते तर शेतकऱ्यांना आत्महत्या करण्याची गरजच नसती पडली.

२) मजुराची कमतरता व वाढते मजुरीचे दर :

गेल्या २० वर्षात शेतकऱ्यांची परिस्थितीमध्ये फार मोठा बदल दिसतो. त्यांचे जीवन फार हलाखीचे झाले आहेत. याचे महत्वाचे कारण म्हणजे मजुराची कमतरता व वाढते मजुरीचे दर २० वर्षांपासून शेतीच्या कामाकरीता मजुरच मिळनासे झाले आहे. व मजुरीचे दर चौपटीने वाढले. त्याचा परिणाम हा झाला की शेतीत कितीही उत्पादन घेतले तरी हातात काहीच उरत नाही. सर्व उत्पादन हे मजुरांना वाटण्यात जाते. कधी कधी मजुरी देण्यास तयार असतो तर वेळेवर मजुर मिळत नाही. व हातात आलेला माल हा मातीमोल होतो. शेतकऱ्यांच्या हातात दमडीही उरत नाही अशी दयनिय अवस्था शेतकऱ्यांची होते या सर्व परिस्थितीचा आढावा घेतला तर शेतकरी वर्गाची दयनिय स्थितीचे दर्शन घेता येते. मग असा प्रश्न पडतो की, याला जबाबदार कोण? तर तो आपल्या नशीबाला दोष देतो. म्हणत असतो “आमचे नशिब फाटकेच आहे.” म्हणूनच शेतकरी ज्या परिस्थितीत जगत आहे तसाच जगेन नाहीतर आत्महत्या केल्याशिवाय पर्याय नाही.

३) शेतीतील व्यापाराविषयी तडजोडी :

सण १९८६ मध्ये कारखानी मालाच्या व्यापाराबद्दल व शेतारी मालाच्या व्यापाराबद्दल तडजोडी करण्यात आल्या पण मुख्य समस्या शेतीमालाच्या व्यापाराबद्दल आहेत. भारतामध्ये शेतकरी संघटनेने शेती मालाच्या किंमती व शेतीमालाचा व्यापार हा विषय महत्वाचा केला. पण हा मुद्दा पहील्यांदा मांडला तेव्हा मोठ मोठी माणसं म्हणायची “शेतीमालाची किंमत ती काय त्याची बाजार पेठ ती काय? त्याला इतकं महत्व देऊन कशाला बोलायला हवं? आणि शेती मालाला भाव दिला म्हणजे देशाची गरीबी हटेल असं काहीही म्हणावे?

अशी शेतीमालाच्या भावाविषयी त्यांच्या बाजारपेठे विषयी भारतासारख्या देशात उपेक्षेची, क्षुद्रपणाची भावना आहे ह्या सगळ्या कचाट्यात शेतीमालाचा भाव आणि बाजारपेठ सापडली आहे. आणि कारखानदारी यालाबद्दल तडजोड व शेतीमालाबद्दल काहीही तडजोड व्हायला जागा नाही परीनामी ह्या सगळ्या कचाट्यात शेतकरी भरडला जातो व जीवन संपवितो.

४) दुष्काळ व नापिकी :

कोणत्याही भूप्रदेशात दुष्काळी स्थिती निर्माण होण्यामागे कारणमिमांसा लक्षात घेतली; तर ह्या दुष्काळ पडण्याचे अनेक कारणे आहेत. आणि ते नैसर्गिक असतात. ह्यात वाद नाही. पण ह्या दुष्काळावर प्रभावीपणे मात करता येते. याचेही सबळ पुरावे आहेत. याठीकाणी आपण महाराष्ट्राचा विचार करित आहोत सन २००४ मध्ये महाराष्ट्राने असह्य वेदना सोसल्या २००४ मधील या दुष्काळाला अभूतपूर्व समजण्यामागील कारण, नैराश्यातून दैनंदिन शेतकरी करित असलेल्या आत्महत्याचा आहे. आजही सण २०१७, २०१८, २०१९, २०२० ह्या काळाचा विचार केला तर आजही शेतकरी आत्महत्या होताना दिसते. कारण नापिकीला कंटाळून त्यांना आपले जीवन संपविल्या वाचून पर्याय नाही.

याचा परिणाम म्हणजे महाराष्ट्राच्या दुर्गम भागात सुरू असलेले कुपोषण की, ज्यामुळे महाराष्ट्रातील दैवी आपत्तीला नवे आयाम व संदर्भ प्राप्त होत आहेत. पण, या कुपोषणाचे कारण सकस आहाराची दुर्मिळता हेच एकमेव कारण नसुन वैद्यकीय सुविधांचा अभाव हे सुध्दा कारण सांगता येते भारता सारखा देश कृषीसारख्या क्षेत्रात खालच्या क्रमांकावर फेकल्या गेला ही शोकांतीका आहे. या शोकांतीकेची खऱ्या अर्थाने दखल घेत चिंतन केले तर चांगले होईल अन्यथा शेतकरी रसातळाला गेल्याशिवाय राहणार नाही.

**५) परदेशातून शेतमालाची आयात :**

जगातील सर्वच देश हे कोणत्या ना कोणत्या कारणाने एकमेकांवर अवलंबून असतात हे सत्य नाकारता येत नाही. आणि ह्यामुळे देशा—देशातील संबंध सुधारून एकमेकांना मदत करतात आणि एकमेकांच्या गरजा भागवतात असे संबंध देशासाठी चांगले असते पण एखाद्या देशात शेतीमाल चांगला पिकत असेल तर कधी—कधी जेव्हा देशात महागाई वाढत असते किंवा उद्योगपतीच्या फायद्यासाठी शासन परदेशातून स्वस्त माल बोलावतो व भारतातील मालाचे भाव पडतात त्या कारणाने शेतकरी भरडल्या जातो. हे शेतकऱ्यांच्या दृष्टीने हितकारक होत नाही. शेतकऱ्यांच्या मालाला भाव मिळत नाही. आणि त्याने लावलेली किंमत सुध्दा वसूल होत नाही. अशा प्रकारचे धोरण हे बदलले पाहिजे असे मला वाटते. कि, जेनेकरून शेतकरी सुखी होईल.

६) खर्चाचे वाढते प्रमाण व उत्पन्नात घट :

भारत हा कृषीप्रधान देश आहे आणि तेथील लोक जास्त प्रमाणात व्यवसाय हा शेती आहे. आजच्या औद्योगिकीकरणाच्या काळात नव—नवे तंत्रज्ञान नव—नवे रासायनिक खते, बी—बियाने, औषधी शेती पिकासाठी निर्माण झाल्या आहेत. आणि शेतकऱ्यांना त्यांची भुरळ घातली आहेत शेती क्षेत्रात मोठ—मोठ्या कंपन्या उभ्या ठाकल्या आहेत. शेतकरी उत्पन्न वाढीसाठी वेगवेगळ्या प्रकारचे रासायनिक खते किटकनाशके उत्पन्न वाढीसाठी उपयोग करतांना दिसतात. पण त्याचा खर्च जास्त होतो व उत्पन्नात सुध्दा कमालीची घट होत आहे. याचे महत्वाचे दोन कारणे, म्हणजे उत्पन्न वाढीची स्पर्धा व श्रीमंतीची लालसा पण त्याचा परिणाम अस होतो. की, खर्च करून ही पाहिजे तेवढ्या प्रमाणात उत्पन्न मिळत नाही व जमिनीची प्रत घसरून जमिन ही उत्पादन घेण्या योग्य राहत नाही परिणामी बळीराजा संकटात सापडतो.

७) कृषीवरील कुटूंबाचा वाढता भार :

आजच्या काळाचा विचार केला तर सगळीकडे बेरोजगारीचे चित्र पाहावयास मिळत आहे. आणि बेरोजगारीची समस्या दिवसेंदिवस तीव्र होतांना दिसत आहे. तरून, सुशिक्षित तरूनांना कामच मिळत नाही ग्रामीण भागामध्ये कुटूंब हे फार मोठ असते. आणि त्यावर उपजिविका करणारे फार सदस्य असतात त्याचा सर्वात मोठा ताण हा कृषीवर पडलेला दिसतो.

सर्व कुटूंब शेतीवर जगत असतात त्या शेतीमधून कुटूंब जगण्याइतके कधीकधी उत्पादन होत नाही. नापिकी होते. शासनाच्या धारेणाने चांगला भाव मिळत नाही. त्यामुळे उत्पादनात फार मोठा फरक पडतो. ह्या तोकड्या उत्पन्नावर एवढ्या मोठ्या कुटूंबाचा गाढा चालवीने फार कठीन जाते. कृषी असे क्षेत्र आहेत की, त्या शेतीची वाढ करणे व्यक्तित्या हातात नसते म्हणूनच शेती कधी वाढविली जात नाही. तर शेतीतील उत्पन्न वाढविले जाते. पण शेतकऱ्यांचे नशीबाच खोटे सगळीकडून त्याची पिळवणूक होते.

८) भौतिक गरजाची वाढ :

दिवसेंदिवस समाजात अनेक प्रकारचे बदल होताना दिसते. व्यक्ति बदलतो त्याच्या गरजा बदलतात दुसऱ्या व्यक्तित्या सानिध्याने त्या व्यक्तित्मध्ये बदल होतो तसेच आजच्या घडीला घडत आहेत. शेतकरी असो वा अन्य कोणीही असो त्याला चांगले खाणे, राहणे, खोटी प्रतिष्ठा दाखवीणे असे प्रकार दिसतात शेतकऱ्यांच्या बाबतील बोलायचे झाल्यास त्यांच्या भौतिक गरजांत कमालीची वाढझाली आहेत. अगोदरच तो उत्पादनाच्या बाबतीत कमी असतो. त्याची आर्थिक परिस्थिती ढासळलेली असते. पण तो काहीही करतो किंवा कधी—कधी कर्ज काढतो व आपल्या कुटूंबाच्या गरजा पूर्ण करित असतो.

शेतकरी कधी असा विचार करित नाही की, आपली परिस्थिती ह्या गरजा पूर्ण करू शकत नाही तो कधी—कधी खर्चामध्ये काटकसर करित नाही. शेतीचा खर्च व उत्पादन याचा विचार करित



नाही तो फक्त भौतिक गरजाची पूर्तता करित असतो ऐशोआरामाने जीवनमान जगण्याचा प्रयत्न करतो परिणामी तो कर्ज बाजारी होतो.

उपाययोजना :

१) जलसिंचनाच्या सुविधेत वाढ :

पाण्याशिवाय मनुष्य आणि प्राणी ही जीवंत राहू शकत नाही त्याच प्रमाणे पाण्याविना शेतीही होऊ शकत नाही. काही राज्यामध्ये याबाबत कमालीचा मागासलेपणा दिसून येतो. ह्या भागातील जास्तीत जास्त शेती ही कोरडवाहू आहे. काही ठिकाणी विहीरी, बोअरवेलच्या माध्यमातून प्रयत्न केले जातात परंतु भरपूर पाण्याच्या साठ्या अभावी शेतकरी हतबल आहे. त्याकरीता शासनाने जातीने लक्ष घालून पाण्याची पातळी वाढवण्यावर भर दिला पाहिजे. महाराष्ट्राचा विचार केला तर जसा पश्चिम महाराष्ट्र समृद्ध झाला आहे. त्या प्रमाणे विदर्भ सुध्दा समृद्ध झाला असता जलसिंचनाच्या सुविधेमध्ये मध्यम व राज्य स्तरीय लघू पाटबंधारे योजना व स्थानिक पाटबंधारे व उपसा जलसिंचन योजना ह्या शेतकऱ्यांचा शेती पाण्याचा प्रश्न मिटू शकतो. पण याकडे शासन गांभीर्याने लक्ष देत नाही म्हणूनच शासनाने यावर तोडगा काढून हा सिंचनाचा प्रश्न मिटवला तर शेतकऱ्यांना फार उपयोगी होईल.

२) शेती पुरक व्यवसायाला प्रोत्साहन :

शेतकऱ्यांनी शेती व्यवसायासोबतच कोबंड्या, बकऱ्या पाळाव्यात हा जुना विचार झाला तरीपण या व्यवसायातुनही फार मोठी अर्थप्राप्ती होते शेतकऱ्यांनी आपली प्रगती करण्यासाठी अशा प्रकारचा व्यवसाय केला पाहिजे या व्यवसायासाठी शासनाने ६० टक्के मदत केली पाहिजे.

दुधाचा व्यवसाय करित असतांना नुसते दुध न विकता दुधाचे वेगवेगळे पदार्थ बनवून विकता येतात दुधाच्या विविध प्रकारच्या मिठाई करून विकता येतील. अशा उद्योगासाठी शेतकऱ्यांना प्रवृत्त करणे. व त्या उद्योगाचे त्याच्या गावातच प्रशिक्षण दिले तर शेतकरी निश्चितच रस घेईल व त्यांना प्रोत्साहन मिळेल. ज्यातून शेतकरी वर्गाचे मनोर्षेय उंचावेल असे कार्यक्रम गावागावात घेतले पाहिजे. प्रत्येक गावात जाऊन जोडधंद्याची माहिती व त्याचे फायदे सांगायला हवे त्यातून शेतकऱ्यांचे मत परीपवर्तन होऊन तो जोडधंद्याला सुरूवात करून आपली प्रगती साध्य करू शकतो.

३) शेतमाल खरेदी शेतकऱ्यांना अनुकूल असावी :

शेतमाल खरेदीचा हंगाम तोंडावर येताच कृषी मंत्री किंवा अन्य कोणी शासनाने अधिकारी त्यावर चर्चा करतात. लोकांची मत मतांतरे मागविली जातात आणि त्यावर काही प्रभावी निर्णय होत नाही. तर त्यावर काहीतरी चांगला निर्णय होऊन शेती मालाला चांगला भाव मिळवून दिला पाहिजे, व्यापाऱ्यांनी हमीभावा पेक्षा कमी किमतीने माल खरेदी केला नाही पाहिजे यासाठी व्यापाऱ्यावर कडक बंधने असायला हवी कोणत्याही प्रकारचा माल खरेदी केल्यानंतर त्याचा मोबदला लवकरात लवकर शेतकऱ्यांना मिळाला पाहिजे असा सोय असावी. कृषी उत्पन्न बाजार समिती मध्ये शेतकऱ्यांची पिळवणूक होता कामा नये आणि त्याच्या मालाची निगा राखण्याची जबाबदारी हि सर्वस्वी बाजार समितीची राहिल असा नियम बनवायला हवा वरील प्रमाणे जर नियम अंमलात आणले तर निश्चितच पुढील काही दिवसामध्ये शेतकऱ्यांचे व त्यांच्या परिस्थितीचे चित्र बदललेले दिसेल.

४) नैसर्गिक शेतीकरण्यावर भर :

हजारो वर्षा अगोदर जी शेती करण्याची पध्दती होती ती म्हणजे नैसर्गिक पध्दती होय. आजच्या काळात त्याच पध्दतीने शेती केल्यास भारतीय शेतकऱ्यांना ज्याचा निश्चितच फायदा



होईल त्या पध्दतीने शेती केल्यास शेतीचा जो अवाढव्य खर्च आहे तो बचत होतो. व उत्पादन ही मोठ्या प्रमाणात होते. आजची शेती तंत्रज्ञानाच्या कचाट्यात सापडली आहे. आता ते सोडून नैसर्गिक शेती केली तर शेतकऱ्याचा विकास झाल्या वाचून राहणार नाही आणि जे शेतकऱ्याची अधोगती होताना दिसते त्यातून सुटका होईल व आत्महत्या कुठेतरी थांबेल.

५) बचत करण्याची सवय लावावी :

शेतकरी वर्गाचे उत्पन्न फार कमी असते व त्या मानाने खर्च तो जास्त करतो. म्हणजेच ज्या अत्यावश्यक गरजा आहे. त्यावरच खर्च केला पाहिजे, जसे अन्न, वस्त्र, निवारा, शिक्षण यावर काटेकोरपणे खर्च केला तर काही प्रमाणात बचत होते व ती बचत भविष्यात शेतकऱ्याच्या कामी येते असा जो शेतकरी विचार करतो. तोच खरा विकास साध्य करतो.

शेतकऱ्यांना बचत करणे हे जीकीरीचे व कष्टाचे काम आहे. हे मान्य करावे लागते. कारण उत्पादन कमी असते. व गरजा ह्या अमाप असतात. तरीपण त्यातूनही काही प्रमाणात पैसा बचत केल्या जाऊ शकतो. व पुढच्या कार्याला त्याचा हातभार होऊ शकतो असा मनामध्ये विचार केला तर पैशाची बचत झाल्या वाचून राहणार नाही.

६) अशासकीय सामाजिक संस्था व ट्रस्ट यानी गावे दत्तक घ्यावी :

सामाजिक कल्याण करण्याकरीता भारतात अनेक संस्था व ट्रस्ट कार्यरत आहे. असे दिसते. त्या क्षेत्रात आपली भुमिका बजावत असते, गोरगरीब, अनाथ विकलांग निराधारांना आधार देण्याचे महत्वाचे काम करतांना तसेच शेतकऱ्यांच्या हितासाठी जर ह्या संस्था व ट्रस्ट मदतीसाठी धावल्या तर शेतकऱ्याचे दुःख काही प्रमाणात कमी करता येऊ शकते. अशा संस्थानी जे कोणते गावे जास्त प्रमाणात आत्महत्येला बळी पडले आहेत त्या गावातील कुटूंबाला आर्थिक मदत करायला पाहिजे त्यांच्या मुलामुलीसाठी शिक्षण आरोग्य, विवाह सुध्दा करून दिले पाहिजे त्यामुळे त्या कुटूंबाला आधार मिळेल व थोडेशे दुःख कमी करता येऊ शकते.

अशा संस्था पुढाकार घेत आहेत पण तेवढ्या प्रभावी शेतकऱ्यासाठी झटत नाही. अशा संस्थानी आता या गोष्टीकडे वळणे जरूरी झाले आहेत. ह्या संस्थानी गावे जर दत्तक घेतली तर त्या गावाचा विकास होऊन आत्महत्या ग्रस्त कुटूंबियांना पुढे जीवन जगण्याची एक शक्ती मिळेल व जीवन संपवीण्याचा विचार मनात येणार नाही.

सारांश :

वरील सर्व गोष्टीचा विचार करता शेतकरी आत्महत्या का करतात त्या मागची खरी कारणे कोणती त्यावर वरील उपाययोजना प्रभावी ठरेल कि, नाही. याचा अंदाज बांधणे शक्य नाही. तरीपण एक छोटासा प्रयत्न म्हणून शेतकऱ्यांच्या उध्दारासाठी, विकासासाठी, कल्याणासाठी केला तर वावगे ठरणार नाही.

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प्राचीन काळापासून भारतीय कृषीव्यवसायाचे शोषण होत असल्याचे दिसून येते. राजे, महाराजे, सरंजामदार, सावकार, व्यापारी यांनी शेतकऱ्यांचे शोषण केल्याचे अनेक दाखले इतिहासात प्राप्त होतात. स्वातंत्र्यपूर्व काळात ब्रिटिशांनी भारतीय शेतीव्यवसायाचे शोषण करून औद्योगिक क्रांती यशस्वी केली. भारतीय स्वातंत्र्यानंतर कृषीव्यवसायाला सुगीचे दिवस येईल असे शेतकऱ्यांना वाटत होते. परंतु पंचवार्षिक योजनेत कृषीव्यवसायासाठी केलेल्या तरतुदी अत्यंत तुटपुंज्या होत्या. याचे एकंदरीत शेकडा प्रमाण बघितल्यास पहिल्या पंचवार्षिक योजनेत १४.०८ टक्के, दुसरीत ११.०३ टक्के, तिसरीत २.०७ टक्के, चौथीत १४.०९ टक्के, पाचवीत १२.०३ टक्के, सहावीत ५.०८ टक्के, सातवीत ५.०९ टक्के, आठवीत ५.०२ टक्के, नववीत ४.०९ टक्के तर दहावीत ५.०२ टक्के (१९५१ ते २००७ पर्यंत) इतकी अर्थिक तरतुद करण्यात आली होती. (दिवाकर बोकरे २००८ प्र. क्र. १३१) वरील आकड्यांवरून स्पष्ट होते की, सरकारने कृषी क्षेत्राकडे दुर्लक्ष केल्यामुळे आज शेतकरी आत्महत्येकडे वाटचाल करीत आहे. भारत हा कृषीप्रधान देश असून जवळपास ६० टक्के जनता आजही कृषीव्यवसायावर आपला उदरनिर्वाह करीत आहे. हे बघता या क्षेत्राच्या विकासाकडे अधिक लक्ष देण्याची गरज सरकारला होती. परंतु याबाबत सरकारचे दुर्लक्षी धोरण हे शेतकरी आत्महत्येस कारणीभूत ठरत आहे.

शेतकरी संघटनेचे अध्यक्ष श्री शरद जोशी यांनी 'सरकारी धोरण हेच शेतकऱ्यांचे मरण आहे' असे म्हटले आहे. त्यांनी प्रथमच सांगितले की, शेतकऱ्यांच्या गरिबीला सरकारी धोरण जबाबदार आहे. शेतकऱ्यांच्या शेतमालाला हमीभाव न मिळाल्यामुळे शेतीव्यवसाय तोट्यात आहे. हा हमीभाव ठरविताना सरकार पातळीवरील अधिकारी लागवडीकरिता येणारा संपूर्ण खर्च लक्षात घेत नाही. त्यामुळे चुकीच्या पद्धतीने हमीभाव ठरविला जातो. हे शासनाच्या निदर्शनास आणून देण्यासाठी त्यांनी कृषी मेळावे, अधिवेशने घेऊन शेतकऱ्यांना जागृत केले. त्यामुळे महाराष्ट्रातील निद्रीस्त शेतकरी जागृत होऊन अन्यायाविरुद्ध पेटून उठला. सरकारने या आंदोलनाची तिब्रता बघून शेतमालाचा हमीभाव ठरविण्याच्या पद्धतीत काही सुधारणा केल्या. तरीसुद्धा अनेक पातळीवर शेतकऱ्यांचे शोषण सुरू असल्याने आजही शेतकरी आत्महत्या करण्यास प्रवृत्त होत आहेत.

शरद जोशींनी स्वतः शेती कसून शेतकऱ्यांच्या होणाऱ्या शोषणाचे कारण शोधण्याचा प्रयत्न केला. त्यांना शेती करताना आलेल्या अनुभवातून 'उणे सबसिडी' ही संकल्पना मांडली. भारतीय शेतमालाचे भाव आणि आंतरराष्ट्रीय बाजारपेठेत मिळणाऱ्या शेतमालाचे भाव यात खूप जास्त तफावत त्यांना दिसून आली. १९८० पासून ही गोष्ट शेतकऱ्यांना आणि सरकारला सांगितल्यानंतर (१९८६-८९) भारताचे व्यापारमंत्री श्री प्रणव मुखर्जी यांनी जागतिक व्यापार संघटनेपुढे भारतीय शेतकऱ्यांना सरकार सबसिडी देत नसल्याचे मान्य केले. या काळात जगात विभिन्न देशात शेतकऱ्यांना सबसिडी देऊन प्रोत्साहन दिले जात होते. उदा. :- भारतीय शेतकऱ्याला उत्पादन खर्च १७२ रुपये येत असेल तर सरकार त्याला १०० रुपये देत होते. युरोपात १६५ रुपये, अमेरिकेत १३५ रुपये दिल्या जात होते. म्हणजेच भारतीय शेतकऱ्याला उणे



बहात्तर रुपये तोटा सहन करावा लागत होता. अशा सरकारी धोरणामुळे भारतीय शेतकऱ्यांचे १९८० ते २००० या दोन दशकात उणे सबसिडीमुळे भारत सरकारने ३ लाख कोटी रुपयांचे अर्थिक शोषण केले. अशा प्रकारच्या शोषणामुळे शेतकरी दारिद्र्याच्या खोल गर्तेत लोटल्या जात आहे. वेळप्रसंगी आत्महत्येकडे प्रवृत्त होत आहे.

शेतीव्यवसाय करण्याकरिता शेतकरी आपले शेत बँकेकडे गहाण ठेवून कर्ज घेतो. शेतात नैसर्गिक संकट आले तर त्याचे संपूर्ण पीक नष्ट होते. उदा. :- अतीवृष्टी, महापूर, टोळधाड, अवकाळी पाऊस या नैसर्गिक आपत्तींमुळे त्याच्या हाती येणारे पीक नष्ट होते. अशावेळी तो बँकेचे कर्ज फेडू शकत नाही. अशा कठीण परिस्थितीत शेतकऱ्यांच्या घरी बँकेचे वसुली पथक येते. त्याच्या जमिनीचा, घराचा लिलाव केल्या जातो. त्यामुळे शेतकरी हा मानसिक व सामाजिक अपमान सहन करू शकत नाही. शेवटी आत्महत्या करणे हाच त्याच्यापुढे पर्याय असतो. यासंदर्भात अध्ययन करताना टाटा इन्स्टिट्यूट ऑफ सोशल सायंस आणि गोखले इन्स्टिट्यूट ऑफ सोशल सायंस यांच्या पाहणी अहवालातून शेतकऱ्यांच्या आत्महत्येचे प्रमुख कारण कर्जबाजारीपणा असल्याचे सांगितले आहे.

वाढती महागाई, बी-बियाणे, रासायनिक खते, औषधी यावरील होणारा खर्च आणि शेतीतून मिळणारे उत्पन्न याचा ताळमेळ बसत नाही. कारण वाढत्या महागाईनुसार सरकार शेतकऱ्यांच्या शेतमालाला भाव देत नाही. याउलट सरकारी कर्मचाऱ्यांना वेतनात भरघोस वाढ दिली जाते. व्यापारी, उद्योगपती यांना देण्यात येणारी सूट या तुलनेत शेतकरी मात्र उपेक्षित असल्याचे दिसून येते. यासंदर्भात एक उदाहरण खालीलप्रमाणे बघता येईल.

कापसाचे दर प्रति क्विंटलमध्ये आणि सोन्याचे दर प्रति तोळ्यामध्ये

अ. क्र.	वर्ष	कापूस (क्विंटल)	सोने (तोळा)
१	१९७२	२५०	१८०
२	१९७५	५४०	५४०
३	१९८०	५६०	१३११
४	१९९०	७००	३३२०
५	१९९५	१४००	४८३०
६	२०००	१८२५	५२००

(स्रोत :- दैनिक लोकमत दि. ८ जुलै २०१९)

वरील तक्त्यावरून असे निदर्शनास येते की, १९७२ साली कापसाला प्रती क्विंटल २५० रुपये भाव होता तर सोने १८० प्रती तोळा होते. म्हणूनच कापसाला 'पांढरे सोने' म्हणून ओळखले जात होते. परंतु यानंतर कापसाच्या भाववाढीची गती संध झाली तर सोन्याच्या भावात भरघोस वाढ झाल्याचे दिसून येते. अशाच प्रकारची स्थिती इतरही पिकांसंदर्भात दिसून येते.

यासारखे अनेक कारणे शेतकऱ्यांच्या आत्महत्येसाठी जबाबदार आहे. सरकारचे आयात-निर्यात धोरण, सावकारी कर्ज, शासन स्तरावरील भ्रष्टाचार अशा अनेक कारणामुळे शेतकऱ्यांचे शोषण होते. राष्ट्रसंत तुकडोजी महाराज यांनी शेतकऱ्यांच्या शोषणाबद्दल आपले विचार व्यक्त करताना म्हटले की, 'कच्चा माल मोतीच्या भावे जावा, पक्का होताची चौपटीने जावा' म्हणजेच एका दाण्याचे हजार दाणे करणारा शेतकरी नेहमीच गरिबीत जीवन जगतो पण कारखान्यात पक्का माल बनविणारा कारखानदार हा करोडो रुपये कमवितो. यातील तफावत जोपर्यंत सरकार कमी करणार नाही तोपर्यंत शेतकऱ्यांच्या आत्महत्या सुरूच राहणार. यासंदर्भात सरकारने शेतकऱ्यांच्या आत्महत्या थांबविण्याकरिता खालील उपाययोजना करणे आवश्यक आहेत.



- १) **योग्य हमीभाव** :- शेतकऱ्यांचा शेतीसाठी लागणारा उत्पादन खर्च निघून त्याला आत्मसन्मानाने जगता येईल इतका जरी भाव शेतमालाला मिळाला तरी शेतकरी आत्महत्येकडे वळणार नाहीत. यासाठी शेतमालाचा भाव ठरवताना तज्ज्ञांनी महागाई निर्देशांक लक्षात घेणे आवश्यक आहे. करीता शेतकऱ्यांच्या शेतमालाला योग्य भाव देणे गरजेचे आहे.
- २) **बिनव्याजी कर्ज** :- शेतकऱ्यांना एका वर्षाच्या अल्प मुदतीवर बिनव्याजी कर्ज दिल्यास शेतकरी अधिक आत्मीयतेने शेती करून कर्जाची वेळेवर परतफेड करेल. सावकाराच्या कर्जाच्या जाळ्यातूनही त्याची मुक्तता होईल. परंतु नैसर्गिक संकटप्रसंगी त्याला कर्जमाफी किंवा मुदतवाढ देण्याची गरज आहे.
- ३) **सिंचन सुविधा** :- भारतात प्रामुख्याने मोठ्या प्रमाणात कोरडवाहू शेती केली जाते. अशा परिस्थितीत हाती येणारे पीक पाण्याअभावी करपून जाते. तेव्हा कोरडवाहू शेतीला ओलीताखाली आणण्यासाठी सिंचनाच्या पुरेशा सोयी उपलब्ध करून देण्याचे काम सरकारचे आहे. उदा.— महाराष्ट्राचा विचार करता पश्चिम महाराष्ट्रात सिंचनाची सुविधा उपलब्ध असल्याने तेथे शेतकरी आत्महत्या फारशा प्रमाणात दिसून येत नाही. परंतु मराठवाडा आणि विदर्भात सिंचनाच्या अपुऱ्या सुविधेमुळे शेतकरी आत्महत्येचे प्रमाण मोठ्या प्रमाणात आहे. म्हणून महाराष्ट्र सरकारने विदर्भ आणि मराठवाड्यात सिंचनासाठी विशेष प्रयत्न करण्याची आवश्यकता आहे.
- ४) **शेततळे, विहीरी यासाठी दीर्घ मुदतीचे कर्ज देणे** :- शेततळे, विहीर यासाठी दीर्घ मुदतीचे कर्ज देणे गरजेचे आहे. शेततळे तसेच काल्हापुरी बंधारे बांधून पाण्याची पातळी वाढविता येईल. शेतातील पावसाचे पाणी थांबवून जमिनीतील पाणीपातळी वाढवता येईल. त्यामुळे विहीरीच्या पाणीपातळीत वाढ होईल. याचा फायदा शेतकऱ्यांना ओलीताकरिता करता येईल. त्यासाठी शेतकऱ्यांना दीर्घ मुदतीचे कर्ज उपलब्ध करून देणे आवश्यक आहे.
- ५) **उच्च दाबाची वीज उपलब्ध करून देणे** :- अनेकदा शेतकऱ्यांच्या शेतातील विहीरीला पाणी उपलब्ध असते परंतु उच्च दाबाची वीज न मिळाल्याने किंवा केवळ ८ ते १२ तास (रात्रपाळीत) वीज उपलब्ध झाल्यामुळे तो ओलीत करून शकत नाही. या समस्येकडे शासनाने जातीने लक्ष घालून शेतकऱ्यांना २४ तास मुबलक प्रमाणात उच्च दाबाची वीज उपलब्ध करून द्यावी. तसेच वीज दरातही सवलत दिली पाहिजे.
- ६) **सरकारी योजना शेतकऱ्यांच्या दारी** :- सरकार शेतकऱ्यांसाठी अनेक योजना राबवितात परंतु त्या शेतकऱ्यांपर्यंत पोहचत नाही. म्हणून सरकारच्या कृषी विभागाने पुढाकार घेऊन अशा योजना शेतकऱ्यांपर्यंत पोहचवण्यासाठी विशेष अभियान राबविणे आवश्यक आहे.
- ७) **बाजारातील दलालांचे वर्चस्व नष्ट करणे** :- बाजारातील दलालांचे वर्चस्व नष्ट करण्यासंदर्भात केंद्र सरकारने घेतलेला निर्णय स्वागतार्थ आहे. त्यामुळे शेतकऱ्यांचा दलाली, मापारी, हमाली यासाठी होणारा खर्च कमी होईल आणि बाजारातील दलालांचे वर्चस्व संपुष्टात येईल.
- ८) **खुली बाजारपेठ** :- संपूर्ण भारत एक बाजारपेठ ग्राह्य धरून शेतकरी कुठेही आपला शेतमाल विकू शकतो हा केंद्र सरकारने घेतलेला निर्णय योग्य आहे. त्यामुळे जो शेतकऱ्यांच्या शेतमालाला जास्त भाव देईल त्याला शेतकरी शेतमाल विकू शकले.
- ९) **शेतकऱ्यांच्या शेतमालाच्या निर्यातीला प्रोत्साहन देणे** :- भारत सरकारने शेतमालाच्या निर्यातीला प्रोत्साहन देऊन शेतकऱ्यांच्या पर्यायाने भारताच्या आर्थिक समृद्धीकडे लक्ष देण्याची आवश्यकता आहे. तरच शेतकरी समृद्ध होऊ शकेल.



१०) **निर्यात धोरण ठरविणे** :- आंतरराष्ट्रीय स्तरावर मागणी असणाऱ्या शेतमालाला प्रोत्साहन देऊन त्याची निर्यात करणारे धोरण सरकारने तयार करावे. त्याचबरोबर शेतकऱ्यांना तत्संबंधी प्रशिक्षण देण्यासाठी शिबिरे आणि कार्यशाळांचे आयोजन करावे.

११) **शेतकऱ्यांना लघु उद्योजक बनविणे** :- शेतकऱ्यांना प्रोत्साहन देऊन त्यांच्या स्थानिक पातळीवर लघुउद्योग तयार करण्याचे स्वातंत्र्य व भांडवल उपलब्ध करून देणे. उदा.— शेतकऱ्यांनी १६ ते १७ रु. किलो याप्रमाणे गहू न विकता २५ रु. किलो प्रमाणे कणकीचे पॅकेट तयार करून विकणे. व अशा प्रयोगांना प्रोत्साहन देणे आवश्यक आहे.

१२) **उत्कृष्ट दर्जाचे बी—बियाणे उपलब्ध करून देणे** :- बहुतांश शेतकरी हा अल्पशिक्षित असतो. अशा शेतकऱ्यांना उत्कृष्ट बी—बियाणे कमी दरात शासकीय पातळीवर उपलब्ध करून देणे आवश्यक आहे. यासाठी शासनाने पुढाकार घेणे आवश्यक आहे.

१३) **शीतगृहाची सुविधा** :- शेतकरी आपल्या शेतात भाजीपाला, टमाटर किंवा अल्पमुदतीचे पीक घेतात. त्यांना दीर्घकाळ टिकवण्यासाठी शीतगृहाची आवश्यकता असते. हे शीतगृह सरकारने प्रत्येक गावात उपलब्ध करून दिल्यास शेतमाल ताजा राहिल व अधिक काळ टिकेल. त्यामुळे शेतकऱ्यांचे होणारे नुकसान टाळता येईल.

१४) **नैसर्गिक आपत्तीत शासकीय मदत देणे** :- शासनाने नैसर्गिक आपत्तीच्या काळात शेतकऱ्यांना योग्य ती शासकीय मदत त्वरीत उपलब्ध करून देणे आवश्यक आहे. कारण शेतकरी जगेल तर देश जगेल, देश जगेल तर देशाचा विकास होईल.

१५) **परिशिष्ट ९ रद्द करणे** :- परिशिष्ट ९ नुसार शेतकऱ्याला आपल्या अन्यायाविरुद्ध न्यायालयात दाद मागता येत नाही. त्यामुळे सरकारने शेतकरी विरुद्ध अनेक कायदे पारीत करून शेतकऱ्यांचे शोषण केले आहे. त्यासाठी सर्वप्रथम परिशिष्ट ९ रद्द करून शेतकऱ्यांवरील अन्यायी कायदे रद्द करण्यात यावे. तसेच शेतकऱ्यांवर होणाऱ्या शोषणाविरुद्ध त्याला न्यायालयात दाद मागता यावी यासाठी उपाययोजना करणे आवश्यक आहे.

१६) **अल्पभूधारक शेतकऱ्यांसाठी विशेष योजना** :- शेतकरी आत्महत्येचा अभ्यास करताना असे लक्षात आले की, मोठ्या प्रमाणात आत्महत्या करणारे शेतकरी हे अल्पभूधारक कुटुंबप्रमुख आहेत. त्यामुळे अशा कुटुंबासाठी विशेष योजना तयार करून ती कार्यान्वीत करावी. उदा.— मुलांना मोफत शिक्षणाची सोय, महिलांना विशेष प्रशिक्षण देऊन गृहउद्योग सुरू करण्यासाठी कर्जपुरवठा करणे, इ.

१७) **अद्ययावत तंत्रज्ञान उपलब्ध करून देणे** :- जागतिक दृष्टिकोनातून भारतीय शेतकरी मागे असण्याचे मुख्य कारण म्हणजे अद्ययावत तंत्रज्ञानाचा अभाव हे आहे. अद्ययावत तंत्रज्ञान शेतकऱ्यांसाठी उपलब्ध करून देणे सरकारची प्राथमिक जबाबदारी आहे. त्यादृष्टीने सरकारने लक्ष दिल्यास शेतकऱ्यांना कमी खर्चात व कमी वेळेत जास्त उत्पादन घेता येईल. पर्यायाने शेतीला व देशाला अधिक सक्षम बनविता येईल.

यासारख्या उपाययोजना सरकारने करून प्रभावीपणे राबविल्यास शेतकऱ्यांच्या आत्महत्या थांबविल्या जाऊ शकतात.

शेतकरी कर्जात जन्म घेतो, कर्जातच जगतो आणि कर्जातच मरतो. अशा प्रकारची परिस्थिती ब्रिटिशकालीन शेतकऱ्यांची होती. त्यात आजही फारसा फरक पडलेला दिसून येत नाही. अशा बिकट परिस्थितीतून शेतकऱ्यांना बाहेर काढण्यासाठी शासकीय पातळीवर प्रभावी उपाययोजना करण्याची आवश्यकता आहे. 'भीक नको, हवे घामाचे दाम' या शेतकरी संघटनेच्या घोषवाक्यात शेतकऱ्यांच्या शोषणाचे सत्य दडले आहे. आजचा महागाई दर लक्षात घेता जर शेतकऱ्यांच्या शेतमालाला भाव दिल्यास तो बँकेचे कर्ज फेडू शकेल, त्याच्या राहणीमानाचा दर्जा उंचावेल, व्यापार—उद्योगाचा विकास होईल आणि देशाचेही वार्षिक उत्पन्न वाढेल. त्यामुळे



शेतकऱ्यांच्या आत्महत्यांचा प्रश्न सुटेल. शेतकऱ्यांना देण्यात येणारे पॅकेज, सबसिडी यापासून सरकारची सुटका होईल. शेतकरी आत्मसन्मानाने जगू शकतील. हे सगळं करण्यासाठी प्रबळ राजकीय इच्छाशक्तीची आवश्यकता आहे. आज वाढत्या शहरीकरणाच्या मुळाशी शेतीव्यवसायातील शेतकऱ्यांचे होणारे शोषण जबाबदार आहे. शेतीव्यवसाय तोट्यात येत असल्यामुळे शेतकरी कर्जबाजारी होतो. हे कर्ज फेडण्यासाठी तो आपल्याकडील जमीन विकतो. मिळालेल्या पैशात तो सावकाराचे व बँकेचे कर्ज फेडतो. गावात दुसरा उद्योग नसल्यामुळे शहरात येतो. पैशाअभावी तो झोपडपट्टीत राहतो. त्यामुळे शहरातील बेकारी, गरिबी, गुन्हेगारी या समस्येत अधिक भर पडते. या समस्येतून देशाला वाचविण्याकरिता सरकारने शेतीव्यवसाय नफ्याचा करणे आवश्यक आहे. त्यामुळे शेतकरी गावातच राहतील आणि शेतकऱ्यांच्या समस्या आणि वाढते शहरीकरण थांबविता येईल.

संदर्भ :-

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प्रत्यक्ष विदेशी गुंतवणीकीचा (FDI) भारतीय शेतीक्षेत्रावर झालेला परिणामांचा विश्लेषणात्मक अध्ययन

प्रा. भेदराज भानुदास ढवळे

सहाय्यक प्राध्यापक व विभाग प्रमुख अर्थशास्त्र विभाग

स्व निर्धनराव पाटिल वाघाये कला व वाणीज्य महाविद्यालय मुरमाडी तुपकार लाखणी, भंडारा

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सारांश : विकसनशील अर्थव्यवस्थेत भांडवलांचा कमरता हा विकासातील महत्वाचा अडथळा आहे. भारताच्या अर्थव्यवस्थेचा विचार केला तर गुंतवणूकीची कमतरता हा वैशिष्ट्य असलेला दिसून येतो. ही भांडवलाची कमरता दूर करण्यासाठी प्रत्यक्ष विदेशी गुंतवणूक अत्यंत महत्वाची भूमिका पार पाडताना दिसत आहे. विदेशी प्रत्यक्ष गुंतवणूकीमुळे भारतातील गुंतवणूक विदेशी प्रत्यक्ष गुंतवणूकीमुळे भारतातील गुंतवणूक तर वाढलीच त्याचबरोबर तंत्रज्ञानाचा आदानप्रदान रोज गारावाढ आधारभूत संरचनेची निर्मिती उत्पादनात वाढ व एकूणच देशातील नागरिकांच्या राहणीमानांत वाढ झाल्याचे दिसून येत आहे. म्हणूनच प्रत्यक्ष विदेशी गुंतवणूकीला विकासाचे इंजीन म्हटलेले आहे.

भारत हा कृषीप्रधान देश आहे. भारतातील जवळपास ६५ टक्के लोकसंख्या शेती व शेतीवर आधारित उद्योगावर अवलंबून आहेत. देशाच्या एकूण घरगुती उत्पादनात जवळपास १९ टक्के वाटा हा शेतीक्षेत्राचा आहे. म्हणूनच शेतीक्षेत्राचे महत्त्व आहे. म्हणूनच शेतीक्षेत्राला भारताचा कणा आहे असे म्हटले जाते त्यामुळेच देशातील अर्थव्यवस्थेच्या बाबतीत घेतलेला कोणताही निर्णय हा प्रत्यक्ष अप्रत्यक्ष रित्या शेतीक्षेत्रावर परिणाम करताना दिसून येतो. इ.स. १९९१ ला भारतसरकारने देशाच्या प्रगतीसाठी खाजगीकरण, उदारीकरण, जागतीकीकरण असा विकासचा मॉडेल प्रस्तुत केलेला आहे. याच विकासाच्या सिध्दान्तामधून विदेशी प्रत्यक्ष गुंतवणूकीला दिलेला आहे. प्रत्यक्ष विदेशी गुंतवणूकीला प्रोत्साहन दिलेला आहे. प्रत्यक्ष विदेशी गुंतवणूकीला पुर्वी ५९ टक्के पर्यंत गुंतवणूक करता येत होती. आता शेतीक्षेत्रात १०० टक्के प्रत्यक्ष विदेशी गुंतवणूकीला प्रोत्साहन दिलेला आहे. प्रत्यक्ष विदेशी गुंतवणूकीमुळे भारतातील सेवाक्षेत्र औद्योगिक क्षेत्र, शेतक्षेत्र रस्ते व वाहतुक, आरोग्यक्षेत्र, विमा क्षेत्र, शिक्षण क्षेत्र, वाहन उद्योग क्षेत्र इत्यादीमध्ये भरीव गुंतवणू झालेली आहे. प्रत्यक्ष विदेशी गुंतवणूकीमुळे फार मोठ्या प्रमाणात रोजगार प्राप्त झालेला आहे. शेतीक्षेत्रामध्ये अन्न व प्रक्रिया उद्योग, रबर क्षेत्र, फरमैटेशन उद्योग, वनस्पती तेल उद्योग शेतीसाठी लागणारी यंत्रे, खत उद्योग चहा व कॉफी उद्योग इत्यादी शेती व शेतीवर आधारित उद्योगामध्ये फार मोठ्या प्रमाणावर प्रत्यक्ष विदेशी गुंतवणूकीचा भारतीय अर्थव्यवस्थेवर व मुलतः शेती क्षेत्रावर काय परिणाम झाला हे पडताळून पाहणे हाच या अभ्यासाचा मुलभूत उद्देश आहे शेतीक्षेत्रातील प्रत्यक्ष विदेशी गुंतवणूक वाढविण्यासाठी भारत सरकारने कोणकोणते प्रयत्न केले आणि त्याचा काय परिणाम झाला? १९९१ ते २००० या एकूण कालावधीत प्रयत्न विदेशी गुंतणूक किती झाली? कोणकोणत्या राज्यात झाली? कोणकोणत्या क्षेत्रात झाली? या सर्वांचा विश्लेषणात्मक अभ्यास करण्याचा हेतु आहे.

महत्त्वपूर्ण शब्द :- प्रत्यक्ष विदेशी गुंतवणूक भारत सरकारचे शेतीविषयक धोरण, प्रत्यक्ष झालेली गुंतवणूक आर्थिक विकास.

प्रस्तावना



स्वातंत्र्यानंतर भारतात भांडवलशाही व समाजवादी अर्थव्यवस्थेचे चांगल्या गुणांचा अवलोकन करून मिश्र अर्थव्यवस्थेचे स्विकार करण्यात आला. भांडवलशाही समाजवादी स्विकार करण्यात आला. भांडवलशाही समाजवादी अर्थव्यवस्था असा या अर्थव्यवस्थेचा स्वरूप होता. काही उद्योग सरकारद्वारा व काही उद्योग भांडवलदारांकडून तर काही उद्योग दोन्हीकडून चालविले जात होते. शेतीक्षेत्र सुध्दा खाजगी क्षेत्रातच होते. शेती क्षेत्राचा व अर्थव्यवस्थेचा विकास व्हावा या उद्देशाने नियोजन आयोगाची स्थापना करून पंचवार्षिक योजना तयार करण्यात आल्या. प्रत्येक पंचवार्षिक योजनेची विशिष्ट उद्दीष्टे तयार करण्यात येतात. त्या माध्यमातून प्रत्येक क्षेत्राचा विकास करण्यात येतो.

भारतात खाजगी उद्योग स्थापन्यासाठी सरकारची परवानगी आवश्यक होती. त्यासाठी खुप मोठा भ्रष्टाचार दप्तरद्विंरगाई होत असे. उद्योगाती कोणत्या वस्तंचे उत्पादन घ्यावे किती प्रमाणात घ्यावे कुठे विकावे किंमत किती असावी या सर्वांचे नियंत्रण सरकारकडे होते. त्यामुळे एखादा उद्योग स्थापन करण्यासाठी सरकारवर अवलंबून राहावे लागे. मुलभुत आधारभुत क्षेत्रात फारच कमी गुंतवणूक झाली त्यामुळे भारताचा विकास फारच प्रभावित झाला १९६० च्या दशकात भारताचा राजनैतिक संबंध सोव्हीअत रशिया सोबत होते. रशियाच्या मदतीने भारतात काही उद्योग स्थापन करण्यात आले. भारताचे रशियाशी संबंध चांगले असल्याने अमेरिका सारखे पश्चिम युरोपीय देशासोबत भारताचे संबंध चांगले नव्हते. १९८० सोहियत रशियाचे विघटन झाले त्यामुळे भारतचा आयात निर्यात व्यापार प्रभावित झाला.

१९९१ पर्यंत भारतात शेती क्षेत्रात मूलभुत गुंतवणूक न झाल्याने रस्ते व वाहतुक क्षेत्राचा विकास न झाल्याने, जलसिंचनाच्या मूलभुत सोयीची कमतरता असल्याने दरहेक्टरी उत्पादन फारच कमी होते. त्यामुळे भारत देश अविकसीतच राहिला होता. भारताचा विदेशी व्यापार प्रभावित झाल्याने आयात वाढली निर्यात कमी झाली त्यामुळे विदेशी कर्ज वाढले. व देशाचा विकास खुंटला. म्हणून भारतासमोर देशाची अर्थव्यवस्था खुली करण्याशिवाय कोणताही पर्याय नव्हता. १९९१ मध्ये पंतप्रधान पि. व्ही. नरसिंह राव व अर्थमंत्री डॉ. मनमोहन सिंग यांनी देशाची अर्थ व्यवस्थेला विकासाची चालना मिळावी या हेतुने खाजगीकरण, उदारीकरण नागतीकीकरण हा नविन सिध्दात विकसित केला.

ऐतिहासिक पार्श्वभूमी :-

विदेशातील एखाद्या कंपनीने दुसऱ्या देशाच्या उत्पादनात किंवा उद्योगात केलेली प्रत्यक्ष गुंतवणूक म्हणजे प्रत्यक्ष विदेशी गुंतवणूक म्हणजे प्रत्यक्ष विदेशी गुंतवणूक असे म्हणता येईल. ही प्रत्यक्ष विदेशी गुंतवणूक असे म्हणता येईल. ही प्रत्यक्ष गुंतवणूक दुसऱ्या देशातील एखादी कंपनी खरेदी करून किंवा त्या देशात पूर्वीपासूनच अस्तित्वात असलेल्या उद्योगातील पूर्वीच्याच व्यवहारांमध्ये अधिक किंवा जास्तीची वाढ करून केलेली असते. भारतात आर्थिक उदारिककरणाची सुरुवात १९९१ मध्ये झाली. आणि तेव्हाच प्रत्यक्ष विदेशी गुंतवणूकीची सुरुवात झालेली दिसून येते. भारत हा विकसनशील देश असून येथिल ग्राहक उपभोग्य वस्तु बाजार खुप मोठा आहे.

भारत हा जगातील तिसरा महत्वाचा देश आहे की ज्यामध्ये प्रत्यक्ष विदेशी गुंतवणूक आकर्षित झालेली आहे. UNCTAD च्या सर्वेनुसार २०१३ ते २०१५ मध्ये चिन आणि संयुक्त अमेरिका यांच्यानंतर भारतामध्ये सर्वात जास्त विदेशी गुंतवणूक झालेली आहे.

अध्ययनाचे उद्देश :-



१. भारत सरकारच्या प्रत्यक्ष विदेशी गुंतवणूक नितीचा विश्लेषण करणे.
२. प्रत्यक्ष विदेशी गुंतवणूकीचा शेती क्षेत्रावर झालेल्या परिणामांचा अभ्यास करणे.
३. प्रत्यक्ष विदेशी गुंतवणूकीचा शेती क्षेत्रावर झालेल्या परिणामांचा चिकित्सक अभ्यास करणे.

संशोधनची कार्यपध्दती :-

सदरील संशोधनासाठी वर्णनात्मक पध्दतीचा उपयोग केलेला आहे. संशोधनासाठी दुय्यम साधनांचा वापर केलेला आहे. त्यामध्ये प्रकाशित पुस्तके, जनल्समध्ये प्रकाशित झालेली संशोधन वर्तमान पत्र विविध विभागांची ऑनलाईन वेबसाईटवर असणारी आकडेवारी याचा संशोधनाला निष्कर्षाप्रत पोहचण्यासाठी मदत घेतलेली आहे.

भारत सरकारची प्रत्यक्ष विदेशी गुंतवणूक निती :-

प्रत्यक्ष विदेशी गुंतवणूकीचा इतिहास बधीतला तर असे लक्षात येते की १९९१ च्या नविन आर्थिक धोरणानुसार सन २००० पासून प्रत्यक्ष विदेशी गुंतवणूकीला सुरुवात झाली.

भारतात २००० – २००१ त २०२०-२०२१ या एकूण २० वर्षांचा अभ्यास केला तर असे लक्षात येते की या कालावधीत २०००-२००१ या एकूण १०७३३ करोड रूत्र तर २००१ – २००२ ला १८६९४ करोड रूपये प्रत्यक्ष विदेशी गुंतवणूक झाली. तर १८६९४ करोड रूपये प्रत्यक्ष विदेशी गुंतवणूक झाली. तर २०१९ – २०२० ला ३५३५५८/- करोड रूपये तर २०२० ते २०२१ या कालावधीत ४४२८६९/- करोड रूपये म्हणजेचच २० वर्षांच्या कालावधीत गुंतवणूक फार मोठ्या प्रमाणात वाढली.

प्रत्यक्ष विदेशी गुंतवणूकीचा क्षेत्रावार विचार केला तर गुंतवणूकीत सेवाक्षेत्राला सर्वाधिक पंसती मिळालेली आहे. त्याचबरोबर वाहतुक व दळणवळन आरोग्य विमा, रस्ते विकास खनिकर्म पोलाद उद्योग वनोत्पादन शिक्षण शेती अशा विविध क्षेत्रात गुंतवणूक झालेली दिसून येते.

प्रत्यक्ष विदेशी गुंतवणूकीचा राज्यवार क्रमवारी पाहिली तर २०२१ला गुजरात राज्यात १८१७९४ कोटी गुंतवणू होऊन देशात प्रथम क्रमांक पटकावला तर त्याच वर्षा महाराष्ट्र राज्यात १७१८०७ करोड रूपये गुंतवणूकी सह दुसऱ्या क्रमांकावर तर कर्नाटक तिसऱ्या क्रमांकावर आहे. तर सर्वात कमी गुंतवणूक ४८६१ कोटी रूपये गुंतवणूकीसह सर्वात शेवटी असलेला दिसून येते. २०१९ प्रत्यक्ष विदेशी गुंतवणूकीचा विचार केला तर महाराष्ट्र ५२०७३ कोटी रूपये गुंतवणूकीसह प्रथम क्रमांक गुजरात १८९६४ कोटी रूपये गुंतवणूकीसह द्वितीय क्रमांक कर्नाटक ३०७४० कोटी रूपये गुंतवणूकीसह तृतीय क्रमांकावर असलेला दिसून येते.

प्रत्यक्ष विदेशी गुंतवणूक करणारे देश या बाबत विचार केला तर भारतामध्ये मार्च २०२१ ला सर्वात जास्त गुंतवणूक करणारा देश मॉरिशस एकूण गुंतवणूकीचा २८ टक्के गुंतवणूक या देशाने केली. तर सिंगापुर ने एकूण २२ टक्के गुंतवणूक केली तर यु. एस. ए. ने एकूण ८ टक्के गुंतवणूक केली तर नेदरलॅन्ड या देशाने एकूण ७ टक्के गुंतवणूक केलेली आहे.

२० वर्षांत झालेली प्रत्यक्ष विदेशी गुंतवणूकीतील वाढ असे लक्षात येत की, भारतातील मोठी बाजारपेठ मोठा विमाक्षेत्र, आरोग्य क्षेत्र खनन, उद्योग, शेतीउद्योग, सेवा क्षेत्र इत्यादी क्षेत्रामध्ये वाढ झालेली लक्षात येते.

भारत सरकारची शेती क्षेत्रातील प्रत्यक्ष विदेशी गुंतवणूक निती.

भारत सरकारच्या प्रत्यक्षविदेशी गुंतवणूकीच्या नविन धोरणानुसार शेती व शेतीशीसंबंधित क्षेत्रात १००टक्के गुंतवणूकीस स्वयंचलित भागाने करता येईल. त्यातील महत्वाचे क्षेत्र खालील प्रमाणे.

- फ्लोरीकल्चर, हाटॉकल्चर, कल्टीवेशन ऑफ व्हेजिटेबल आणि मशरूम नियंत्रित उत्पादनातील गुंतवणूक
- बि – बियाने आणि वनस्पती लागवडीसाठी साहित्याचे विकासन आणि उत्पादन
- पशुपालन (कुत्र्यांचे प्रजोत्पादन)मासेमारी जलचर, मत्सपासन
- शेती व शेतीसंबंधीत सेवा क्षेत्र.



त्याचबरोबर चहा क्षेत्र, चहामळे, कॉफीच्या मळ्याचे लागवड, रबर लागवड, वेलदोडा लागवड पॉम आईल वनस्पती लागवड, ओलिव्ह तेल झाडांची लागवड या सर्व क्षेत्रात १०० टक्के प्रत्यक्ष गुंतवणूक स्वयंचलित पध्दतीने करण्याची परवानगी दिलेली आहे.

मल्टी – बॅन्ड रिटेल स्वेटरमध्ये ५१ गुंतवणूकीची परवानगी काही अटी शर्ती च्या अधिनस्व प्राप्त झालेली आहे.

खालील तक्त्यावरून २०१२ ते २०२० –२०२१ मध्ये झालेली शेतीक्षेत्रातील वर्षानिहाय गुंतवणूकीचे विश्लेषण करता येईल.

तक्ता क्र.१ :- भारतातील शेतीक्षेत्रातील प्रत्यक्ष गुंतवणूक

वर्षे	एकूण गुंतवणूक करोड मध्ये
२०१२ – २०१३	१३९२
२०१३ – २०१४	८४५
२०१४ – २०१५	७९६
२०१५ – २०१६	६७३
२०१६ – २०१७	६१८
२०१७ – २०१८	८.२१.३
२०१८ – २०१९	६६४.७
२०१९ – २०२०	१०४०.६४
२०२० – २०२१	१५०२.७२

तक्ता क्र. २ :- शेतीक्षेत्रातील प्रत्यक्ष विदेशी गुंतवणूक (शेती व व्यासंबंधित इतर उद्योग)

अ. क्र.	शेतीक्षेत्र	मुल्य (करोड)	टक्केवारी
१.	अन्न प्रक्रिया उद्योग	६४७४५.५७	१.९६
२.	रबर वस्तु	१९९९४.०२	०.६२
३.	शेती क्षेत्र	१२३६८.८९	०.४३
४.	फरमेनटेशन	१७८२३.१७	०.५८
५.	वनस्पती तेल	६१४२.६३	०.१९
६.	शेतीसाठी लागणाऱ्या मशिनरी	४२९४.५३	०.१४
७.	खत उद्योग	४०४५.१५	०.१३
८.	साखर उद्योग	१४६५.०२	०.०५
९.	चामडा उद्योग	१२२८.९६	०.०४
१०.	टिंबर प्रोडक्ट	११५९.०६	०.०४
११.	चहा आणि कॉफी उद्योग	८५४.२१	००.३
	एकूण →	१३४०९४.२१	

Source :- Government of India ministry of Commerc and Industry Department for promotion of Industry and Internal Trade (FDI Divison)

वरील तक्त्यावरून असे लक्षात येते की सन २०२० – २०२१ या आर्थिक वर्षात शेती व शेतीशी संबंधित असलेले इतर तत्सम उद्योगांमध्ये १३४०९४.२१ करोड रूपयांची प्रत्यक्ष विदेशी गुंतवणूक झालेली दिसून येत आहे. परंतु



या वर्षात भारतात प्रत्यक्ष विदेशी गुंतवणूक एकूण ४४२५६९ करोड एवढी झालेली आहे. त्यामाने भारतातील शेतीवर अवलंबून असल्या लोकसंख्या मागे अगदी अल्प असल्याचे दिसून येते.

प्रत्यक्ष विदेशी गुंतवणूक आणि शेतीविषयक कायदे

भारतसरकारने सप्टेंबर २०२० मध्ये भारतातील शेतीक्षेत्रावरील विकासाच्या उद्देशाने शेतीला लाभ होतील असे कायदे संसदेच्या चर्चेविना संमत केलेत

१. आवश्यक वस्तु साठेबाजी कायदा – २०२०
२. शेतकरी हक्क व सुरक्षा हमी व कृषी सेवा करार विधेयक
३. शेतकरी उत्पादने (व्यापार व वाणिज्य प्रोत्साहन व सुविधा) विधेयक

वरील कायदे शेतकरी हिताचे आहेत असे सरकार म्हणत आहे. परंतु या कायद्याला शेतकऱ्यांचा व अर्थतज्ञांचा मोठ्या प्रमाणात विरोध होत आहे. हे कायदे रद्द होण्यासाठी शेतकरी गेल्या ६ महिन्यांपासून आंदोलन करीत आहेत. त्या आंदोलनात आतापर्यंत ४००च्या वर शेतकरींच्यांनी आपला जिव गमावला विरोध करण्याचे प्रमुख मुद्दे खालीलप्रमाणे दिसून येत आहेत.

१. आवश्यक वस्तु साठेबाजी विधेयकानुसार कोणालाही शेतमालाची साठवणूक करण्यात कोणतेही बंधन असणार नाही याचा परिणाम असे होईल की व्यापारी, हंगामात शेतकऱ्यांचा माल कमी किमतीत घेऊन त्याची साठेबाजी करेल. कृत्रिम टंचाई निर्माण करेल व बिगर हंगामात खूप जास्त चढ्या किमतीत विकेल यामध्ये फायदा फक्त व्यापाराचा होईल.
२. शेतकरी हक्क व सुरक्षा किंमत हमी व कृषी सेवा करार विधेयका नुसार – व्यापारी शेतकऱ्यांशी एकत्रित करार शेतमाल लागवडीपूर्वीच करेल व त्या कराराततततत विशिष्ट किंमत ठरवेल. त्या किंमतीनुसार शेतकऱ्यांना करारानुसार आपला शेतमाल विकावा लागेल. जर त्या वेळेस हमी भावापेक्षा जास्त किंमत असेल तर व्यापारी माल विकत घेणे टाळू शकतो. यामध्ये हमीभावापेक्षा कमी किमतीत शेतकऱ्यांचा माल घेता येणार नाही याची कोणतीही हमी सरकार घेत नाही म्हणजेच हमी भाव आपोआपच नष्ट होईल. यास शेतकऱ्यांचा विरोध आहे. एपीएमसी आपोआपच बंद होईल.
३. शेतकरी उत्पादने(व्यापार व वाणिज्य प्रोत्साहन व सुविधा) विधेयकानुसार शेतकऱ्यांना आपला माल कुठेही आणि कितीही भावाने विकता येईल व कोणत्याही पॅनकार्डधारकाला माल खरेदी करता येईल. यामुळे काय होईल तर सुरवातील मल्टीब्रँड क्षेत्रातील व्यापारी अदानी – अंबानी एपीएमसीच्या बाहेर सुरुवातील चढ्या भावाने माल विकत घेतील. काही वर्षांनंतर एपीएमसी बंद होईल व त्यामुळे मल्टीब्रँड उद्योजक कोणत्याही भावाने माल खरेदी करू शकतील.

प्रत्यक्ष विदेशी गुंतवणूक अशा क्षेत्रात केली तर आपले शेतकरी देशोधडीला लागू शकतील. आपण उत्पन्न केलेले आपल्यालाच विकत घेता येणार नाही. या विधेयकानुसार या शेतीक्षेत्रात प्रत्यक्ष विदेशी गुंतवणूकीला वाव आहे. भारत देश अन्नधान्याच्या बाबतील स्वयंपूर्ण राहणार नाही याचेच ज्वलंत उदाहरण सोयाबीनच्या हंगामात सोयाबीन ४००० /- रू. प्रति क्विंटल विकत घेण्यात आला आणि आज घडीला १०००० ते ११०००/- रू. क्विंटलने विकल्या जात आहे. आज सोयाबीन तेलाचे भाव १६० रू. प्रति किलो आहे.

टिकात्मक विश्लेषण:-

१९९१ च्या खाजगीकरण उदारीकरण जागतिकीकरण या धोरणानुसार शेतीक्षेत्र खुले करण्यात आले व विदेशी गुंतवणूक होऊ लागली २००० – २०२१ या २१ वर्षांच्या कालावधीत प्रत्यक्ष विदेशी गुंतवणूक १०७३३ करोड रूपयावरून ४४२५६९ करोड एवढी वाढली. परंतु शेती क्षेत्रात झालेली वाढ अगदी नगण्य आहे एकूण २१ ते ३०



वर्षाच्या कालावधीत २९६४३८ शेतकऱ्यांनी आत्महत्या केलेल्या आहेत. या वरूनच प्रत्यक्ष विदेशी गुंतवणूकीचे अपयश आपल्याला दिसून येते.

प्रत्यक्ष विदेशी गुंतवणूकीचा एकुण २० वर्षांचा कालावधी पहिला तर शेतीक्षेत्रात आधारभूत संरचना असेरस्ते वाहतुक, गोदामाची व्यवस्था, नविन शेतीउपयोगी मशिनरीज शेतीसाठी लागणारी ऊर्जा जलसिंचनाचे प्रकल्प इत्यादी क्षेत्रात फारच कमी गुंतवणूक झालेली आहे त्यामुळे आजही भारतीय शेती मान्सूनच्याच पावसावर अवलंबून असलेली दिसते. शेतकऱ्यांना १५-१६ तास लोडशेडींग असते. पिकलेला माल गोदामे नसल्याने साठवून ठेवता येत नाही नाशिवंत वस्तूची वाहतुक त्वरीत होत नाही. डिझेल पेट्रोलचे भाव वाढल्याने शेतकऱ्यांचा उत्पादन खर्च वाढला. यावरून असे लक्षात येते की प्रत्यक्ष विदेशी गुंतवणूकीचा फारसा फायदा भारतीय शेतकऱ्यांना झालेला नाही.

प्रत्यक्ष विदेशी गुंतवणूकीसाठी आकर्षित करणारे वातावरण आजही भारतीय शेती व्यवस्थेत वातावरण आजही भारतीय शेती व्यवस्थेत दिसून येत नाही.

निष्कर्ष :-

भारतातील नविन आर्थिक धोरणानुसार भारतीय ग्राहकउपयोगी बाजारपेठ खुप मोठी असल्याने प्रत्यक्ष विदेशी गुंतवणूकीच्या संधी विदेशी गुंतवणूकदारांना खुणावत आहेत. २००० ते २०२१ या कालावधीत लक्षात येते की गुंतवणूकीचा प्रवाह कित्येक टक्क्याने वाढलेला आहे. शेतीक्षेत्रातही नविन नविन उद्योग या मार्फत येत आहेत. भारताचा विदेशी व्यापार ही प्रभावीत होत आहे. नविन कृषी कायदेही तयार झालेली आहेत. परंतु त्यात चर्चा घडवून काही सुधारणा केल्या ती त्याचा फायदा विदेशी गुंतवणूक भारतीय शेतीची व शेतकऱ्यांचे जिवनमान उंचाऊ शकेल. आधारभूत संरचना निर्माण होऊ शकतील अशा प्रकारे प्रत्यक्ष विदेशी गुंतवणूक आणि भारतीय शेती याचा विश्लेषण करता येईल.

संदर्भ:

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**सेंद्रिय शेती : कृषी शाश्वत विकासाचा मार्ग****डॉ. अंजली रामचंद्र कदम / नारायणे**

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प्रस्तावना:

आर्थिक आणि सामाजिक शाश्वतता बरोबरच अलीकडच्या काळात पर्यावरणीय शाश्वतता या संकल्पनेची दखल संपूर्ण जगाने घेतली आहे. जगभर विकास प्रक्रीयेमध्ये पर्यावरणाच्या शाश्वततेकडे दुर्लक्ष झाले व बहुतेक सर्वच राष्ट्रात पर्यावरणावर दुष्परिणाम झाला. या सर्व गोष्टीचा जगातील बहुतेक राष्ट्रांनी दाखल घेतली. उदा. संयुक्त राष्ट्र संघ, जागतिक बँक, जी –ह्यु, देशाचा समूह इ. आंतरराष्ट्रीय संस्थांनी जागतिक पातळीवर स्वतःच्या विकास प्रक्रियेमुळे पर्यावरणास हानी पोहचणार नाही अशी सर्वच सदस्य देशावर कायदेशीर बंधने घातली जावीत असे ठरले. जागतिक अर्थव्यवस्थेच्या शाश्वत विकासाला सर्व समावेशक दिशा देण्याच्या दृष्टीने सप्टेंबर ह्युह्यु मध्ये संयुक्त राष्ट्रांच्या आमसभेने एकूण घक्त उद्दिष्टे असणारा ह्युह्यु साठीचा शाश्वत विकासाचा महत्वाकांक्षी उपक्रम स्वीकारला. शाश्वत विकासासाठी एकूण घक्त उद्दिष्टे सदस्य राष्ट्रांनी ह्युह्यु ते ह्युह्यु या कालावधीत साध्य करायची आहेत अशी भूमिका स्पष्ट केली. यामध्ये सर्व देशातून गरिबीचे, विषमतेचे निर्मूलन, सर्वांना गुणवत्ताधिष्ठीत शिक्षण. लिंग समानता, शून्य उपासमार, आर्थिक प्रगती, उद्योगवाढ, पायाभूत सुविधा, नवोपक्रम, शांतता, सुरक्षितता व समान न्याय व्यवस्थेसाठी भक्कम यंत्रणा तसेच स्वच्छ हवा, हरित उर्जा, जलचर, भू भागावरील जीवन संवर्धन, शाश्वत शहरे, व शाश्वत समाजाचा अंतर्भावाचा समावेश केला आहे. शाश्वत विकास संकल्पनेमध्ये आर्थिक शाश्वतता, सामाजिक शाश्वतता आणि पर्यावरणीय शाश्वतता या तीन संकल्पनांचा समावेश होतो. जगात आजही ह्युह्यु टक्के लोक दारीर्घ रेषेखालील जीवन जगत आहेत आणि दुर्दैवाने त्यातील ह्युह्यु टक्के लोक भारतात राहात आहेत. जातीव्यवस्थेमुळे कदाचित जगातील सर्वांत मोठी सामाजिक विषमताही आपल्याच देशात असावी, जगभर झालेल्या औद्योगिकीकरणाचा पर्यावरणावर परिणाम होऊन झालेल्या हवामान बदलाचे सर्वाधिक दुष्परिणामही भारतात आणि उष्ण कटिबंधातील देशांनाच भोगावे लागतात.^१

शाश्वत विकासाची संकल्पना:

शाश्वत विकास म्हणजे पृथ्वीवरील संसाधनांचा उपयोग करून आपला विकास करताना पुढील पिढ्यांच्या विकासासाठी संसाधनांचा काळजीपूर्वक वापर करणे होय^२ शाश्वत विकास या शब्दात नैसर्गिक आणि मानवनिर्मित संसाधनांचा जपून आणि योग्य तितका वापर करणे अपेक्षित आहे. आपल्या येणाऱ्या पिढ्यांचा विचार करून जी मर्यादित संसाधने आहेत त्यांचा नियंत्रित वापर शाश्वत विकासात अपेक्षित आहे. निसर्ग चक्र आणि निसर्ग तत्व हे शाश्वततेचा मूलाधार आहेत. जमीन, जल, वायु, अग्नी, प्रकाश या संपूर्ण पंचमहाभूताचची सुरक्षितता म्हणजेच आपल्या भावी पिढीची सुरक्षितता होय. या सर्वांचा एकत्रित समतोल सांभाळला तर निश्चितच शाश्वत विकासाला खीळ बसणार नाही. शाश्वत जल, ऊर्जा निर्मिती, पर्यावरण रक्षण, शेती, या विविध अंगांनी भारतीय अर्थव्यवस्थेचा शाश्वत विकास कसा साध्य होईल याबद्दल सातत्याने प्रयत्न होणे गरजेचे आहे.

कृषी शाश्वत विकासाची संकल्पना:

नैसर्गिक शेती ही काही भारतामध्ये नवीन संकल्पना नाही. शेती करताना रसायनांचा वापर अजिबात न करता शेती करण्याची पद्धत आपल्याकडे अतिशय प्राचीन काळापासून अस्तित्वात



आहे. सेंद्रिय शेती म्हणजे नैसर्गिक साधनाचा वापर करून औषध, खते तयार करणे व पारंपारिक बियाणाचा वापर करून केलेली विषमुक्त म्हणजेच रसायनाचा वापर टाळून केलेली शेती म्हणजे सेंद्रिय शेती होय. सेंद्रिय शेती म्हणजे परंपरागत शेती होय. शेती करताना रसायनाचा वापर न करता केवळ शेतातील पिकांचे अवशेष, शेण, गोमूत्र व नैसर्गिक साधनांचा वापर करून सेंद्रिय शेती केली जाते. सेंद्रिय शेती पद्धतीनुसार पारंपरिक बी-बियाणे वापरणे, जमिनीची धूप थांबविणे त्यासाठी योग्य ठिकाणी बांध घालणे, मशागत करणे शेण-गोमूत्राचा जास्त वापर करणे यामुळे वाफ्यात पाणी टिकून राहते. बैलांच्या मशागतीने जमिनीची नांगरणी उत्तम होते. नांगरणी उत्तम झाल्यामुळे पिकांची वाढ चांगल्या प्रकारे होते. तर रासायनिक खतांचे दर दिवसेंदिवस वाढत चालले आहेत. रासायनिक खतांचा वापर केल्याने जमिनीचा कस कमी होऊ लागला आहे. त्यावर उपाय म्हणजेच सेंद्रिय शेती होय. थोडक्यात सेंद्रिय शेती ही एक स्थायी आणि पर्यावरणास अनुकूल अशी उत्पादन प्रक्रिया आहे, या प्रक्रियामध्ये वनस्पती व प्राणी यांच्या अवशेषापासून जे खत तयार होते त्याला सेंद्रिय खत म्हणतात. सेंद्रिय खतांमध्ये महत्त्वाची खत हे शेणखत, कंपोस्ट, हिरवळीची खते, गांडूळ खते, माश्यांचे खत, तेलबियांची पेंड इत्यादी आहेत †.सेंद्रिय शेतीचे वैशिष्ट्ये पुढीलप्रमाणे सांगता येतील

- स्थानिक गोष्टींचा पुनर्वापर करण्यायोग्य वनस्पती व प्राण्यांचे अवशेष पुनर्वापर.कमी संसाधने व पाऊसपाणी असलेल्या क्षेत्रांत उत्पादनाची वाढ होणे,
- मातीचा आरोग्यशास्त्र ध्वायम ठेवण्यास मदत होते'. शेत आणि आसपासच्या क्षेत्रात जैव विविधता आणि नैसर्गिक संसाधनांचे जतन होणे.
- शेतीच्या आजूबाजूला असणाऱ्या वनस्पती व पिके यांच्या मधील पोषक तत्वाचा व सभोवतालच्या सेंद्रिय पदार्थांचा पुनर्वापर करता येतो.
- आर्थिक मिळकत वाढविण्यासाठी आणि खर्च कमी करण्यासाठी याद्वारे आर्थिक नियोजन
- सकस व शाश्वत पीक उत्पादन. सेंद्रिय उत्पादनांना चांगला मोबादला मिळवता येतो.
- रोग ध्कीड नियंत्रणासाठी वनस्पतिजन्य रोगनाशके व कीटकनाशके वापरूनही गरज भागविता येते.

सेंद्रिय शेतीचे फायदे व तोटे.

- उत्पादन खर्चात घट करून शेती फायदेशीर करता येते व आर्थिक मिळकत वाढविता येते.
- प्रदूषणाचे संरक्षण आणि पर्यावरणाचे (जमीन,हवा आणि पाणी)संतुलन राखता येते.
- बियाणे, रसायनिकखते, कीटकनाशके, औषधे यांच्या वापरावर मर्यादा आणतायेते व त्याऐवजी रोग व कीड नियंत्रणासाठी वनस्पतिजन्य रोगनाशके व कीटकनाशके इ.स्वस्त व सहज उपलब्ध होणाऱ्या नैसर्गिक साधन संपत्तीचा वापरावर भर देता येतो
- शुद्ध आरोग्यदायी, टिकाऊ, शेतमालाची निर्मिती, सुरक्षित व विषमुक्त अन्नाची निर्मिती करता येते.
- जमिनीचा पोत सुधारून शाश्वत आणि सातत्यपूर्ण उत्पादन घेता येते.
- शेतातच सेंद्रिय खत निर्मिती व वापर या बाबीवर लक्ष देता येते.
- सेंद्रिय मालासाठी देशांतर्गत आणि देशाबाहेर निर्यातीसाठी बाजारपेठा उपलब्ध आहेत.
- शेतकर्यांच्या निव्वळ उत्पादनाला चांगला भाव मिळत असल्याने उत्पादनात वाढ करून शेती फायदेशीर करता येते
- सेंद्रिय मालासाठी देशांतर्गत मोजकेच ग्राहक व व्यापारी उपलब्ध आहेत.



- सेंद्रिय शेती पद्धतीचे मध्ये पिढ्यनपिढ्य पुढच्या पिढीला विनाप्रयास ज्ञान प्राप्त होत असले तरीही सतत होणारे हवामानातील बदल, विविध प्रकारचे उद्भवणारे रोग व कीड याच्या नियंत्रणाचे व्यवस्थापण प्रत्येक वेळेच्या परिस्थितीत वेगळे असते. या सर्वांचे व्यवस्थापण जमले पाहिजे.
- भारतातील बहुतांश शेतकरी कर्जबाजारी व कर्ज घेऊन शेती करणारे असल्याने पैशाची निकड लगेच भासते. सेंद्रिय शेती पद्धतीचेमध्ये पैशाची आवक ही ताबडतोब नसते. पण व्याक्तिगत पातळीवर बाजार मिळवणारे अनेक शेतकरी आहेत.

या विरुद्ध सायनिक शेतीचे फायदे व दुष्परिणाम पुढीलप्रमाणे

- रासायनिक खते हि पिकाला वापरल्यास लवकर उपलब्ध होतात. पिकाला लागणारी सर्वच प्रमुख, दुय्यम आणि सुक्ष्मअन्नद्रव्ये आपण रासायनिक खतामधून देऊ शकतो.त्यामुळे पिकांची उगवण चांगली होते,नंतरची वाढ हि जोमदार होते आणि भरघोस उत्पादन मिळते व विक्रीसाठी सर्वत्र बाजारपेठ उपलब्ध व मोठ्य प्रमाणावर ग्राहक उपलब्ध.
- यात कोणत्याही प्रकारचे सेंद्रिय खत वापरले जात नाही तर या शेती प्रकारामध्ये पिकांची खतमात्रा हि पूर्णपणे रासायनिक खतातूनच दिली जाते,
- रोग आणि कीड नियंत्रणासाठी रासायनिक कीटकनाशके आणि बुरशीनाशके यांचाच वापर केला जातो तसेच तण नियंत्रणासाठी सुद्धा रासायनिक तणनाशकांचाच वापर केला जातो.
- या पद्धतीत सेंद्रिय पदार्थांचा वापर करत नसल्याने जमिनीतील सुक्ष्म जीवाणूंची संख्या मात्र कमी होते.
- जमिनीत रासायनिक खते टाकल्यावर त्याचे विघटन करून पिकाला उपलब्ध करून देण्याचे काम जमिनीतील सुक्ष्मजीवाणू करत असतात.त्यांचीच संख्या कमी झाल्याने ध्कार्यक्षमता मंदावल्याने काही कालावधीनंतर रासायनिक खते भरपूर टाकूनही पिके त्याला प्रतिसाद देत नाहीत.
- या पद्धतीने सेंद्रिय पदार्थांच्या अभावी जमिनीच्या भौतिक गुणधर्मावर दिवसेंदिवस विपरीत परिणाम होतो आणि जमिनीची उत्पादन क्षमता दिवसेंदिवस कमी होत जाते.
- अनियमित पर्जन्यामुळे पिके अर्ध्यावरच कोमेजतात. दुबार, तिबार पेरणी करावी लागते. पेरलेले हातात नाही आले तर कर्ज होणारच मग शेतकरी आत्महत्या आणि कर्जमाफीचा चक्रव्यूह आपोआपच तयार होतो.^५

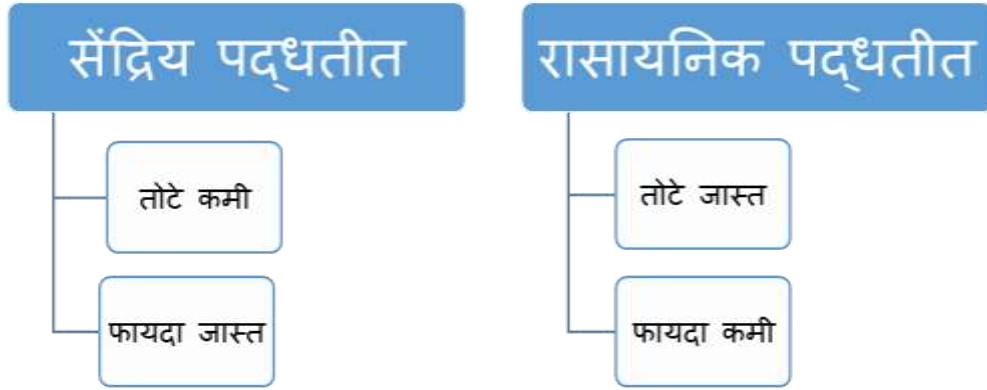
जमिनीत रासायनिक खते वापरल्याने जमीनला निर्जीव स्वरूप प्राप्त होते.निर्जीव जमिनीचे दुष्परिणाम पुढीलप्रमाणे

- सेंद्रिय पद्धतीत पूर्वी जमिनीला धी पाण्याच्या पाळ्या देऊन उत्तम पीक येत होते.आता जमिनीत रासायनिक खते टाकल्यावर पिकांची पाण्याची गरज तीन पटीने वाढली आहे. पिकाला दिलेले पाणी थेट खडकांपर्यंत निघून जाते. त्यामुळे जमिनीत पाणीच थांबायला तयार नाही.
- रासायनिक खतांनी वनस्पतींची वाढ चांगली होते. मात्र, रोग प्रतिकारक शक्ती कमी झाल्यामुळे कीटकनाशक आणि बुरशीनाशकांच्या फवारण्यांचे खर्च वाढले.
- आपण सजीव जमिनीबाबत विचार केलाच आहे. अशा सजीव जमिनीत सेंद्रिय कर्ब आणि जीव जीवाणूमुळे पीक उत्तम येते. अशी जमीन पाणी धरून ठेवण्याचे काम करते. दुर्दैवाने रासायनिक खतांच्या अतिवापरामुळे जमिनीची पाणी धरून ठेवण्याची क्षमता कमी झाली.



- जमिनीला अनेक दिवसांपासून रासायनिक खतांचा मारा सुरू आहे. त्यामुळे जमिनीतील काही घटक विरघळले आहेत आणि पिकांवर परिणाम होत आहे.
- रासायनिक खतांचे अंश पाण्यात उतरले आहेत. पाणी पिण्यायोग्य वा पिण्यायोग्य न राहिल्याने घराघरांत आरओ सिस्टीम बसवल्या गेल्या आहेत. नाशिक जिल्ह्यात ग्रामीण भागात वीस टक्के पाणीसुद्धा आता पिण्यायोग्य नाही. अशा पाण्यावर शेती करताना जमिनीची प्रतिकारशक्ती कमी झाल्याने फवारण्यांचे खर्च वाढले आहेत. यामुळे उत्पादनातही घट येऊ लागली आहे. वरील गोष्टी विचारात घेतल्यावर लक्षात येईल, की पाऊस सरासरीच्या ऋ ते घडू टक्के पडतोय पण जमिनीत पाणी थांबत नाही. शेतकऱ्यांचा उत्पादन खर्च वाढला आहे. पिकाची पाण्याचा ताण सहन करण्याची क्षमता कमी झाली आहे. पाण्याचा वापर तीन पटींनी वाढला आहे. रोग, किडींचे प्रमाण वाढले आहे. जमीन मृत झाली आहे. सेंद्रिय शेती काळाची गरज आहे.^६

सेंद्रिय शेती व रासायनिक पद्धतीची तुलनात्मक दृष्टीने संक्षिप्त वर्णन



भारतातील सेंद्रिय शेतीचा विकास:

सर्व जगात भारताला कृषिप्रधान देश म्हणून ओळखले जाते. भारताची कृषिक्षेत्रातील आजपर्यंतची वाटचाल बऱ्याच प्रमाणात स्वालंबी होण्याच्या दिशेने होत आहे. मोठ्या लोकसंख्याला अन्नधान्य पुरवण्यासाठी व स्वयंपूर्णतेकडे वाटचाल करण्यासाठी हरितक्रांतीपर्यंत सेंद्रिय पद्धतीचे शेतीची होणारी लागवड हरितक्रांतीमध्ये रासायनिक खताचा अवलंब भारतात होऊ लागला. कृषी क्षेत्राचा वाटा हा एक चांगला मापदंड आहे! हजारो वर्षांपासून ब्रिटिश राजवट, स्वातंत्र्यप्राप्ती नंतर हरितक्रांतीपर्यंत भारतीय शेतकरी सेंद्रिय कार्यपद्धती वर आधारित शेती कसत होते. ते हरितक्रांती नंतर सेंद्रिय शेतीचा विकास, विस्ताराला खीळ बसली. भारतात १९६० च्या दशकापासून १९६६. ६७ मध्ये हरितक्रांती घडून आली. अन्नधान्याचे उत्पादन हळू मिलियन टन (१९५०) वरून १३० मिलियन टन (१९७८.७९) झाले या सर्वांचे फलित म्हणजे भारताने केलेली 'हरितक्रांती' होती. क्त उत्पादन वाढीसाठी रासायनिक खते, कीटकनाशके, तणनाशके, सुधारित व संकरीत बी— बियाणे यांचा मोठ्या प्रमाणात वापर करण्यात आला. सुरुवातीच्या काळात शेतमालात मोठ्या प्रमाणावर उत्पन्न मिळू लागले त्यानंतरच्या काळातही अधिक उत्पादन मिळावे या हव्यासापोटी रासायनिक खतांचा, कीटकनाशकांचा, तणनाशकांचा अतिरेकी वापर झाला. उत्पादनतर वाढलेच, त्याबरोबरच उत्पादनखर्चही वाढला. त्याच्या फायद्याबरोबरच त्याचे दुष्परिणामही समोर आले. रासायनिक शेतीचा अवलंब केल्यामुळे जमिनीचा पोत खालावला, उपयुक्त सूक्ष्म जीव— जिवाणू यांचा नाश झाला,



विषयुक्त अन्नधान्याच्या सेवनाने मानव जीवन धोक्यात आले. त्यामुळे साक्षर व जागरूक ग्राहकांचा विषयुक्त अन्नधान्यास वाढता प्रतिसाद व मागणी, आरोग्यविषयक जनजागृती, सेंद्रिय बाजारपेठांचा विस्तार व विकास यामुळे सेंद्रिय शेतीस पुन्हा एकदा चांगले दिवस येऊ लागले. घृष्ट्या च्या जागतिकीकरण. उदारीकरण व खाजाकीकरण धोरणा मध्येही कृषी क्षेत्राचे रासायनिक शेतीपासून सेंद्रिय शेतीकडे स्थलांतरासाठी विविध धोरणे, योजना व सेंद्रिय शेतीचे ज्ञान, शिक्षणाचा प्रसार अशा विविध कार्यक्रमांची आखणी शासकीय आणि, निमशासकीय पातळीवर झालेली दिसून येते. २००० च्या 'राष्ट्रीय कृषी धोरणाने' भारतीय पारंपारिक सेंद्रिय शेतीचे ज्ञान वैज्ञानिक पातळीवर वापर करण्याची शिफारस केली. त्यामुळे भारत सरकारच्या डिपार्टमेंट ऑफ अॅग्रिकल्चर अँड को-ऑपरेशन विभागाने २००० साली एका कृती दलाची निर्मिती केली. केंद्र शासनाच्या व्यापार मंत्रालयाने एप्रिल ह्यज्ज नॅशनल ऑर्गॅनिक प्रोग्रॅमची सुरुवात केली. या कार्यक्रमाचा भाग म्हणून नॅशनल प्रोग्रॅम फॉ 'ऑर्गॅनिक प्रोडक्शन धोरणाची अंमलबजावणीसाठी करण्यासाठी अपेडा (www.apeda.com) वर सर्वोच्च नियंत्रण संस्था म्हणून जबाबदारी दिली गेली.^८ अपेडा या संस्थेमार्फत या सेंद्रिय शेतीच्या राष्ट्रीय कार्यक्रमाचे कामकाज चालते. या संस्थेला संलग्न अशी राष्ट्रीय मान्यता मंडळ (NAB & National Accreditation Board) संस्थेची स्थापना करण्यात आली आहे. या संस्थेच्या नियंत्रणाखाली २२ प्रमाणीकरण संस्था कार्य करतात. तसेच या प्रमाणीकरण संस्थांनी पाठविलेल्या शेतमालाच्या नमुने परीक्षणासाठी राष्ट्रीय मान्यता मंडळ मान्यताप्राप्त ३३ प्रयोगशाळा कार्यरत आहेत. भारतामध्ये शासनाने १ अपेडा २ टी बोर्ड ३ स्पायसेस बोर्ड ४ कॉफी बोर्ड ५ कोकोनट डेव्हलपमेंट बोर्ड ६ डायरेक्टोरेट ऑफ कॅश्यू कोको असे सहा संस्था प्रमाणपत्रीकरण संस्था म्हणून अधिस्विकृत करण्यासाठी नेमस्त केलेल्या आहेत^९

जागतिक सेंद्रिय बाजारपेठेत आणि भारत:

सेंद्रिय शेतीमालाला असलेली निर्यात बाजारपेठ ही भारतातील भारतातील सेंद्रिय शेती क्षेत्रातील वाढ जागतिक सेंद्रिय बाजारपेठेत भारत एक महत्वाचा भागीदार म्हणून उदयास येऊ लागला आहे. सेंद्रिय शेती करणाऱ्या शेतकऱ्यांच्या संख्येमध्ये भारत सर्वात प्रथम आहे. तर सेंद्रिय शेतीच्या क्षेत्राचा विचार केला तर भारत नवव्या स्थानावर आहे. भारताचा नववा क्रमांकय जवस, तीळ, सोयाबीन, चहा, वनौषधी, तांदूळ आणि डाळी या सेंद्रिय उत्पादनांची प्रामुख्याने निर्यात भारतातून ३१ सेंद्रिय उत्पादने निर्यात होतात. भारत सेंद्रिय चहाचा निर्यातदार म्हणून प्रसिध्द आहे. सेंद्रिय भात, भाज्या, कॉफी, तेलबिया, गहू आणि कडधान्ये यांनाही चांगला प्रतिसाद आहे. फळाच्या पिकांपैकी केळी, आणि संत्री ही सर्वाधिक पसंतीची सेंद्रिय उत्पादने आहेत २०१३ साला पासून भारत जगातील सर्वात जास्त सेंद्रिय पीक उत्पादक घेणारा देश म्हणून उदयास आला^{१०} भारताने सन २०१८-१९ मध्ये ५१५१ कोटींची सेंद्रिय कृषी उत्पादनाची निर्यात केली आहे. या निर्यातीमध्ये जवळपास ५० टक्के वाढ झाली आहे.^{१०}

राज्याची सेंद्रिय शेती:

सिक्कीम या संपूर्ण राज्यामध्ये केवळ सेंद्रिय शेती केली जाते. पूर्णतः सेंद्रिय शेती करणारे हे जगातले पहिले राज्य आहे. तेथील ७५ हजार हेक्टर क्षेत्रावर सेंद्रिय शेती सुरू करण्यात आली आहे. मेघालयातून मदर डेअरी, रेवांता अन्न आणि मणिपुरातून बिग बास्केट या कंपन्यांना सेंद्रिय उत्पादने पुरवली जातात. सेंद्रिय उत्पादनाला बाजारपेठ निर्माण करणे, तसेच थेट विक्री करणे यासाठी महाराष्ट्र, कर्नाटक या राज्यांमध्ये काम केले जात आहे. त्यामुळे लोकांना आपल्या दारामध्ये ताजी सेंद्रिय उत्पादने मिळू लागली आहेत. सिक्कीममध्ये राज्य सरकारने रासायनिक खताला बंदी घालून आणि सेंद्रिय पदार्थांच्या वापराला प्रोत्साहन देऊन आपली परंपरागत सेंद्रिय शेती वाढवली आहे आणि पूर्ण सेंद्रिय शेती करणारे राज्य असा लौकिक मिळवला आहे.



सिक्किमच्या खालोखाल केरळनेसुध्दा सेंद्रिय शेतीला आपल्या राज्यामध्ये मोठा बढावा दिलेला आहे. आता त्यापाठोपाठ त्रिपुरा आणि उत्तराखंड या राज्यांनी आपल्या क्षेत्रात संपूर्णपणे सेंद्रिय शेती करण्याचे उद्दिष्ट निश्चित केले आहे. ईशान्य भारतामध्ये पारंपरिक पद्धतीने सेंद्रिय शेती केली जाते. या भागात रासायनिक खतांचा वापर इतर देशांच्या तुलनेमध्ये अतिशय कमी करतात. त्याचबरोबर आदिवासी आणि इतर लहान लहान बेटांवरही सेंद्रिय शेती करण्यात येत आहे.^{१९}

सारांश

कृषी क्षेत्र आत्मनिर्भर बनविण्यासाठी तसेच आरोग्यपूर्ण पौष्टिक अन्नासाठी सेंद्रिय शेती अलिकडच्या काळात सेंद्रिय शेतीचे प्रमाण सातत्याने वाढत आहे. जमिनीला, पर्यावरणाला आणि शाश्वत विकासाबरोबरच मानवाला हितकारक होणार आहे हे सत्य ठरले. सध्याच्या युगात सेंद्रिय शेती करणे नितांत गरजेचे आहे. पणशहरी बाजारपेठेत जितक्या प्रमाणात आणि ज्या सातत्याने सेंद्रिय मालाचा पुरवठा व्हायला हवा त्यात सध्या अनेक मर्यादा आहेत सेंद्रिय माल पिकविणाऱ्या शेतकऱ्यांना खात्रीची व सर्वत्र बाजारपेठ मिळत नाही, त्यामुळे त्यांच्या वाढीला मर्यादा आहेत. शहरी बाजारपेठेपुरती सेंद्रिय शेतमालाची मागणी, केवळ उच्चभ्रू, जास्त उत्पन्न गटातील लोकांपुरतीच मर्यादित झालेली दिसते यासाठी रासायनिक खतांचा वापर पूर्णपणे बंद न करता त्याबाबत संयम पाळला, सेंद्रिय व जैविक तंत्रज्ञानाची जोड दिली तसेच हिरवळीच्या खतांचा वापर वाढविला तरच आपले उद्दिष्ट साध्य होऊन शेतीतील वाढणाऱ्या समस्यांची तीव्रताही आपण काही अंशी कमी करू शकतो. पर्यावरणपूरक व आर्थिकदृष्ट्य किफायतशीर शेती पद्धती म्हणून शेतकरी रासायनिक शेती कार्यपद्धती कडे पाठ फिरवून पुन्हा एकदा सेंद्रिय शेतीकडे वळाला आहे. या बाबींना प्राधान्य देऊन सामाजिक बांधिलकी जोपासणे आवश्यक असल्याने सेंद्रिय शेतीचे शेतमालाचे संशोधन मूल्यवर्धन, प्रशिक्षण, प्रमाणीकरण, विकास व विस्तार होणे गरजेचे आहे. सध्याच्या जागतिकीकरणाच्या प्रवाहात गुणवत्ते बरोबरच अधिक उत्पादनालाही अग्रक्रम दिला तरच आपण स्पर्धेत टिकून राहू शकू यासाठी एकात्मिक अन्नद्रव्य व्यवस्थापनाचा, जलसिंचनाचा योग्य वापर करून आपण जास्त उत्पादना बरोबरच चांगल्या गुणवत्तेचाही माल तयार करू शकू व पर्यावरण व आर्थिक अशा दुहेरी हेतूने सेंद्रिय शेतीचा मोठ्या प्रमाणात विस्तार करून कृषी शाश्वत विकास साध्य करता येईल.

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