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February-2019 Special Issue – 103

Agriculture : Problems and Prospects in Maharashtra**Guest Editor:****Dr. Bhaskar Shelake**

Principal,

Agasti Arts, Commerce & Dadasaheb Rupawate Science College,
Akole, Tal. Akole, Dist. Ahmednagar**Executive Editor of the issue:****Prof. Vishwanath Kotkar** (HoD. Economics)**Dr. Sunil Mohate** (Assistant Professor, Economics)Agasti Arts, Commerce & Dadasaheb Rupawate Science College,
Akole, Tal. Akole, Dist. Ahmednagar**Guest Editor:****Dr. Dhanraj Dhnagar** (Yeola)

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Indian Agriculture Prices : Challenge Before Indian Economy

Dr. Sambhaji Bhaurao Kale

Head, Dept of Economics,
Jijamata College Bhende B-K

Akshay S. Kale

Ph. D. Reserch Student,
Shivaji University Kolhapur

Introduction :-

India is an Agrarian country with around 60 - 70 percent of its people directly or indirectly depend on agriculture related sector . Marketing of his produce is the most important activity of a farmer. Main problems of agriculture sector is a financial future decision , agriculture prices, unplanned crop pattern , labour availability and other agriculture related issue . Many developed countries have made protection for the agriculture sector but Indian agriculture faced various problems in agriculture finance , prices so farmers economical condition is very critical and low income . The recent trends in Indian agriculture showing that critical situation of agriculture sector in the country. In recent period several unfavorable things such as suicides of farmers in many advanced states of the country. Has made great attention policy makers, researchers and media. Many studies conducted by individuals and institutions clearly stated that the frusta rated conditions of farmers which driven to take the extreme step of suicide by farmers. To increase the income of the farmers, the poor of the country have to pay more. This practice will create the problem to allocate inefficiency in the country .Subsidizing farmers through higher product prices is an inefficient method because it penalizes the consumer with higher prices. Also it means large farmers will benefit the most. They have received more than they need but small farmers are still struggling.

Farmers use fertilizers in the huge quantity to increase their production but it creates problems for those peoples who do not get benefits from this increment in the production.

Measures To Improve Agricultural Price Policy:

Thus the agricultural price policy which was introduced In India, the price policy was first introduced in 1947 after independence made a compromise with the situation and followed a variable policy of progressive decontrol in 1947 and Again in 1950 Foodgrains Procurement Committee was appointed which introduced the system of rationing and control in the supply of foodgrains in the country then a partial control in 1955. Then in 1959, the government introduced the state trading in foodgrains particularly in rice and wheat. The main objective of the price policy in India was to protect the interests of consumers. In this policy no attention was paid to provide incentive price to farmers. It was only in 1964, a clear-cut policy was introduced for providing incentive price to farmers in 1964, the government introduced food zones for imposing restriction on the movement of foodgrains from one zone to another in order to enforce stability in agricultural prices.

In 1965, the Agricultural Price Commission was set up which announced the minimum support prices and procurement prices in the successive years in order to guarantee minimum

prices to the producers and for building up buffer stocks to maintain the public distribution system.

NAFED is also an important agency which appoints state agencies for undertaking Price Support Scheme (PSS) operations. The losses, if any, incurred by central agencies on undertaking PSS operations are reimbursed up to 15 per cent by the Central Government. Apart from this, government also provides working capital to the central agencies for undertaking PSS operations.

In 1966, the government appointed another foodgrains Policy Committee which recommended the following matter in connection with the prices of agricultural commodities:

- i. To create a favourable price condition for increasing agriculture production, the government should announce the minimum support prices well in advance of the sowing season in Country
- ii. Procurement price should be higher than support price so that it can offer proper incentive to the producer and reasonable price to consumer.
- iii. To create a favourable climate for long-term investment, minimum support prices should be fairly stable.
- iv. Making adequate marketing arrangement for making purchases at minimum support prices.

Basic Facilities Needed For Agriculture Marketing through Agricultural Price Policy System :

- i) He should have proper facilities for storing his goods.
- ii) He should have holding capacity, in the sense, that he should be able to wait for times when he could get better prices for produce and dispose of his stocks immediately after the harvest when the prices are very low
- iii) He should have adequate and cheap transport facilities which would enable him to take his surplus produce to the mandi rather than dispose it of in the village itself to the village money-lender-cum-merchant at low prices.
- iv) He should have clear information regarding the market condition as well as the ruling prices; otherwise, he may be cheated. There should be organised and regulated markets where the farmers will be not cheated by the dalal and arhatiyas.
- v) The number of intermediaries should be as small as possible so that the middlemen profits are reduced. This increases the returns to the farmers.

Agriculture prices and consumer price is a common feature. But fluctuations in the prices of agricultural commodities have serious consequences on the economy of the country. As the sudden steep fall in the price of a particular crop, result in huge loss to the farmers producing that crop as their income declines. This will force the farmers not to cultivate the crop next year leading to a serious shortage in the supply of that food item and that may force the government to import that food crop from foreign countries. These will provide a minimum support price to the producers and arrange the supply of these agricultural produce to the consumers at fair prices. Thus while fixing the minimum support prices and procurement prices care must be taken to fix those prices at such level which will induce the farmers to produce more. Thus, the agricultural price policy can be designed as an “instrument of growth”.

Effects of Agricultural Price Policy on agriculture Production

- i. To Reduces Risk and Uncertainty in agriculture production and farmers income insure the producer through guaranteed minimum support price
- ii. To motive the desired outputs of different crops according to growthagriculture targets.
- iii. To induce an increase in aggregate agricultural output through large input use and adoption of high yielding seed, fertilizer and water responsive technology.
- iv. To induce farmers to part with a large proportion of foodgrains production as a marketed surplus.
- v. To protect the consumer against the excessive rise in prices, especially to protect the low income consumers in periods when supplies lag behind demand and market prices rise continuously”.

Evaluation of Agricultural Price Policy:

The agricultural price policy in India has succeeded in establishing certainty and confidence in respect of the prices of agricultural commodities through the fixation of minimum support prices by Agricultural Prices Commission (later on renamed as Commission for Agricultural Costs and Prices).

But due to the variations in the degree of enforcement of procurement in different years, some degree of uncertainty and instability in prices were experienced by the Indian farmers. Again raising the minimum support prices and procurement prices offered incentive to the producers to increase their production but these benefits were mostly restricted to large farmers. Moreover, the public distribution system in India is also subjected to various limitations such as its restricted operation in wheat and rice only, insufficient coverage of rural areas, inadequate coverage of the people lying below the poverty line and its too much expensiveness due to lack of targeting.

Moreover, the fixing of uniform purchase price for the country on the basis of cost of production of huge cost states by the Commission for Agricultural Costs and Prices has benefitted the developed states having low average cost of production such as Punjab, Haryana etc. Thus, the policy had a bias in favour of the rich states at the cost of consumers in general.

Features of Agricultural Price Policy in India:

(i) Setting up Institutions:

The Government of India has set up some institutions for the implementation of agricultural price policy in the country. Accordingly, the Agricultural Price Commission was set up in 1965 which announced the minimum support prices and procurement prices for the agricultural products.

In 1985, the name of this institution was changed into Agricultural Cost and Prices Commission. Moreover, the foodgrains Policy Committee was appointed by the Government in 1966 which also recommended various measures of price support.

(ii) Minimum Support Price:

The government fixes the minimum support prices of agricultural products like wheat, rice, maize, cotton, sugarcane, pulses etc., regularly for safeguarding the interest of farmers. The FCI also make their purchases of food grains at the procurement prices so as to maintain a rational price of foodgrains in the interest of farmers.

Accordingly, minimum support price of foodgrains fixed by the government increased from Rs 388.26 per quintal in 2003-04 to Rs 429.22 in 2007-08 and then to Rs 829.94 (at average) in 2012-13.

(iii) Protecting the Consumers:

In order to safeguard the interest of the consumers, the agricultural price policy has made provision for buffer stock of foodgrains for its distribution among the consumers through public distribution system.

(iv) Fixation of Maximum Prices:

In order to have a control over the prices of essential commodities the government usually determines the maximum price of agricultural products so as to protect the general people from exorbitant rise in prices.

Effects of Agricultural Price Policy:

(i) Incentive to Increase Production:

Agricultural price policy has been providing necessary incentive to the farmers for raising their agricultural output through modernisation of the sector. The minimum support price should be determined effectively by the government which will safeguard the interest of the farmers.

Accordingly, minimum support price of foodgrains fixed by the government increased from Rs 388.26 per quintal in 2003-04 to Rs 429.27 in 2007-08 and then to Rs 829.94 (at average) in 2012-13

(ii) Increase in the Level of Income of Farmers:

The agricultural price policy has provided necessary benefit to the farmers by providing necessary encouragement and incentives to raise their output and also by supporting its prices. All these have resulted in an increase in the level of income of farmers as well as their living standards.

(iii) Change in Cropping Pattern:

The agricultural price policy has resulted in a considerable change in cropping pattern of Indian agriculture. The production of wheat and rice has increased considerably through the adoption of modern techniques by getting necessary support from the Governments. But the production of pulses and oilseeds could not achieve any considerable change in the absence of such price support.

(iv) Benefit to Consumers:

The policy has also resulted in considerable benefit to the consumers by supplying the essential agricultural commodities at reasonable price regularly.

(v) Benefit to Industries:

The agricultural price policy has also benefitted the agro industries of the country, like sugar, cotton textile, vegetable oil etc. By stabilising the prices of agricultural commodities, the policy has made provision for adequate quantity of raw materials for the agro industries of the country at reasonable prices.

(vi) Price Stability:

The agricultural price policy has stabilised the prices of agricultural products to a large extent. It has become successful to contain the undue fluctuation of prices of agricultural products. This has created a favourable impact on both the consumers and producers of the country.

Suggestions for Rationalisation of Agricultural Price Policy:

Following are some of important suggestions which can be advanced for the rationalisation of agricultural price policy of the country:

(i) Establishment of Some More Agencies:

Apart from Food Corporation of India, some more agencies should be set up for ensuring rational prices of other agricultural products and also for procuring other agricultural products. In the meantime the government has already set up Cotton Corporation and Jute Corporation, which needs to be further strengthened.

Moreover, the government should set up a separate agency for providing necessary minimum price support to perishable commodities like potato and other vegetables, fruit, etc., considering its growing potential market both for internal consumption and exports. The operational efficiency of existing agencies like FCI should be improved.

(ii) Extension of the Price Policy:

The agricultural price policy should be extended to cover more commodities over and above the 15 commodities covered at present. The commodities like pulses, potato, onion and other important vegetables and fruits may also be covered.

(iii) Rationalisation of Price Fixation:

The prices of agricultural commodities should be fixed in the most rational manner so that it could cover the entire costs of production. While fixing the prices, the increasing cost of agricultural input should be taken into consideration.

(iv) Protection of Consumers:

The agricultural prices should be so determined that it can also protect the interest of the general consumers.

(v) Modernisation:

The agricultural price policy should be framed in such a manner so that it can induce the farmers to go for modernisation of their agricultural practices.

(vi) Improvement in Agricultural Marketing:

In order to ensure the success of the agricultural price policy, the improvement of the agricultural marketing system is very important. The farmers should be set free from the clutches of middlemen and all intermediaries.

(vii) Improvement of PDS:

The public distribution system should be improved so as to ensure a success in the operation of agricultural price policy. The operation of fair price shops should be streamlined and be made more efficient and transparent.

Motives (advantages) behind the announcement of Minimum Support Price (MSP):

To secure the interests of the farmers as also the need of self reliance, government has been announcing the minimum support price for 24 major crops. The main objectives of the MSP are:

1. To prevent fall in the price in the situation of over production.
2. To protect the interests of the farmers by ensuring them a minimum price for their crops in the situation of a price fall in the market.
3. To meet the domestic consumption requirement
4. To provide price stability in the agricultural product

5. To ensure reasonable relationship between prices of agricultural commodities and manufactured goods
6. To remove price difference between two regions or the whole country.
7. To increase the production and exports of agricultural produce.
To provide raw material to the different industries at reasonable prices in the whole country.

Conclusion:

The basic motive behind the Agriculture policy of Government of India is to save the interests of both farmers and consumers. The prices of the food grains should be decided very wisely so that neither farmers nor consumers get suffer. In order to implement the system, the Government introduced Food Zones, where eight zones were created for wheat and some for rice in South India. This scheme too did not give good results and consequently each state was declared a zone. The government took upon itself the responsibility of moving food-grains from the surplus to the deficit states but for no significant gains. It was in the context of acute food scarcity during the sixties and the failure of various schemes for food management that the GoI appointed the Food-grains Prices Committee in 1964 under LK Jha to look under the entire question of food management in India, and Jha Committee's major contribution was the creation of Food Corporation of India (FCI) and the Agricultural Prices Commission (APC) in 1965.

References:-

1. Indian Economy-Datta, Sundarm-S. Chand N. Dehli, 2008
2. Suicide of Farmers in Maharashtra-Report by Sirjit Mishra, IGIDR, Mumbai, Jan 2006.
3. Agrarian Crisis and Farmer Suicide, Edited by R.S. Deshpande, Saroj Arora, SAGE Publication, 2010.

Problem of Production oil Seed Crop in India –A Case Study Soybean Crop

Dr. Archana Antre

Shri Sai Nirman Art's,
Commerce and Science College Shirdi

Induction:

India is one of the largest producers of oil seeds in the world .three oilseeds; groundnut, soybean and mustard, together account for over 80 percent of aggregate cultivated oilseeds output .The oilseed complex in India is undergoing visible changes in the new environment of liberalized trade. Consumption patterns are changes, as consumers are beginning to accept oil other than those consumed traditionally mission and price support.

India is world leader in groundnut farming; with 5.4 million hectare of cultivated area with production 5.5 million tons (2009-10) Gujarat is the largest producer contribution about 37 per cent of the total of the groundnut production of India followed by Andhra Pradesh (21.62 per cents), Tamilnadu (15.53 per cents) and Maharashtra (4.93 per cents), Around 75 per cents of the crop is produced in kharif season (june-sept)and remaining 25 per cents in rabi season (November –March) .

In the recent past, soybean cultivation has increased manifold as compared to any other oilseed crop in India and stands next only to groundnut. Soybean production is mainly confined to Madhya Pradesh (59.03 per cents) Maharashtra (27.85 per cents), and Rajastan (8.17 per cents). The area under the crop steadily increased from 22.5 lakh hectares in 1989-90to 88.05 lakh hectares in 2007-08, in the same period production had also increased from 18.05 lakh tones to 94.73 lakh tones. As the country is in short supply of edible oil and about 50 per cents of our edible oil consumption is fulfilled by imports of different vegetable oils, there is a dire need to promotes the production of oilseed like groundnut and soybean .when such large quantity of edible oils are required to be imported, why its production has not increased in the country or state, is the question to be answer .Is it that, it is less profitable or complex marketing system or any other reasons? Hence, the present study was taken up with the following specific objectives.

Objectives:

1. To study production of soybean crop in India.
2. To study Problem of production the soybean crop in India

Research mythology :

The support of secondary data is majorly taken in the research paper .these data has been collected from various project reports, ICAR report etc.

Origin and Spreads :

The first domestication of soybean has been traced to the eastern half of north china in the eleventh century b.c.or perhaps a bit earlier. Soybean has been one of the five main plant foods of china along with rice, soybeans, wheat, barley and millet. According to early authors soybean production was localized in china until after the Chines-Japanese war of 1894-95 ,when the Japanese began to import soybean oil cake for use as fertilizer .shipments of soybeans were made to Europe about 1908 and the soybean attracted worldwide attention .Europeans had been aware of soybeans as early as 1772 .some soybean seed may have been sent china by missionaries as

early as 1740 and planted in France .The soybean was a recent introduction to India from China,Japan and south east Asia via the Naga hill and Manipur ,at the far eastern tip of India .production of soybean in India at the present time is restricted mainly to Madhya Pradesh Uttar Pradesh ,Maharashtra and Gujarat.

World soybean production 2018

Sr.no	Country	Million Metric Tones	%of Global production
1.	United States	125.179	34.01
2.	Brazil	120.500	32.78
3.	Argentina	55.500	15.10
4.	China	16.000	4.35
5.	India	11.000	2.99
6.	Paraguay	9.800	2.66
7.	Canada	7.500	2.04
8.	Mexico	0.340	0.09
9.	European Union	2.700	0.73
9.	Other	18.978	5.16
10.	Total	367.497	100

Sources:SOPA

Situation of Soybean production in India:

At present, India is deficit in production of edible oils. Large quantities of oilseeds are imported which results in precious foreign exchange. To overcome this problem, the government of India and all state government are making efforts in increasing the production of oilseeds in the country .In view of the present low level of production and availability of edible oils soybean, soybean most importance place in Indian Agriculture. It is rich in proteins fat minerals and vitamins .it contains 20 per cents oil and 30-45 per cents high quality proteins .the biological value of soybean .soybean is called the Miracle crop of the 20th Century.

Area, production and yield of soybean crop

(Area: 000 ha, production: 000 mt, productivity: kg/ha)

Sr.no.	Year	Area	Production	Productivity
1.	2011-12	10109.09	12213.51	1208
2.	2012-13	10840.73	14666.45	1353
3.	2013-14	11716.43	11860.84	1012
4.	2014-15	10910.83	10373.80	951
5.	2015-16	11604.54	8569.80	738
6.	2016-17*	11320.0	13159.0	1162.
7	2017-2018**	10560.0	11390.0	1078

*final estimates, **Second advance estimates

Source: Agricultural Statistics, Ministry of Agriculture Govt, of India

Problem in soybean production

As mentioned above soybean is a very sturdy .short duration and profitable crop .The major problem faced by cultivators lack of irrigation facilities for the crop .in fact most of the crop is grown under rain fed condition .in view of the growing demand for edible oils and

growing dependence on imports for satisfying domestic demand ,it is importance to increase production of oilseed .though soybean is the major oilseed of the state ,the current level of its production have to be sustained and increased. As there are limits to area expansion ,the production has to increase through yield increase .Lack of irrigation to this crop seems to be one of the main constraints in increasing its production .besides this factor, other economic ,technological ,agro-climatic and institutional factors are there which can boost the production in the favorable policy environment .

1. Absence of rain
2. Non –availability of suitable varieties
3. Poor crop germination
4. Lack of irrigation facilities
5. Incidence of diseases
6. Crops suffered pests
7. Weeds infestations
8. Poor quality of soils
9. Drought at critical stags of crop growth
10. High input cost
11. Shortage of fertilizer.
12. Shortage of Human labor.
13. High wage rate
14. Price Relented risk
15. Problem of timely availability of seed
16. Risk of crop failure
17. Low and fluctuating prices
18. Low and fluctuating prices
19. Oilseeds lees profitable compared with other crops
20. Lack of awareness of soybean crop



Conclusions :

Soybean is cash crop .soybean cultivation is indeed profitable .however, given the fact that the growth rates of production and productivity of soybean in India are declining, the profit ability of soybean cultivators needs to be maintained provision of irrigation and strong Extension machinery may lead increase of soybean production.

References:

1. Damodaram .T. and M.Hedge (2000) Oilseeds Situation :A Statistical Compendium - 2000 Indian Council of Agricultural Research Hyderabad
2. Jayanti kajale and Sangeeta shroff ,(2013) Problems and prospects of soybean cultivation in Maharashtra . Gokhale institute of politics and Economics.
3. Dr.V.G.Pokharkar ,(2011) Economics of Production and marketing of oilseed Crop in western Maharashtra .Project repots M.P.K.V.
4. Agricultural Research Data Book (2011) I.C.A.R. Report.
5. w.w.w.ikisan .com
6. SOPA

Agricultural Development in Maharashtra Problems and Prospects

Bagwan Juber Ejaj.

Agasti Arts, Commerce And Dadasaheb Rupawate

Science College, Akole.

Mobaile No. 9130237849

Email Id : juberejajbagwan@Gmail.Com

Pin Code : 422601

Abstract:

Maharashtra is one of the most industrialised and urbanised states In India. Paradoxically, however, it also enjoys the dubious distinction of a state having highest rural-urban disparity in standard of living of its population. The share of agriculture in the net state domestic product of Maharashtra declined steeply from 36% in 1961-62 to 18.7% in 1992-93. The comparable shares for Indian agriculture were 47% and 27%. Yet, in terms of the proportion of labour force engaged in agriculture which was 60% in 1991, Maharashtra's economy continues to be predominantly agrarian. Indeed, the share of State's rural labour force employed in agriculture (main workers only) was as high as 83 per cent even in 1991, nearly half of the agricultural workers being labourers. Thus, the crucial dependence of its rural labour force on agriculture is quite evident and is unlikely to diminish drastically in the near future. It is against this scenario, that importance of accelerated growth in Maharashtra's agriculture must be judged. Apart from the direct impact of agricultural growth on generation of rural employment and incomes its significant secondary linkages with the development of rural non-farm sectors are more crucial. Trade in agriculture's outputs and inputs and services required by it and processing of its products open up additional and more significant avenues for labour absorption. Maharashtra being an important producer of cotton, sugarcane, groundnut and a few horticultural crops, such secondary linkages of agriculture assume added importance to its rural economy, more so now, in the context of new liberalised trade environment for farm products. That is why, careful assessment of agriculture's past performance and based on it, future prospects of growth is needed.

Keywords: Area, Yield, Growth, Decomposition, Sustainable Agriculture, Agricultural Price Policy

Objectives:

- 1) To examine trends in and sources of growth in production of major crops and crop groups and changes in them over the two phases of the period under study both at the state and the district level.
- 2) To study the degree of and trends in instability in crop output, analyse the sources of instability and identify the factors associated with changes in degree of instability over the two phases of the study period.
- 3) To analyse the inter-district disparity in output growth and input concentration and further to examine inter-relationship between the output and input concentration for the two phases.

Introductions:

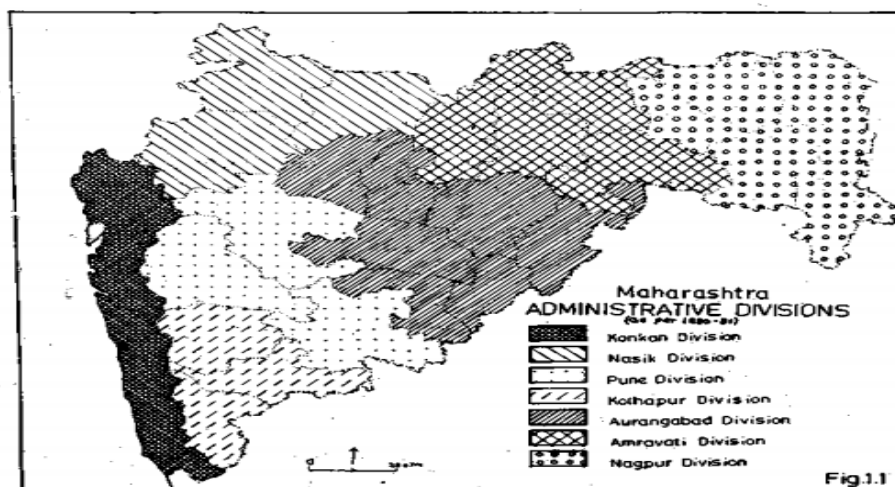
Maharashtra is one of the most industrialised and urbanised states In India. Paradoxically, however, it also enjoys the dubious distinction of a state having highest rural-urban disparity in

standard of living of its populations. The share of agriculture in the net state domestic product of Maharashtra declined steeply from 36% in 1961-62 to 18.7% in 1992-93. The comparable shares for Indian agriculture were 47% and 27%. Yet, in terms of the proportion of labour force engaged in agriculture which was 60% in 1991, Maharashtra's economy continues to be predominantly agrarian. Indeed, the share of State's rural labour force employed in agriculture (main workers only) was as high as 83 per cent even in 1991, nearly half of the agricultural workers being labourers. Thus, the crucial dependence of its rural labour force on agriculture is quite evident and is unlikely to diminish drastically in the near future. It is against this scenario, that importance of accelerated growth in Maharashtra's agriculture must be judged.

Apart from the direct impact of agricultural growth on generation of rural employment and incomes its significant secondary linkages with the development of rural non-farm sectors are more crucial. Trade in agriculture's outputs and inputs and services required by it and processing of its products open up additional and more significant avenues for labour absorption. Maharashtra being an important producer of cotton, sugarcane, groundnut and quite a few horticultural crops, such secondary linkages of agriculture assume added importance to its rural economy, more so now, in the context of new liberalised trade environment for farm products. That is why, careful assessment of agriculture's past performance and based on it, future prospects of growth is needed. The present study undertakes this exercise, focussing on the comparison between the early phase i.e., the years from 1967-68 to 1979-80, vis-a-vis the latter phase i.e., 1980-81 to 1992-93 of the post green revolution period.

Crops:

In all 24 major crops and four major crops categories have been included in the state level analysis. The crop categories are: (I) cereals (ii) pulses (iii) oilseeds and (IV) all crops. The district level analysis is, however, restricted to only four major crop categories and in addition, covers two crops, namely, sugarcane and cotton. The fourth category i.e. of 'all crops' covers 26 major crops, at the State level and only 25, i.e., excluding safflower, at the district level and represents gross value of output of crops covered at 80-81 prices." The series has been specially generated to examine aggregate growth performance of the crop sector at the state and district level, using the recent pricebase i.e., 1980-81 in place of the old base used in the official crop



productionindex.

Agriculture in the Economy of Maharashtra:

Share of agriculture in the net state domestic product of Maharashtra declined from 28 per cent in 1967-68 to 25% in 1980-81 and further down to 19% in 1990-91. Thus, not only the absolute magnitude of the share of agriculture in the state's economy in the recent year i.e., 19% was lower than that of Indian agriculture in the national income (i.e., 27%) but the rate of decline in the former during the eighties has been much faster visa-vis its own fall in the early phase i.e., 1967-80. It may be the result of either a distinct setback to agricultural growth in Maharashtra in the 1980's or a much greater acceleration in growth in the other sectors of its economy during the same period or the combined result of both. Agricultural sector's growth record in Maharashtra was highly impressive, during the early phase (i.e., 1967-80) of the GR period especially when viewed against its total stagnation prior to 1968 or for that matter through the entire decade of the 1960's. Pace of growth decelerated greatly and significantly in the latter period i.e., 1980-93. In contract, there was acceleration in growth in the manufacturing as also in the remaining sectors of the economy.

Sector wise Growth Rates in State Domestic Product

Sector	All years included				Drought years excluded		
	I: 1967 to 1980	II: 1980 to 1993	Extended period 1980 to 1995	Acceleration/Deceleration between I & II	1967 to 1980	1980 to 1993	Acceleration/Deceleration between I & II
(1)	(2)	(3)	(4)@	(5)	(6)	(7)	(8)
Agriculture	4.65* (0.79)	2.84* (0.96)	3.02*	Deceleration*	4.94* (0.92)	3.81* (0.77)	Deceleration*
Manufacturing	5.57* (0.96)	6.51* (0.97)	6.60*	Acceleration*	7.16* (0.99)	7.41* (0.94)*	Acceleration
Total SDP	4.52* (0.97)	5.70* (0.97)	5.88*	Acceleration*	5.54* (0.99)	6.54* (0.95)	Acceleration

Some Aspects of Operational Holdings in Maharashtra:

About 85% of agricultural holdings in Maharashtra were mainly crop production holdings while about 13 per cent were mainly livestock holding in 1981-82. The relative dominance of crop followed by livestock holdings continued till 1991-92 with only a marginal decline in the share of crop holdings to 83%. Poultry, plantation and other holdings together improved their share from 2% in 1981-82 to 4 per cent in 1991-92 (NSSO, Report No. 407, 1996). Average size of operational holdings declined continuously from 3.83 hectares in 1970-71 to 2.96 hectares and 2.25 hectares in 1981-82 and 1991-92 respectively. The decline has been more or less comparable to Indian agriculture in which case average size was 2.2 hectares, 1.67 hectares and 1.34 hectares. In the respective years. Though the share of marginal holdings was much lower in Maharashtra initially (i.e. at 24 per cent in 1970-71) than that in Indian agriculture (46%) growth in the number of marginal holdings has been much faster in Maharashtra compared to rise at the national level. Proportion of marginal holdings increased to 44 per cent in

1991-92 for Maharashtra from the initial proportion of 24% in 1970-71. The comparable change for Indian agriculture was from 46% in 1970-71 to 62 per cent in 1991-92.

Agricultural Growth Across Crops:

Trend And Sources:

Recent years, particularly the latter part of the eighties and the early nineties experienced significant upsurge in production and productivity growth in the Indian agriculture. It was the result of a much wider and accelerated diffusion of technology across the crops, the regions and the farmers covering the slow growth crops, the lagging regions and the farmers (i.e., the small and marginal farmers) too. However what was observed at the aggregate level was not uniformly true for all the states. There were a few outliers like Gujarat and Maharashtra which indicated significant deceleration in the pace of growth in their agricultural sectors. We would initially focus in section 2 on growth at the aggregate level in the state's crop sector using three macro levels series, namely (i) the net state domestic product in agriculture (SDPA), (ii) All crop production Index (ACPI) and (iii) gross value of output (GVO) in crop sector at 80-81 prices, generated in this study. This would be followed by an assessment of the growth performance of major crop groups and crops covering changes in the trends and sources of output growth in section 3. An elaborate scrutiny of trends in the crop wise output growth and sources of output growth would then be presented in section 4. The analysis at each level would examine comparative performance of the two phases of the GR period, namely, the early part or the first period covering the years from 1967-68 to 1979-80 and the latter part or the second period which includes the years from 1980-81 to 1992-93 for the state level analysis and up to 1990-91 for the district level analysis.

Agriculture the backbone of Indian economy and food security

India is principally an agricultural country. The agriculture sector accounts for about 18.0% of the GDP and employs 52% of the total workforce. There is a continuous steady decline in its contribution towards the GDP, and the agriculture sector is losing its shine and anchor position in Indian economy. The problems with which the Indian agricultural scenario is burdened in present times are many but this in no way undermines the importance of the sector, and the role it can play in the holistic and inclusive growth of the country. Agriculture is fundamental for sustenance of an economy as is food for a human being. It contributes significantly to export earnings and is an important source of raw materials for many industries. Its revival is being taken on priority, through various interventions at different levels, because of its potential in reducing poverty and food insecurity. The global experience of growth and poverty reduction shows that GDP growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside agriculture. Agriculture is and will continue to be the engine of the national growth and development.

Role of Agriculture in Growth:

- **Two reasons why agriculture is considered central to growth**
 - i) It has a big share of GDP, or
 - ii) It stimulates structural transformation|| the process whereby resources move from low productivity sectors to higher productivity sectors.
- **Two possibilities for structural transformation**

- i) It can be driven by productivity improvements within the agricultural sector.
- ii) It can be driven by productivity improvement outside the agriculture sector.

• **There is no agreement which underlying process drives the structural transformation in general**

Without higher agriculture growth, India's 10% economic growth target will be impossible to achieve. In addition, higher real incomes lead to higher food consumption, implying more pressure on demand. Historically, India's agriculture growth has lagged growth in the overall economy. In fact, long-term average growth in agriculture has been close to 2%. India's population has been growing at 1.4%. Consequently, India has just managed to maintain its per capita growth in food and non-food crop production. Given such a precarious demand-supply position, one year of drought leads to food prices shooting up. This is what we are seeing at this time of the year. With growth in per capita incomes, the supply constraints will hit India even harder in the future. The central government has limited scope to contribute to agricultural reforms through the budget as agriculture is largely a state subject. However, it can certainly take certain concrete steps. With the focus on long-term growth, the principal focus areas for increased outlay should be:

- i) Increased spending in agricultural research and farm extension practices to improve yield and production.
- ii) Better supply chain management in both procurement and distribution cycles through improvements in public distribution systems

Profiling the growth process Bosworth and Collins (2008) find:

- In both China and India, agriculture played a positive role but not a leading role in driving overall growth.
 - o In China, it was industry which contributed most to growth
 - o In India, the main growth driver was services.
- In both countries, the reallocation effect was an important source of growth.
 - o Gollin (2010) find similar evidence in a broader set of developing countries using the same technique
- The accounting framework which calculates the resource reallocation effect essentially as a residual.
 - o Much like Solow residual in the growth accounting, it has well known problem of interpretation.
- The decomposition exercise like this is good for understanding what happened but not why it happened

Decomposition of Output Growth of Individual Crop:

To measure the relative contribution of area and yield to the total output change for individual crop, Minhas (1964) component analysis model as given below was used. Sharma (1977) redeveloped the model and several research workers used this model and studied growth performance of crops on state level (see Narula and Vidysagar, 1973; Singh and Sissodia, 1989; Bastine and Palanisami, 1994; Bhatnagar and Nandal, 1994; Mundinamami et. al, 1995; Gupta and Saraswat, 1997; Singh and Ranjan, 1998; Singh and Ashokan, 2000 and Siju and Kombairaju, 2001).

$$\Delta P = A_o \Delta Y + Y_o \Delta A + \Delta A \Delta Y$$

Change in Production = Yield effect + Area effect + Interaction effect.

Thus, the total change in production can be decomposed into three effects viz. yield effect, area effect and the interaction effect due to change in yield and area.

Growth Rates of Area, Production and Productivity of Principal Crops:

The growth rates of area of principal crops in Maharashtra over three periods of time are presented in Table 1. Results of this analysis revealed a mixed trend in respect of growth in area under important crops in Maharashtra State. For overall period, except jowar, bajra and wheat all other crops recorded a growth in area. Growth rates of area of kharif jowar, paddy, wheat and sugarcane were higher for second period (1971-72 to 1980-81) than first (1961-62 to 1970-71) and third period (1981-82 to 1997-98). This is obviously due to high yielding varieties and increase in input use. Bajra recorded highest growth rate during first period. For, tur, gram, oilseeds and cotton growth rates for third period were higher. The cereal and oilseed crops recorded decline in area as evident from negative rate of growth, however, area under foodgrains was almost stagnant. A higher rate of increase in area for cereals during second period of study could be due to government policy of increasing production through expansion of area under cultivation.

Crop	Period I	Period II	Period III	Overall Period
Kharif Jowar	0.0491	2.619**	-2.594**	-0.092
Paddy	0.0894	1.451**	0.183	0.507**
Bajra	2.944**	-1.966	0.770	-0.0027
Rabi Jowar	-1.739**	1.036	-0.864	-0.144
Wheat	-1.209**	4.028*	-1.917	-0.512*
Total Cereals	-0.161	1.269*	0.677**	0.013
Tur	1.773**	2.019*	3.657**	1.973**
Gram	-2.158*	3.526*	4.416**	2.168**
Other Pulses	2.244**	6.914	0.157	0.305*
Total Pulses	1.412**	1.536	1.867**	1.054**
Total Foodgrains	0.163	1.319	-0.142	0.231**
Oilseeds	-1.331**	0.597	3.375**	1.292**
Cotton	0.420	-0.411	0.962**	0.178
Sugarcane	1.534	6.335**	4.179**	4.057**

Note: * Significant at 5 % level and ** Significant at 1% level.

Source : Compound growth rates of area of principal crops in Maharashtra State.

Decomposition of Output Growth for Individual Crop:

The pervious section presented an analysis of growth in area, production and productivity of selected crops in the state. An analysis of growth in area, production and productivity of these crops indicated the general pattern of growth and the direction of changes in area and productivity. But this does not evaluate the contribution of area and productivity to the production growth. For that, it is necessary to examine the sources of output growth. The growth in output of selected crops was therefore apportioned to the various sources by breaking the change in production into three effects i.e., area effect, yield effect and interaction effect.

Policies for Raising Agricultural growth:

There are three goals of agricultural development. These are: (a) achieve 4% growth in agriculture and raise incomes by increasing productivity (land, labour), diversification to high

value agriculture and rural non-farm by maintaining food security; (b) sharing growth (equity) by focusing on small and marginal farmers, lagging regions, women etc.; (c) third is to maintain sustainability of agriculture by focusing on environmental concerns. What are the policies needed to achieve the above goals? There are basically seven factors which need focused reforms in the short and medium terms. These are: (a) price policy; (b) subsidies and investments; (c) land issues; (d) irrigation and water management (e) research and extension; (f) credit; (g) domestic market reforms and diversification.

Price Policy:

The major underlying objective of the Indian governments price policy is to protect both producers and consumers. Currently, food security system and price policy basically consists of three instruments: procurement prices/minimum support prices, buffer stocks and public distribution system (PDS). One criticism of procurement policy is that it is limited to few crops and few states. Our field visits to different states reveal the following farmers' perceptions about agricultural prices. The cost of cultivation is increasing due to increase in input prices. Particularly agricultural wages have increased due to National Rural Employment Guarantee Scheme (NREGS) in several states. They want to resort to mechanization due to labour shortages in peak season. Farmers respond to prices as shown by increase in yields of wheat in Punjab and other states with significant increase in MSP. Farmers have to undergo distress sales due to lack of procurement in states like Bihar, parts of UP, M.P. and Orissa. If rice production is to be shifted to Eastern region, rural infrastructure including procurement centres has to be improved.

Subsidies and Investments in Agriculture:

One major reform needed in agriculture sector relates to reduction in subsidies and increase in investments. Agricultural subsidies are fiscally unsustainable and encourage misuse of resources, leading to environmentally malignant developments. There is trade-off between subsidies and investments. Public investment declined from 3.4% of agri.GDP in the early 1980s to 1.9% in 2001-03. At the same time subsidies increased from 2.9% to 7.4% of agri.GDP (GOI, 2007). Rise in public and private investment is crucial for enhancing agricultural growth. Fortunately, gross capital formation in agriculture has increased from 12% of agricultural GDP in 2004-05 to 14.2% of GDP in 2007-08 (Table 4). Public sector investment has increased significantly during this period. However, we need 16% agricultural GDP as investment in order to get 4% growth in agriculture.

Land Issues:

Some argue that small size of farm is responsible for low profitability of agriculture. Chinese and the experience of other East Asian countries show that it is not a constraint. On land market, the Report of the Steering Committee recommended the following. —Small farmers should be assisted to buy land through the provision of institutional credit, on a long term basis, at a low rate of interest and by reducing stamp duty.

Irrigation and Water Management:

Water is the leading input in agriculture. Development of irrigation and water management are crucial for raising levels of living in rural areas. Major areas of concern in irrigation are: decline in real investment, thin spread of investment, low recovery of costs, decline in water table, wastages and inefficiencies in water use and, non-involvement of users. Both investment and efficiency in use of water are needed. Major areas of reforms needed in

irrigation are: stepping up and prioritizing public investment, raising profitability of groundwater exploitation and augmenting ground water resources, rational pricing of irrigation water and electricity, involvement of user farmers in the management of irrigation systems and, making groundwater markets equitable (Rao, 2005). In a recent study, Shah et al (2009) indicate that the impact of the drought of 2009 is expected be less severe than the drought of 2002 due to ground water recharge in the last few years. Ground water can be exploited in a big way in Eastern region.

Credit:

According to the expert group on Financial Inclusion (GOI, 2008) only 27% of farmers have access to institutional credit. It is true that there have been some improvements in flow of farm credit in recent years . However, the Government has to be sensitive to the four distributional aspects of agricultural credit.

Conclusion

Pattern of growth over the two sub-periods under the study was significantly differential across the major crops and crop groups including that of the all crop output. Aggregate growth performance of the crop sector in Maharashtra was commendable as growth in the all crop output exceeded 5% during 1967-80 period. But it slipped down considerably in the post-1981 period (2.36%). Major source of decline in the growth rate of crop output was steep fall in the growth of aggregate crop-yield index.

The three key roles agriculture can play in promoting inclusive growth - stimulating economic growth, reducing poverty, and creating employment.

Ways in which agriculture can contribute to or pose a challenge to achieving more inclusive growth through any of these links vary - depends on country context, and within country over time.

References

1. Acharya, S.S. (1997), —Agricultural Price Policy and Development : Some Facts and Emerging Issues|| Indian Journal of Agricultural Economics, Vol.52, No.1
2. Alagh, Y.K. (2006), —Indian Economic Strategies After Doha|| in Radhakrishna, R, S.K. Rao, S.Mahendra Dev and K.Subbarao (2006 eds.), India in a Globalising World: Some Aspects of Macroeconomy, Agriculture and Poverty, Essays in honour of C.H. Hanumantha Rao, Academic Foundation
3. Bhalla, G.S. (1995), —Globalization and Agricultural Policy in India||, Indian Journal of Agricultural Economics, Vol.50, No.1
4. Bhalla, G.S. (2006), —Agricultural Growth and Regional Variations||, in R.Radhakrishna, S.K. Rao.
5. S.Mahendra Dev and K.Subbarao (eds.), India in a Globalising World: Some aspects of Macro economy, Agriculture and Poverty, Essays in honour of Prof. C.H. Hanumantha Rao, Academic Foundation, New Delhi.
6. Bhattacharya, B.B. (2003), —Trade Liberalization and Agricultural Price Policy in India Since Reforms||, Indian Journal of Agricultural Economics, Vol.58, No.3.
7. Acharya, T.K.T. (1973), Scope of Green Revolution in Maharashtra, State Bank of India-Monthly Review, 12(10), pp. 369-386.
8. Bastine, C.L. and K.P. Palanisami (1994), An Analysis of Growth Trends in Principal Crops in Kerala, Agricultural Situation in India, 48(12), pp. 885-891

Agriculture System: Conventional Verses Sustainable

Dr. Bejamee G. Lobo

Assistant Professor,
Department of Economics and Research Centre,
Prof. Ramkrishan More College, Akurdi, Pune-411044
Affiliated to Savitribai Phule Pune University, Pune-411007

Introduction

The term sustainable agriculture means an integrated system of plant and animal production practices, satisfy human food and fiber needs, enhance environmental quality and the natural resource base on which the agricultural economy depends. It makes the most efficient use of nonrenewable resources and on-farm resources and integrates, where appropriate, natural biological cycles enhance the quality of life for farmers and society as a whole over the long term. Over the past three decades, the concerns about conventional, technology-based, and energy-intensive agriculture are deepening, while the interest in sustainable agriculture is increasing rapidly.

Ecologically and environmentally, the continued use of chemical fertilizers has increased soil erosion and decline soil productivity. Increased resistance of weeds and insects to herbicides and insecticides, combined with the destruction of wildlife and beneficial insects by pesticides may trigger a new vicious cycle both economically and ecologically. At present and in foreseeable future, there are no substitutes that can replace these depleted resources. Therefore, it seems sensible to consider alternative approaches, like sustainable agriculture. Following are the negative effects of the conventional agriculture which is the root of the problem. The objective of the paper is to focus on the problems of conventional agricultural practices; strategies should be implemented for sustainable development in future.

Problems of Conventional Agricultural Practices

Conventional farming practices has the characteristics as rapid technological innovation; large capital investments in order to apply production and management technology; large-scale farms; single crops/row crops grown continuously over many seasons; uniform high-yield hybrid crops; extensive use of pesticides, fertilizers, and external energy inputs; high labor efficiency; and dependency on agribusiness. Because of which this system has following negative effects:

Decline in soil productivity

Decline in soil productivity can be due to wind and water erosion of exposed topsoil; soil compaction; loss of soil organic matter, water holding capacity, and biological activity; and sanitation of soils and irrigation water in irrigated farming areas. Over use of water many times increase the salt content of the land which decreases the productivity of the fertile land.

Use of Chemical Fertilizers

Ecologically and environmentally, the continued use of chemical fertilizers has increased soil erosion and decline soil productivity. As a result of the intensive use of chemicals in agriculture soil and water are more and more contaminated, human beings are faced with the dilemma of consuming unsafe food and drinking polluted water, or spending extra money to restore the damaged environment.

Water Pollutants and Water Scarcity

Agriculture is the largest single non-point source of water pollutants including sediments, salts, fertilizers (nitrates and phosphorus), pesticides, and manures. Pesticides from every chemical class have been detected in groundwater and are commonly found in groundwater beneath agricultural areas; they are widespread in the nation's surface waters. Reduced water quality impacts agricultural production, drinking water supplies, and fishery production.

Global Climate Change

Destruction of tropical forests and other native vegetation for agricultural production has a role in elevated levels of carbon dioxide and other greenhouse gases. Higher temperatures and an intensification of the hydrological cycle will bring both more water evaporation and more precipitation, which will be very unevenly distributed. Rainfall and cropping patterns will be altered and areas exposed to vector-borne plant and animal diseases will expand. The vulnerability of agriculture to severe meteorological events will increase

Health Hazards

Potential health hazards are tied to sub-therapeutic use of antibiotics in animal production, and pesticide and nitrate contamination of water and food. Farm workers are poisoned in fields, toxic residues are found on foods, and certain human and animal diseases have developed resistance to currently used antibiotics.

Other elements

Other environmental ills that have become resistant to one or more pesticides; stresses on pollinator and other beneficial species through pesticide use; loss of wetlands and wildlife habitat; and reduced genetic diversity due to reliance on genetic uniformity in most crops and livestock breeds.

Sustainable Agriculture Framework

The framework helps to define a sustainable agriculture for agric proper investment and production requirement of the country in short run as well as in long run. Knowledge based approach will help agriculture to developed sustainable approach as research and educational development help to indentify constraint in ecosystem as well as in environment. Agricultural resources should be managed to maintain mainstream ecosystem according to environmental prospective. Trends in Ecosystem health indicators (pH, soil organic matter, erosion, water quality, etc.) should monitored by the system for increase production. Knowledge sharing approach will educate the farmers regarding farming system with environmental management.

Fig. 1 Framework of Sustainable Agriculture

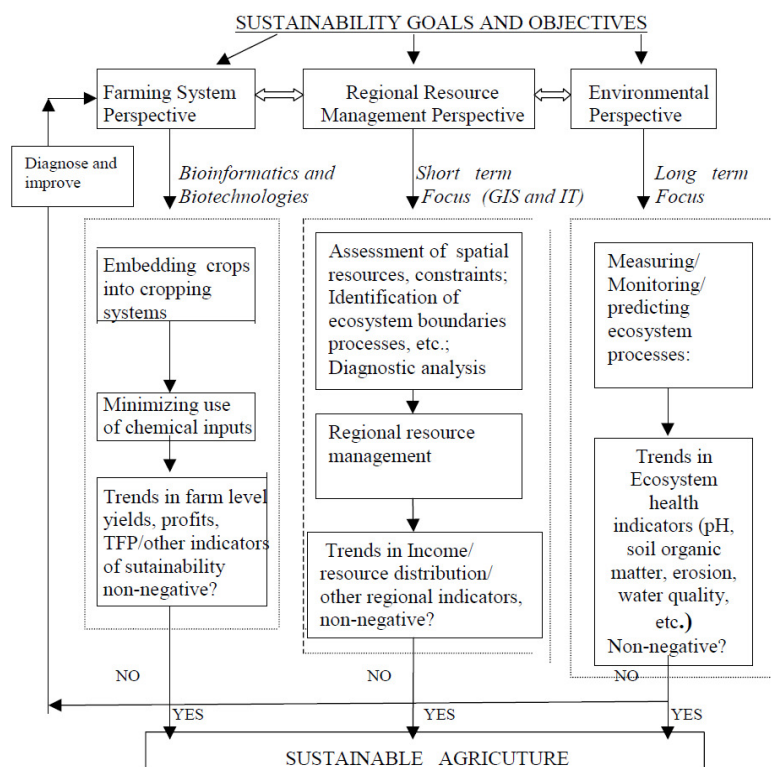


Fig 1 Analytical framework for sustainable agriculture (adopted from Barnett et al, 1995)

Solutions for Sustainable Agricultural System

Today's economic growth is impoverishing growth or unsustainable growth is a type of economic growth when the economy has grown in quantitative terms but the economy's reproductive capacity has declined because of environmental and natural resource degradation and other associated problems in the economy. Following strategies can be suggested to the long term sustainable development.

Crop Rotations & Pest Management Techniques

It mitigate weeds, disease, insect and other pest problems; provide alternative sources of soil nitrogen; reduce soil erosion; and reduce risk of water contamination by agricultural chemicals pest control strategies that are not harmful to natural systems, farmers, their neighbors, or consumers. Which reduce the need for pesticides by practices such as scouting, use of resistant cultivars, timing of planting, more soil and water conservation practices; and strategic use of animal and green manures use of natural or synthetic inputs in a way that poses no significant hazard to man, animals, or the environment.

Group based Technologies

More and more emphasis will need to be placed on the group based technologies. The areas where group action is called for include 1) Synchronization of sowing schedules of certain crop to avoid synchronization with pest reproduction cycle in certain crops where this is a major problem. 2) Watershed management of both arable and non-arable land belonging to individuals as well as villages, forest and revenue department.

Agro-forestry and Rainwater Harvesting

The shift from crop to trees (horticultural and/or timber) is taking place both for reducing the need for outside labour and also for reaping larger commercial gain by larger farmers. Agro-forestry for high and slow growth regions thus is an urgent priority. Run-off water can be collected over large areas (macro-catchments), from micro-catchments or in the form of floodwater, and is then stored in reservoirs, cisterns or in the soil.

Development of drought prone regions & Land Development

We should not try to create conditions by which supply of cheap labour for large irrigation projects is affected adversely. Need to maintain soil fertility and water purity, conservation and improvement the chemical, physical and biological qualities of the soil, recycling of natural resources and conserving energy. Sustainable agriculture produces diverse forms of high quality foods, fibers and medicines.

Integration of Human, Science & Environment

Need to use locally available renewable resources, appropriate and affordable technologies and minimizes the use of external and purchased inputs, thereby increasing local independence and self sufficiency and insuring a source of stable income for peasants, family and small farmers and rural communities. This allows more people to stay on the land, strengthens rural communities and integrates humans with their environment.

Equitable and Participatory vision of development

Sustainable agriculture is a model of social and economic organization based on an equitable and participatory vision of development which recognizes the environment and natural resources as the foundation of economic activity. Agriculture is sustainable when it is ecologically sound, economically viable, socially just, culturally appropriate and based on a holistic scientific approach.

Climate change activities

For facing the challenge of climate change following steps can be adopted 1) making climate information more relevant and usable; 2) developing appropriate tools for prioritising responses; 3) applying climate risk screening tools at the project level; 4) identifying and using appropriate entry points for climate information in project planning; 5) shifting emphasis to implementation, as opposed to developing new plans; and 6) encouraging meaningful co-ordination and the sharing of good practices.

The strategies suggested above require strong social and economic capabilities to be implemented effectively.

Conclusion

Many in the agricultural community have adopted the sense of urgency and direction pointed to by the sustainable agriculture concept. Lack of sharp definition has not lessened its authenticity. Sustainability has become an integral component of many government, commercial, and non-profit agriculture research efforts, and it is beginning to be woven into agricultural policy. Increasing numbers of farmers and ranchers have embarked on their own paths to sustainability, incorporating integrated and innovative approaches into their own enterprises. Development of a productive but sustainable agricultural system would require initiatives on many fronts. Transgenic technologies can contribute in a limited but significant way to the lofty goal of sustainable agriculture.

Reference

1. Barnett,V., Payner,R., and Steiner,R. (1995) *Agricultural Sustainability: Economic, Environmental and Statistical Considerations*, John Wiley and Sons, UK, 266 pp
2. Buttel, F.H. (1997) The politics and policies of sustainable agriculture: Some concluding remarks. *Soc. Natl. Resour.*10, 341–344.
3. Elzen, B.; Barbier, M.; Cerf, M.; Grin, J. (2012) Stimulating transitions towards sustainable farming systems. In *Farming Systems Research into the 21st Century: The New Dynamic*; Darnhofer, I., Gibbon, D., Dedieu, B., Eds.; Springer: Dordrecht, The Netherlands, pp. 431–455.
4. Lynam,J.K (1994). in *Opportunities, Use, and Transfer of Systems Research Methods in Agriculture in Developing Countries*, (eds: Goldsworthy, P. and Penning de Vries,F.W.T) Kluwer Academic Publishers, Dordrecht, Netherlands, pp 3-28.
5. National Research Council (1999) *Our Common Journey: a transition toward Sustainability*, National Academy of Sciences, USA, 1999, 363 pp.
6. Swaminathan, M. S., (1996) *Sustainable Agriculture: Towards an Evergreen Revolution*, Konark Publishers, Delhi.
7. Sharma, T., Carmichael, J., Klinkenberg, B. (2006) Integrated modeling for exploring sustainable agriculture futures, 38, 93–113.

Agrarian Distress in Indian Agriculture: Issues and Remedies

Dr. Bhausaheb Y. Deshmukh

(Associate Prof.&Head ,Dept.
of Economics Adv.M.N.Deshmukh Arts,
Science & Commerce College Rajur,
Tal-Akole, Dist- A-Nagar, 422604 (MS))
Email- dr.bydeshmukh@gmail.com
Mob -9423467238, 8766573007

Abstract :

This paper explores agrarian distress and indebtedness among farmers in India. The study is based on the state level data obtained from the 59th round survey of National Sample Survey Organization (NSSO) conducted in agricultural year 2002 to 2003. The study aims to analyze the pattern of indebtedness and causal factors behind it. The research concludes that the major factors that lead to indebtedness are the instability in food grain yield, level of yield / net returns and the cost of cultivation. Statistically, the rising cost of cultivation and diminishing net returns came out to be significant with the incidences of indebtedness. The states having high level of agricultural development are characterized by high incidence of indebtedness. Most of the indebted farmers belong to the small and marginal categories but the states where the degree of commercialization is high, the incidence of indebtedness is found high among the semi-medium and medium farmers. The present agricultural credit system is abysmal and the farmers are not getting the appropriate price for their crops. This situation demands urgent attention of the government, policy makers and planners to save the farmers from committing suicide and to re-boost the agricultural economy of the country.

Introduction

The distress of the farmers has been aggravated by the decline in earnings from agricultural operations, the cost of inputs, the commercialization of agriculture and the dependence on moneylenders. Since independence, India has travelled a long journey from an importer of food to a food self sufficient nation. During the process of economic transformation, the agriculture sector diminished in importance and the industrial sector played a dominant role. Transformation of resources from agriculture sector to rest of the economy has been seen as a positive and universal phenomenon by the modern thinkers of growth theory (Lewis, 1954; Syrquin, 1988). The impressive growth in recent years is largely a story of the urban-based service sector and to a lesser extent for industry whereas agriculture is lagging behind. Agriculture's contribution to the gross domestic produce in India has reduced from 56% in 1950 to 1951 to 23% in 2005 to 2006 whereas as per the 2001 census, 58% of the total work force and 73% of the rural workers are still dependent on agriculture. Within agriculture, the incremental value addition in output indicates a shift away from traditional crops to high value crops like fruits and vegetables that hardly have any presence under the gross cropped area. The growth of the cereals, propelled largely by rice and wheat through the green revolution, is also not very encouraging in the recent past (Mishra, 2006). Overall, income from cultivation is inadequate. It becomes difficult for the farmer to plan for all possible risks: vagaries of nature (primarily, inadequate or excessive water), market related uncertainties such as increasing input costs and output price shocks, unavailability of credit from institutional sources or excessive reliance on

informal sources with a greater interest burden and new technology among others. With the decline in extension service he has to rely on the input dealer leading to supplier-induced-demand. This has adverse implications on the livelihoods of the cultivators, most of whom are marginal and small farmers, as well as for agricultural laborers. This is indicative of a larger agrarian crisis. Agrarian distress and farmers suicide is a subject of widespread discussion in recent years. The whole crisis is the consequence of the fact that market forces operated at much larger scale during the phase of liberalization and globalization and thus reduced surpluses and increased costs leading to the agrarian distress (Bhalla, 2004).

The paper has been divided into two sections. In the first section, agrarian distress and challenges has been discussed while in the second part, policy implemented in recent years has been analyzed.

Agrarian distress In Indian Agriculture :-

Generally, it is found that the regions where agriculture is practiced traditionally are the ones where commercialization is low and instability in food grain yield is low; and has an economy of self sustaining agriculture. Whereas, the regions that are agriculturally developed that is, those where the level of yield and net returns and the cost of cultivation are high, are the ones having a greater degree of commercialization and the instability is high. Earlier, it was the belief that the instability in food grain yield and low level of yield were major factors leading to indebtedness, but now in the era of globalization indebtedness amidst farmers is more due to the rising cost of cultivation which is a consequence of the traditional agriculture getting transformed into commercial agriculture. Further, statistical relationship between commercialization and the instability in food grain yield, level of yield / net returns and the cost of cultivation was examined. show that wherever the yield levels and the returns are high are the regions experiencing high commercialization whereas any prominent relationship between the degree of commercialization and the instability in food grain yield. Therefore, commercialization is featured by high yield levels and high returns. Whereas, the traditional regions where the instability in food grain yield is high are not the ones practicing commercialization and tend to rely on low cost based subsistence cultivation.

The challenges Emerged –

The year 2017 was marked by several farmers' protests nationwide, with a few turning violent. Last month, in New Delhi, 184 farmer groups came together from Tamil Nadu, Maharashtra, Madhya Pradesh, Uttar Pradesh, Punjab and Telangana to take part in a 'protest walk.' The protest once again highlighted the plight of farmers and the extent of agrarian distress.

The agriculture sector is characterized by instability in incomes because of various types of risks involved in production, market and prices. The National Commission of Farmers (2006), chaired by M.S. Swami Nathan, had pointed out that something "very serious and terribly wrong is happening in the countryside." The agriculture growth rates have been unsteady in the recent past. While it was 1.5% in 2012-13, it rose to 5.6% in 2013-14. In 2014-15, the rate dipped to (-) 0.2%, while in 2015-16 it was 0.7%. The provisional estimate puts it at 4.9% in 2016-17. The trend reflects the distress in the agriculture sector.

The main reason for farm crises is the rising pressure of population on farming and land assets. Government data show the average farm size in India is small, at 1.15 hectare, and since

1970-71, there has been a steady declining trend in land holdings. The small and marginal land holdings (less than 2 hectares) account for 72% of land holdings, and this predominance of small operational holdings is a major limitation to reaping the benefits of economies of scale. Since small and marginal farmers have little marketable surplus, they are left with low bargaining power and no say over prices.

As farmers have been demanding “freedom from debt and remunerative price” through several platforms, they carry on fighting risks in production, weather and disaster, price, credit, market and those in policy.

While crop production is always at risk because of pests, diseases, shortage of inputs like seeds and irrigation, which could result in low productivity and declining yield, the lower than remunerative price in the absence of marketing infrastructure and profiteering by middlemen adds to the financial distress of farmers. Also, the predominance of informal sources of credit, mainly through moneylenders, and lack of capital for short term and long term loans have resulted in the absence of stable incomes and profits.

Further, it leads to defaults and indebtedness. Uncertain policies and regulations such as those of the Agricultural Produce Market Committee (APMC Act), besides low irrigation coverage, drought, flooding and unseasonal rains, are some other factors that hit farmers hard.

Farmers face price uncertainties due to fluctuations in demand and supply owing to bumper or poor crop production and speculation and hoarding by traders. The government's economic survey for 2016-17 points out that the price risks emanating from an inefficient APMC market are severe for farmers in India since they have very low resilience because of the perishable nature of produce, inability to hold it, hedge in surplus-shortage scenarios or insure against losses.

Lakhwinder Singh, an agriculture expert at Punjabi University, Patiala, who has been mapping rural Punjab for decades, points out that along with the slowdown in agricultural growth, the costs of farm inputs have increased faster than farm produce prices. The cost of capital too has increased manifold over the years.

This turned agriculture into an unprofitable occupation and compelled farmers, especially the small and marginal, to borrow costly money from informal sources of credit, which deepened the crises.

While the farming sector has its own set of risks, like any other economic activity, to increase and ensure stable flow of income to farmers it is vital to manage and reduce the risks by analyzing, categorizing and addressing them.

Important ways to mitigate against this that the Indian government could start investing in now.

Smart irrigation-

There is a significant need for an appropriate irrigation system considering rising water scarcity and depleting groundwater resources. Less than 50% of agriculture irrigated. States such as Karnataka, Maharashtra, Madhya Pradesh, Rajasthan, Chhattisgarh and Jharkhand are still extremely vulnerable to climate change due to poor irrigation. Smart irrigation systems such as drip, sprinklers and efficient water management should be made a priority and allocated across the country where needed.

Reduce post-harvest loss-

Post-harvest loss of major agricultural produce is estimated at US\$13 billion . About 16% of fruits and vegetables, valued at US\$6 billion were lost in the year 2015. Only 2.2% of fruits and vegetables, the most perishable of agricultural produces, are sorted and packed for consumption in India, increasing the chances of wastage as it gets sent abroad. In contrast, the US (65%) and China (23%) are far ahead of India in processing their own crops. Small landholders lose out the most from this. It is not economically viable for most of them to transport their produce for centralized large-scale processing – and they lack local processing and preservation technologies. This results in a lot of wastage. This is then compounded by inadequate transport infrastructure produce gets damaged on the journey because of bad roads, gets contaminated from repeated loading and unloaded, as well as lack of refrigeration.

Data driven supply-chain management-

India must start using data to continuously improve the efficiency of its agricultural supply chains. New technologies such as sensors, GPS and satellite imaging can help collect meaningful data to make India's agriculture system more resilient.

Farmer-centric crop insurance-

To compensate for the uncertainty caused by climate change, an effective crop insurance programme is required to protect farmers from bad yields. Many already pay into insurance programme but they provide little protection. The system needs overhauling so that small farmers are protected by low premium and long-term insurance cover, instead of being designed, as it seems to be at the moment, purely for the profit of insurance companies.

Evidence based research -

Agricultural research will be vital in increasing yields but also in increasing resilience to all the problems that could come with climate change – including extreme heat and precipitation, pests and crop disease. Research will be especially important for crops such as pulses and soybean, which are crucial crops and highly vulnerable to weather and climate change.

These measures will improve crop and water management practices. They are tailored to small farmers and to the fragmented, small-scale agricultural landscape to directly improve efficiency, boost productivity and minimize the environmental impact on farming.

India needs a five-point program that addresses agrarian challenges and brings together various ongoing programs under one umbrella:

Increasing incomes-

Agricultural transformation is very slow in India. Therefore, the process of generating higher income from agriculture is also slow. Production increase was the main objective than raising incomes. It is welcoming that Prime Minister Narendra Modi proposes doubling the income of farmers by 2022a paradigm shift. This will require several things: An aggressive push to improve technologies by strengthening the seed sector and knowledge dissemination system; agricultural diversification in favor of high value commodities and the development of value chains by linking production and marketing centers; and finally, developing mechanisms to ensure minimum support prices in the event of crash in farm harvest prices. Success will depend on how farmers are aggregated for production and marketing through promotion of contract farming, cluster farming, farmer producer organizations and self-help groups.

Generating employment opportunities –

The Situation Assessment of India reported that more than 40 percent of farmers would like to quit agriculture if alternative opportunities were available. Agriculture is becoming crowded and does not provide regular employment opportunities. In the absence of regular employment in rural areas, the rural population, especially youth, is migrating to urban areas to explore better opportunities and income. By 2020, people aged 15-34 will make up 34 percent of India's population; currently, more than 70 percent of India's youth lives in rural areas. Their energy and enthusiasm need to be tapped in ways that meet their aspirations and transform agriculture and rural economies. But agriculture per se will not be able absorb the growing number of youth in rural areas. Incentives should be provided in these areas: Aggregating raw and processed products (one example: LijjatPapad, which employs more than 43,000 women); self-employment in agro-processing, agro-advisory, agriculture and rural transport, etc.; private sector engagement in custom-hire services, secondary and tertiary processing; location-specific non-farm employment in micro, small and medium enterprises, linked with the large manufacturing sector; and engagement in government programs, schools, and agriculture extension.

Reducing risks in agriculture-

The risks farmers face have been increasing for years. Both production and price risks are creating ongoing agrarian distress. The incidences of droughts, floods, temperature fluctuations, and unseasonal rains and hailstorms are increasing and adversely affecting agricultural production. But even during normal years, farm harvest prices have fallen steeply, badly affecting farmer incomes. The prime minister's National Agricultural Insurance Scheme is now in place to cover some production losses. Though this scheme is good, the compensation is insufficient and does not cover the risk of falling prices. The government should consider launching a "Prime Minister's Climate Resilience Scheme" that covers both production and price risks. Such an approach could bundle promotion of climate-smart agriculture with value added weather advisory services and effective implementation of agricultural insurance, helping to ensure minimum support prices.

Developing agri-infrastructure –

Agri-infrastructure—including agricultural markets, cold storage, warehouses, and agro-processing—has not developed in corresponding speed with rising agricultural production. The pace of agri-infrastructure is far behind what it is needed to improve the overall agri-food system. In the past, more focus was given to the production of agricultural commodities. In the absence of adequate agri-infrastructure, the supply chains of agri-food commodities are in the hands of an unorganized, fragmented, and inefficient sector. A better- organized private sector is emerging slowly due to the lack of commercial viability to develop agri-infrastructure. The role of public-private partnerships (PPP) is immense in developing agri-infrastructure for high economic and social gains. The government should form a commission to develop modalities and proposals for public-private partnerships in the agri-infrastructure sector. Many lessons can be learned from PPP's excellent track record in the construction of national highways, the building and functioning of airports, the distribution of power, and other areas. These can be applied in developing rural agri-markets, cold storage, agro-processing, surface irrigation, and

agricultural extension, and other elements of agri-infrastructure. The central government should contribute to the efforts of individual states to develop such viable PPP projects.

Improving quality of rural life –

Rural India is still missing basic amenities (including sanitation, hygiene, drinking water, drainage, schooling, and health centers). Three years ago, the prime minister encouraged each member of parliament and the state assemblies to adopt one village and work to transform it into a model village. The main objective was to provide all basic facilities to improve the quality of life in rural areas. The late former President A. P. J. Abdul Kalam originated a similar concept, Provision of Urban Amenities to Rural Areas (PURA), with the aim of providing urban infrastructure and services in rural hubs to create economic opportunities. The scheme should be revived to improve the quality of life in rural areas. In addition, the several programs and schemes that exist to build social and economic infrastructure should be united for larger impact.

It is high time to revive India's agriculture sector and improve purchasing power at the bottom of the pyramid to accelerate overall economic growth. This can only be done by focusing on key areas and implementing programs under one umbrella.

Conclusion -

The forces of globalization have overtaken the traditional factors in deteriorating the conditions of distress among the farmers. The regions which have tried to respond to globalization through high commercialization have in turn faced the burden by turning the occupation into high cost based cultivation. This clearly implies that, if the farmers continue to respond to the demands of the market forces in this manner only then they may get indebted in future.

Indebtedness as a whole is not a major problem in India, but suicides of farmers due to indebtedness is a relatively new phenomenon. And therefore this phenomenon needs a serious attention because paying no heed to it means that tomorrow we may starve. The major reason for the suicides is the heavy indebtedness that the cultivators find themselves in today. This heavy indebtedness is not an overnight phenomenon that has occurred suddenly. It has its roots in the credit policy that has been followed over a number of years. The indebtedness itself results from a mismatch in the cost of production, the support price and the market price that the cultivators are receiving at the end of every cropping cycle. Heavy indebtedness is spreading across the landholding patterns. In that context, the small and the medium-sized cultivator is the most affected of the lot, though the large land holder in the rain-fed areas of the states, too, is coming under strain. In the context of availability of credit, private money lending remains the single largest source of credit to small and marginal farmers. This is so because the banking sector is fast moving out of the credit delivery mechanism (Tata Institute of Social Sciences, 2005).

The surge in farmers' suicides, which is symptomatic of a larger agrarian crisis, seems to be spreading. Without adequate safeguards, the farmer will require more and more credit that will lead him to a quagmire of indebtedness. Policy interventions should independently address all possible risks: income shortfalls, crop loss (weather, pests, theft, fire or spurious quality of seeds and other inputs), price shocks, increasing input costs and resultant indebtedness. Availability of affordable credit requires revitalization of the rural credit market. There is also a strong case for regulating and monitoring the functioning of noninstitutional sources of credit.

The functioning and lending procedure of the commercial banks and cooperatives should be improved. The cooperative societies/ entrepreneurs should be encouraged to provide loans to farmers for heavy machinery strictly on economic feasibility. The generation of non-farm employment opportunities, strengthening the dairy sector, implementing the crop insurance scheme, ensuring the suitable prices for the produce and government positive attitude towards the problems of farmers will go a long way in reducing the agrarian distress and indebtedness among farmers.

References:-

- 1) Suicides in Rural Area of Punjab: A Report. AFDR. Ludhiana Punjab India pp.6-10. Bhalla GS (2004).
- 2) Globalization and Indian Agriculture State of the Indian farmer: A Millennium Study. Academic Foundation in Association with Department of Agriculture in Cooperation with Ministry of Agriculture, Government of India. New Delhi. 27. Deshpande RS (2002).
- 3) Suicides by Farmers in Karnataka: Agrarian Distress and Possible Alleviatory steps. Eco. Pol. Wkly. 37(26):2601-2610. Ghuman RS (2001).
- 4) WTO and Indian Agriculture: Crisis and Challenges: A Case Study of Punjab. Man. Dev. 23(2):67-98. Gill A (2000).
- 5) Rural Credit Markets: Financial Sector Reforms and the Informal Lenders. Deep and Deep Publishers. New Delhi pp.96-100. Gill SS (2005).
- 6) Economic Distress and Farmers Suicides in Rural Punjab. J. Punjab Stud. 12(2):219-237. Government of India (2007). Report of the Expert Group on Agricultural Indebtedness. Banking Division. Ministry of Finance, New Delhi. India. pp.57-58. Lewis WA (1954).
- 7) Economic Development with Unlimited Supplies of Labor, Manchester School of Economic and Social Studies 22:139191. Mishra S (2006). Suicide of Farmers in Maharashtra. Report Submitted to the Govt. Maharashtra. Indira Gandhi Institute. Dev. Res. Mumbai pp.9-14. Reddy VR, Galab S (2006). Looking beyond the Debt Trap. Eco. Pol. Wkly. 41(19):1838-1840.
- 8) Sharma AB (2008). Increased indebtedness leads to farmer suicides. NCEUS. The Financial Express. New Delhi pp.1-3.
- 9) Shergill HS (1998). Rural Credit and Indebtedness in Punjab. Instt. Development & Communication. Chandigarh. India. Monograph Series-IV.
- 10) Singh R, Sangh TB (2008). Indian Agriculture: the crises of indebtedness. News from Dry net - A global Initiative Giving future to dry land. www.drynet.org pp.8-9.

Problems of Agricultural in Maharashtra

Dr. Pankaj.T.Nikam

Arts and Commerce College,
Soygaon Malegaon (Nashik)

Introduction:

Agriculture, the backbone of Indian economy, contributes to the overall economic growth of the country and determines the standard of life for more than 50% of the Indian population.

Agriculture contributes only about 14% to the overall GDP but its impact is felt in the manufacturing sector as well as the services sector as the rural population has become a significant consumer of goods and services in the last couple of decades.

In 2010, 15,963 farmers in India committed suicide, while total suicides were 134,599. In 2012, the state of Maharashtra, with 3,786 farmers' suicides, accounted for about a quarter of the all India's farmer suicides total (13,754). From 1995 to 2013, a total of 296,438 Indian farmers committed suicide.

Problems faced by the Agriculture Sector

Fragmented land holding

Nearly 80% of the 140 million farming families hold less than 2 acres of land. Large land holdings enable the farmer to implement modern agricultural techniques and boost productivity. Small land holdings restrict the farmer to use traditional methods of farming and limit productivity.

As land holdings are small, more people invariably work on the farms in the rural areas and coupled with the obsolete technology, farm incomes come down.

Irrigation problems

Most of the farming in India is monsoon dependent – if monsoons are good, the entire economy (and not just the agricultural sector) is upbeat and when the monsoon fails, everyone everywhere takes a hit to some extent. The problem here is of proper management of water or the lack of it.

Irrigation which consumes more than 80% of the total water use in the country needs a proper overhaul if the country has to improve agricultural output and boost the overall economy.

Seed problems

Most of the farmers – especially the poor and marginal ones – are dependent on seeds sold in the market. Moreover, the HYV seeds as well as the GM seeds which promise higher yields force the farmers to buy seeds for every crop. With spurious seeds hitting the market, the farmers' woes have exceeded all limits. Sometimes seeds do not give the stated/claimed yields and farmers run into economic troubles.

In many cases of GM and HYV seeds, farmers are forced to use high amounts of fertilisers and pesticides, provide large amounts of water (irrigation) and abide to all the other farming requirements that the companies mandate to get the proper yields. A proper regulation/legislation to hold seed companies accountable for false claims is the need of

the hour as companies use legal loopholes to push the blame on to the farmers in the case of failed crops.

Sustainability problems

Indian agricultural productivity is very less compared to world standards due to use of obsolete farming technology. Coupled with this, lack of understanding of the need for sustainability in the poor farming community has made things worse.

Water usage is also unplanned with some arid areas misusing the irrigation facilities provided by planting water intensive crops. In areas where irrigation in the form of rivers and canals is not sufficiently available, ground water resources are heavily exploited.

Sustainability in agriculture is of utmost importance as many problems faced by farmers are related to this. Excess fertiliser usage not only makes the plants dependent on artificial fertilisers but also erodes the land quality, polluted ground water and in case of a surface runoff, pollutes the nearby water bodies.

Similarly, planting crops which require more water like rice on the basis of irrigation facilities extended to areas which are water deficient uses up more water than required. Besides, the excessive evaporation cause salts to accumulate on the fields making them lose their fertility quickly. Lack of proper understanding of the need to grow crops sustainably will push farmers into a vicious circle – of debts, heavy use of fertilisers, water mismanagement, low productivity and thus more debts for the next cycle...

Over dependence on traditional crops like rice and wheat:

every crop requires certain climatic conditions to give the best yields. Though rice and wheat are produced in a large area in India, certain areas can readily switch to other crops to get better productivity. India is importing cooking oil from abroad though we have the necessary conditions to grow more oilseeds here.

Heavy dependence on traditional rice and wheat points to the lack of a proper national plan on agriculture. Excess stocks in a few crops lead to problems in the selling of the produce, storage and shortage of other essential farm output

Moreover, if the farm output is skewed towards crops like rice, irrigation and ground water facilities are misused by farmers, which lead to a host of other problems.

Supply channel bottlenecks and lack of market understanding :

Supply channel bottlenecks and lack of a proper marketing channel are serious problems for a farmer who is already burdened with a host of troubles. These are issues which need to be tackled at the regional, state and national levels.

Lack of a proper marketing channel forces the farmers to distress sale, makes them victims in the hands of greedy middlemen and ultimately restricts their income.

An improper marketing and storage channel also leads to storage problems in the years where productivity is good, leads to poor agricultural exports due to problems in maintaining quality and in many cases leads to gross wastage of valuable food grains and other farm output.

Food wastage running into thousands of crores of rupees every year is nothing short of a crime in a country where more than 25% is below poverty line and where millions go hungry day after day.

Lack of a national strategy in terms of agricultural production leads to production of some crops exceeding the requirement and to some crops well below the minimum limits. The problem is more acute in case of perishable agri output like vegetables and fruits where estimates of wastage are around 40%.

India produces over of food grains per year, which is more than enough to feed all its citizens for a long time. Yet, we see so much of unwanted food wastage, rising food price inflation and millions of hungry people.

This has to be stopped.

Government handling of the issue :

MSP, overall agricultural strategy of the country, PDS, storage/granaries, lack of export market creation. India lacks the required number of storage facilities (granaries, warehouses, cold storage etc) which negates the advantage of having a bumper crop in years of good monsoon.

Exports in agricultural sector are also not very encouraging with a share of just 10% of the total exports, for a country where more than 50% of population is dependent on agriculture.

The Minimum Support Prices (MSP) offered by the Government is a double edged sword – MSPs protect farmers from being exploited by middlemen but during times of excess crop, Government runs the risk of an unnecessary fiscal deficit by buying the excess produce. Lack of proper storage facilities and lack of a proper international market linkage leads to lower exports and in many cases leads to huge amount of wastage.

Similr Problems In This Area:

1. Small or Marginal Land Holding Size
2. Number of operational area more
3. Lack Irrigation facilities & Dependency on Monsoon
4. Low Productivity
5. Low Profitability
6. Subsistent in Character in Majority
7. Seed Replacement Rate
8. Traditional Bound
9. Lack of Diversification
10. Lack of Mechanisation
11. Regional variation
12. Farmers Education
13. Transportation & other infrastructure
14. Contribution in GDP Low but High percentage of employment rate
15. Lack of Marketing and Storage Facilities
16. Sustainability in Agriculture
17. Providing Loan in Wrong Way
18. Agriculture is an unorganised activity there
19. Most farmers are small and economically unfeasible
20. Middlemen and exploitation of farmers
21. Government programmes does not reach the farmers
22. High indebtedness and exorbitant interest rates

23. Real estate mafia

24. Climate change

The increase in global temperature with increased concentrations of anthropogenic greenhouse gases is negligible so also the impact of this on sea level rise, ice melts, etc are also negligible. This affects the crops.

Agriculture, the main sector that provides livelihood to more than half the population of this country, is witnessing a curious change today. While our national dream remains to make agriculture the priority sector, labour shortage is increasing by the year. Even as we have recognised that rural to urban migration could lead to undesirable consequences, particularly in the remote pockets of the country, we have not been able to stop or reduce the phenomenon.

References

- 1) Ruddar Dutta, KPM Sundaram,(2016): Indian Economy, Published by S Chand & Co. Ltd, New Delhi.
- 2) Singh G.B. (1979): Transformation of Agriculture, Vishal Publication, Kurukshtra.
- 3) Datye, V.S. and Dhoiade Amit (1999), Agriculture in Maharashtra, editors. Jaymala Diddee, S.R. Jog, V.S. Kale, V.S. Dalve, Rawat Publications, Jaipur and NewDelhi.
- 4) T.C. Sharma (1999), Technological change in Indian Agriculture.



Agriculture Market in India

Dr. Patil V. H.

Department of Economics
C.T. Bora, College Shirur, (Ghodnadi) Shirur
Tal-Shirur, Dist- Pune

Introduction:

The term agricultural marketing is composed of two words- agriculture and marketing. Agriculture, in the broadest sense, means activities aimed at the use of natural resources for human welfare, i.e., it includes all the primary activities of production. But, generally, it is used to mean growing and/ or raising crops and livestock. Marketing encompasses a series of activities involved in moving the goods from the point of production to the point of consumption it includes all activities involved in the creation of time, place, form and possession utility.

Definitions:

Agriculture marketing covers the various functions like planning, producing, growing, harvesting, grading, packing, transport, storage, Argo & food processing, advertising and sales, grading etc.

Agricultural Marketing in India:

The existing systems of agricultural marketing in India are as briefly described here.

Sale to moneylenders and traders:

A considerable part of the total produce is sold by the farmers to the village traders and moneylenders. According to an estimate 85 % of wheat, 75 % of oil seeds in U. P., 90% of jute in West Bengal and 60% of wheat, 70% of oil seeds and 35% of cotton in Punjab are sold by the farmers in the villages themselves. Often the money lenders act as a commission agent of the wholesale trader.

Hats and shanties:

Hats are village markets often held once or twice a week, while shanties are also village markets held at longer intervals or on special occasions. The agents of the wholesale merchants, operating in different mandis also visit these markets. The area covered by a "hat" usually varies from 5 to 16 miles. Most of "has" are very poorly equipped, are uncovered and lack storage, drainage, and other facilities. It is important to observe that only small and marginal farmers sell their produce in such markets. The big farmers with large surplus go to the larger wholesale markets.

Co-operative marketing:

To improve the efficiency of the agricultural marketing and to save farmers from the exploitation and malpractices of middlemen, emphasis has been laid on the development of co-operative marketing societies. Such societies are formed by farmers to take advantage of collective bargaining. A marketing society collects surplus from its members and sell it in the mandi collectively. This improves the bargaining power of the members and they are able to obtain a better price for the produce. In addition to the sale of produce, these societies also serve the members in number of other ways.

Mandies or wholesale markets:

One wholesale market often serves a number of villages and is generally located in a city. In such mandies, business is carried on by arhatiyas. The farmers sell their produce to these arhatiyas with the help of brokers, who are generally the agents of arhatiyas.

Challenges and Problems of Indian Agriculture:

Heavy Pressure of Population:

The Indian agriculture is characterised by heavy pressure of population. About 70 percent of the total population of the country is directly or indirectly dependent on agriculture. The world average of per head availability of agricultural land is about 4.5 hectares. The fast growth of population industrialization and urbanization are putting enormous pressure on arable land.

Rain-fed Agriculture:

In the greater parts (over 56%) of the country, agriculture is largely dependent on rainfall, especially the summer monsoon. Unfortunately, the behaviour of summer monsoon is highly erratic. Consequently, the variability of rainfall is high which affects the agricultural return adversely. Only about 55 percent of the total cropped area is under irrigation in which the farmers are more confident about their agricultural returns even at the failure of monsoon.

Predominance of Food Grains:

In both the Kharif (summer) and the rabi (winter) seasons, grain crops occupy the greater proportion of the cropped area. In fact, rice, maize, millets, bajara, ragi, and pulses are the dominant crops in the kharif season, and wheat, gram and barley occupy over three-fourth of the total cropped area in the rabi season.

Indian Agriculture is Labour Intensive:

In India, agriculture is a labour based enterprise in which most of the agricultural operations, lie ploughing, levelling, sowing, weeding, spraying, sprinkling, harvesting, and threshing are carried on mainly by human hands.

Depletion of Fresh Ground Water:

The second major negative consequence of green revolution is depletion of fresh ground water. You would remember that areas where green revolution was successful, it was due to the use of chemical fertilizers and irrigation. Most of irrigation in dry areas of Punjab, Haryana and Western Uttar Pradesh was carried out by excessive use of ground water. Today fresh ground water situation in these states is alarming. In the coming few years if this type of farming practice continues, these states are going to face water famine.

Low Productivity:

One of the main problems of Indian agriculture is its low productivity. In comparison to the other agricultural countries, the Indian agricultural yields are among the lowest in the world. The main cause of low yield per hectare is the low fertility of soil and less care to replenish it through green-manure, fertilisers, fallowing, and scientific rotation of crops

Soil Erosion and Soil Degradation :

Soil erosion is a universal phenomenon. It is however, significantly high in the areas of heavy rainfall with undulating topography and in the areas of scanty rainfall (deserts and semi-desert areas). The indiscriminate felling of trees, cattle grazing, unscientific land use practices have greatly accelerated the rate of soil erosion in the different parts of the country.

Lack of Marketing and Storage Facilities:

Lack of marketing and storage facilities and the role of brokers deprive the farmers to fetch remunerative prices for their agricultural products. Except a few states like Punjab, Haryana, Maharashtra, Gujarat and Andhra Pradesh, marketing and storage facilities are inadequate.

Opportunities of Agricultural Marketing In India:

- Agricultural marketing
- Agricultural Marketing support
- Agricultural marketing development
- National Institute of agricultural marketing
- Agricultural advisory services and the market
- New Guyana marketing corporation
- Market infrastructure
- Marketing training
- Market information
- Recent Developments

Conclusion:

A good marketing system is one, where the farmer is assured of a fair price for his produce and this can happen only when the following conditions are obtained. The number of intermediaries between the farmer and the consumer should be small; the farmer has proper storing facilities so that he is not compelled to indulge in distress sales, efficient transport facilities are available; the malpractices of middlemen are regulated. Farmers are freed from the clutches of village moneylenders and Regular market information is provided to the farmer. For the farming community to benefit from the new global market access opportunities.

There is a need to expand all the services that will develop agricultural marketing, relating to marketing system improvement, strengthening of marketing infrastructure, investment needs, possible sources of funds including that from the private sector, improvement in marketing information system using ICT, human resource development in agricultural marketing, and measures needed for promotion of exports.

References:

1. Agrawal A. N. – Problems of Developments and Planning.
2. Ruder Datta and Sundram -Indian Economy
3. Chatterjee B. K. – Marketing Management
4. Adrian Palmer – Introduction to Marketing
5. Report of Agricultural Marketing Committee
6. www.google.com
7. <http://en.wikipedia.org>

Crop Insurance Scheme in Maharashtra - A review

Dr. V. S. Joshi

Vice Principal,

Head and Coordinator,

Associate Professor,

Department of Commerce and Research Centre

Shri Shiv Chhatrapati College, Junnar

Email: vsjoshi2010@gmail.com

Introduction

Agriculture in India is highly susceptible to risk like droughts and floods. It is necessary to protect the farmers from natural calamities and ensure that their creditability for the next session. For this purpose government introduced Crop Insurance Scheme. Crop Insurance is an arrangement aimed at mitigating the financial losses suffered by the farmers due to damage and destruction of their crops resulting from various production risks. Crop Insurance Coverage is compulsory for farmers taking crop loans from rural financial institutions for cultivation of crops i.e. loaner farmers. Non loaner farmers can also insure their crops under the crop insurance scheme Central Government started comprehensive crop insurance scheme in 1985. Central Government established Central Crop Insurance Fund and Crop Insurance Indemnity bears Central Government and State Government in proportion of 2:1 respectively. The scheme covers all foods; oil seeds and annual commercial or horticulture crops for which historical yield data is available and crop cutting experiments are planned for the current year. State Government issues notification containing names of crop, areas eligible for insurance, rates of premium etc. at the beginning of each cropping season. Sum insured is at least equal to loan amount which can be increased to 150% of the value of average yield at the option of the farmers. Premium rates for food crops and oil seeds ranges from 2% to 1%. Subsidy in premium is available to small and marginal farmers.

The Crop Insurance is a contract between farmer and insurer through protection is given against loss of crop due to risks like drought, hail wind rainfall, pests, wild life, etc. In India there are many climates and variety of soils having a scope of diversity of agriculture. Climate plays an important role in agriculture occupation and the agricultural operations like sowing, transplanting, irrigation, application of fertilizers and pesticides are related with climatic conditions. The major risk to the crops during the growing periods are drought, flood untimely and scanty of rainfall or excessive rainfall, cyclone, cold waves, frost and variations in temperature, pest, plant deceases, pest and weeds. Indian economy is predominantly agricultural and 80% of our industries are dependent on agriculture. Under such circumstances protection to the agriculture and agriculturist is needed.

For the first time in India the comprehensive scheme of Crop Insurance was introduced by Government of India in 1985-86. For the administrative purpose, for payment of insurance charges and insurance claim in respect of crop Insurance a Central Insurance fund and Crop Insurance fund (State Government fund) were established. The General Insurance Corporation of India has been entrusted the task of administration of the scheme. Presently NABARD through

State Co-operative Bank, Regional Rural Banks and other agencies involved in financing sector are looking after the implementing of Crop Insurance Scheme.

The risks which are covered under crop insurance are as follows-

1. Climate Risks
2. Plant diseases
3. Pests
4. Fire
5. Wild animals
6. Market
7. Loss of Quality
8. Price Fluctuation

Objectives of the study

The objectives of the meet were as follows:

1. To study crop insurance scheme in Maharashtra.
2. To study the problems faced by peasants in crop insurance.
3. To study the problems and offer solution.
4. To make them aware of crop insurance.

Data Base and Methodology

The present study based on primary and secondary data. Primary data was collected through arranged peasant meet in from various sources. Magazines, periodicals, newspapers, Journals, books, Published and unpublished reports, Internet and websites were also referred for collecting relevant information.

Working definitions

A **crop** is a plant or animal product that can be grown and harvested extensively for profit or subsistence. Crop may refer either to the harvested parts or to the harvest in a more refined state. Most crops are cultivated in agriculture or aquaculture. A crop is usually expanded to include macroscopic fungus, or alga.¹

Problems of the Peasants

1. Form No. 7/12 on which the yields were mentioned cannot be issued within stipulated time.
2. The seven years average threshold yield is not issued before the harvest season.
3. The Crop yield deadline must be eliminated for drought prone and famine prone area.
4. Individual yield income cannot be assessed properly.
5. The peasants are ignorant of various crop insurance scheme and its provisions.
6. The dead line for paying premium of crop insurance must be declared earlier to avoided last minute rush at DCC Bank.
7. At present incidence of cutting and robbery of grown crops is on the increase.
8. The cost of cultivation has increased but peasants cannot get proper market rate.
9. The peasants who have insured crops must get the benefit if their individual crops are destroyed.
10. If floods and famines occur the revenue committee organizes random harvesting crops available at Taluka level which decides the production of that year and their after

insurance amount is given. This is the basic cause of unavailability of crop insurance amount to the peasants that is why peasants are unable to get proper compensation.

Remedies

1. The actual compensation must be made on actual loss of production and irregular climatic condition.
2. The procedure of issuing crop insurance must be made easy.
3. Compensation must also be paid for defoliation, failing of electricity or Power cut, sudden loss etc.
4. When sudden changes in climatic conditions take place investigation report must be given within stipulated period.
5. The crop registered form no.7/12 must be issued immediately.
6. Seven years threshold yield provision must be declared by Government before harvest season and it must be communicated to peasants.
7. The peasants must be given understanding about their individual crop loss is also compensated by government.
8. Prime Ministers Crop insurance committee looks after the peasant's crop insurance scheme at district and taluka level. The committee must be incorporated by *Gramsevak*, *Sarpanch*, Progressive Farmer and Arid land farmers.
9. Cashless crop insurance premium transition must be availed to the peasants.
10. There must be coordination between Agriculture officer and *Gramsevak*.

Conclusion

Crop Insurance is growing concept because it create awareness among farmers due to the various reasons. Farmers are interested to taking crop insurance but it is seen that there is lot of problems in Indian cropping pattern and crop insurance taking procedure. Presents meet is one of the effective remedies suggested by researcher in this study. Maharashtra Agriculture department have to run collaborative activity with other interested institutions. Now days government has increase their issuing simple procedure for crop insurance policy it helps to farmers take policy on time. With the help of crop insurance, agriculture sector definitely help to the grow Maharashtra state economy.

References

1. <https://en.wikipedia.org/wiki/Crop>
2. Prof. Dr. J.C. Joshi & Prof. K. C. Joshi (2010) Insurance, Phadake Publication.

Economic Growth and Agriculture Sector

Dr. Prakash Ratanlal Rodiya

Asst. Prof. Dept of Commerce,
Rajarshi Shahu Mahavidyalaya, (Autonomous) Latur,
prakashrodiya123@gmail.com,
Mobile-9403442432

Abstract

Farming Sector is the foundation of the rural Indian economy around which socio-economic privileges and deprivations rotate and any change in its arrangement is likely to have a corresponding collision on the existing pattern of communal equity. Sustainable Farming production depends on the sensible use of natural assets in a acceptable skill management under the prevailing socio-economic infrastructure. Various research studies and rule papers highlight that the Indian Farming division faces resource constraints, transportation constraints, institutional constraints, technology constraints, and strategy induced limitations. To achieve sustainable farming progress, it is essential to combine ordinary resources, capital resources, institutional resources, and human possessions Information Technology (IT) plays an important role in the rapid economic growth and social transformation in developing countries. To reduce the risks of marginalization and vulnerability, this paper suggests development of a comprehensive Farming Resources Information Systems using Geomatic Technology in districts with public funding, facilitate sustainable farming increase, and also suggest the need for development of metadata and request of Open GIS model for optimal utilization of farming resources in India.

Key Words: GIS, Information Technology, Farming segment.

Introduction

The existence or lack of favorable natural resources can make easy or retard the method of economic increase. Professor W.A. Lewis writes : "Natural resources establish the course of development and constitute the challenge which may not be accepted by the being mind". Developing countries, embarking on programmes of economic expansion, "usually have to begin with and concentrate on the growth of locally available natural resources as an initial condition for lifting local levels of living and purchase power, for obtaining overseas exchange with which to purchase capital equipment, and for setting in motion the development procedure" With the basic thrust on higher growth in food grain manufacture and other farming merchandise, increase in productivity and well-organized use of resources in agriculture has received special emphasize all through the process of the growth, since independence. Sustainable farming manufacture depends on the judicious use of usual resources. Food and Agriculture Organization (FAO) has formulated the following definition for sustainable growth in the context of agriculture, forestry and fisheries.

Economic Reforms Process

Since July, 1991 the kingdom has taken a series of events to structure the economy and improve the balance of payments point. The New Economic Policy (NEP-1991) introduced changes in the areas of traffic policies, economic & financial policies, fiscal & budgetary policies, and pricing & institutional reforms. The most important features of NEP-1991 are (i)

liberalization (internal and external), (ii) extending privatization, (iii) redirect scarce Public Sector Resources to Areas where the private sector is unlikely to enter, (iv) globalization of economy, and (v) market friendly state. Research reports disclose that this macro-economic adjustment programme is remarkable for its relatively painless transition compare with similar programmes somewhere else and a large part of the credit for merger of these shocks is unpaid to the steady increase in farming production. The GATT conformity signed in 1995 will primarily change the comprehensive trade picture in undeveloped sector.

Impact of Economic Reforms Process on Indian Farming Sector

Farming segment is the mainstay of the pastoral Indian economy around which socio-economic privileges and deprivations revolve, and any change in its structure is likely to have a corresponding impact on the obtainable pattern of social equality. No strategy of financial improvement can succeed devoid of sustained and broad based farming growth, which is critical for

- raise living standards,
- alleviate poverty,
- assuring food security,
- generating buoyant market for expansion of industry and services, and
- making substantial payment to the national financial growth.

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

Significance of Agriculture farming plays a crucial role in the life of an financial system. It is the backbone of our economic system. Agriculture not only provides food and raw material but also employment opportunities to a very large proportion of populace. The following facts clearly highlight the importance of farming in this nation.

Source of living:

In India the main profession of our working population is agriculture. About 70 per cent of our population is directly engaged in agriculture. In advanced countries, this proportion is very small being 5 per cent in U.K., 4 per cent in USA., 16 per cent in Australia, 14 per cent in France, 21 per cent in Japan and 32 per cent in USSR. This high ratio in agriculture is due to the fact that the non-agricultural actions have not been developed to attract the rapidly growing population.

part to National Income:

farming is the leader source of our national income. According to National Income Committee and C.S.O., in 1960-61, 52 per cent of national revenue was contributed by agriculture and allied occupation. In 1976-77, this sector alone contributed 42.2 per cent while in 1981-82, its input was to the tune of 41.8 per cent. In 2001-02, it contribute around 32.4 per cent of national income. This was further abridged to 28 per cent in 1999-2000.

provide of Food and Fodder:

Agriculture sector also provide fodder for farm animals (35.33 crores). Import of food grains has been very small in recent years, rather export avenue are being look for.

significance in International Trade:

It is the undeveloped sector that feeds country's trade. Agricultural products like tea, sugar, rice, tobacco, spices etc. comprise the main items of exports of India. If the expansion

process of agriculture is smooth, export increase and import are reduced significantly. Thus, it helps to reduce the adverse balance of payments and save our foreign substitute. This amount can be well utilized to import other necessary inputs, raw-material, equipment and other infrastructure which is or else useful for the promotion of economic growth of the nation.

profitable Surplus:

The growth of agricultural sector leads to profitable surplus. As country develops more and more people are to be engaged in mining, developed and other non-agricultural sector. All these people depend upon the food production which they can meet from the saleable surplus. As farming development takes place, output increases and marketable surplus expand. This can be sold to other countries. Here, it is worth mentioning that the expansion of Japan and other countries were made possible by the surplus of agriculture. There is no cause why this could not be done in our possess case.

supply of Raw Material:

farming has been the source of raw resources to the leading industries like cotton and jute textiles, sugar, tobacco, edible and non-edible oils etc. All these depend straight on farming. separately from this, many others like dispensation of fruits and vegetables, dal milling, rice husking, gur making also depend on farming

Farming planning and development

India is a vast motherland with a variety of landforms, climate, geology, physiography, and vegetation India is endowed with regional diversities for its uneven “economic and farming” development, on account of (i) Agro-climatic environment (ii) Agro-ecological regions (20) and 60 sub-regions, (iii) Agro-Edephic regions, (iv) Terrain mapping sub-units, (v) Natural resources endowments (geology, geomorphology, soil, ground water, surface water, & infrastructure), (vi) Human resources (Population density), (vii) Level of savings in rural infrastructure, and (viii) Level of investment in technology and its implementation. India has a total geographical area (TGA) of 329 Million Hectares (MH) out of which, about 265 MH represent varying degrees of potential for biological production report reveals that more than 50% of TGA is threatened by various types of land degradation, such as soil erosion, gully & ravine formation, salinity, water logging, shifting cultivation, etc. Development of irrigation possible is considered as the key factor in the sustenance of “Green Revolution”. Despite 50 years of development planning, rainfed agriculture is the largest and the most important sector of crop production in India. Water Resources of India contain diverse group of flora and fauna. Agriculture is the greatest user of Water accounting for about 80% of all consumption. Animal Husbandry and Fisheries require abundant water. Development of Water Resources, since Independence, has been undertaken for specific purposes like irrigation, flood control, hydro-power generation, drinking water supply, industrial and various miscellaneous uses. Minor irrigation projects have both surface and ground water as their source, while major and medium projects mostly exploit surface water resources. The break up of the ultimate irrigation potential under the above three categories is,

- 58 M.Ha by major and medium irrigation projects,
- 17 M.Ha by minor surface water schemes, and
- 64 M.Ha by minor ground water schemes.
- enhancing production and productivity of fishermen, fish farmers and fishing industry;

- increasing fish production and thereby, raising nutritional standard of people;
- earning of foreign exchange from export of marine products;
- improving Socio-economic conditions of traditional fishermen;
- generating employment for coastal and rural poor; and
- conservation of depleting species of fish.

The Central Ministry of Agriculture (MOA) is responsible for implementation and formulation of national policies and programs to achieve farming growth through optimum utilization of the land resources, water, soil, plant, fisheries, & livestock resources. Government of India implements the following farming related Schemes (whether Watershed based or Agro-climatic region based) in the country, which deal farming resources information for Planning and

Development:-

- National Farming Research Project (NARP)
- National Farming Technology Project (NATP) to strengthen research-extension-farmer (r-e-f) linkage
- National Watershed Development Program for Rain-fed Areas (NWDPA)
- Soil and Water Conservation Programs
- Drought Prone Area Development programme
- Desert Development Programme
- National Wastelands Development programme
- Integrated Mission on Sustainable Development (IMSD) Programme

Development of Information Systems and utilization of Information Resources over INTERNET/ INTRANET is a matter of strategic importance in all countries today. Informatics Network plays an important role in the information flow from the implementation level to the planner at Macro(national) level, Macro-meso (region covering more than one state) level to Meso (state) level, and Micro (District, Block and Village) level. Metadata standards are simply a common set of terms and definitions that describe geospatial and non-spatial data. Metadata standards provide a way for data users to know:-

- Farming Research,
- Agro-meteorology,
- Farming Marketing,
- Farming Engineering and Food processing,
- Farming Extension and Transfer of Technology,
- Credit & Co-operation,
- Crop Production and Protection,
- Environment & Forest,
- Fertilizers and Manure,
- Fisheries,
- Irrigation and Drainage Systems,
- Livestock, Dairy Development and Animal Husbandry,
- Rural Development and Planning,
- Soil and Water Management,
- Watershed Development, and
- Wastelands Development

Farming Resources Information System

It is clear that sustainable farming production depends on the judicious mix of natural resources (soil, water, livestock, plant genetic, fisheries, forests, climate, rainfall, and topography) in an acceptable technology management under the prevailing socio-economic infrastructure. In addition to the natural resources components, it is also essential to combine natural resources with capital resources, institutional resources, and human resources for sustainable farming development. Farming Resources components include

- Animal Resources
- Capital resources
- Climate resources
- Environment data
- Fisheries Resources
- Forestry Resources
- Institutional resources
- Land owners data
- Plant Resources
- Socio-economic & Infrastructure data
- Soil resources
- Water Resources
- Data warehousing (Data Bases & Model Bases)
- Expert Systems & Knowledge Bases
- Networking (Internet, Intranet and Extranet)
- Geographical Information System (GIS)
- Application of Remote Sensing Data
- Multi-media Information System
- Decision Technology System
- E-Commerce & E-Governance, and
- Digital Library

Both the Ministry of Agriculture and Ministry of Rural Development implement, through corresponding State departments, various central sector and centrally sponsored schemes related to farming and rural development, on watershed basis. The landscape, climate, and agronomic characteristics of each watershed vary considerably. Each watershed contains a complex mixture of

- soil types,
- landscapes,
- climatic regimes,
- land use characteristics, and
- farming systems.

Each watershed can be subdivided into agro-eco-regions having similar soil types, landscapes, climatic regimes, crop and animal productivity, and hydrologic characteristics. Integrated Watershed Development and Management has been recognized as an effective strategy for sustainable farming development in the country.

Sources of Farming Resources Information and design of system

Remote Sensing has provided a new impetus for the earth resource and environmental scientists. Increasing population and diminishing resources have compelled us to consider better ways for management of natural resources. Soil survey and preparation of soil maps are being carried out by NBSS&LUP, AISLUS, CAZRI, CSSRI, CSWCRTI, NRSA, RRSSC, IIRS, State

Departments of Agriculture, State Soil Survey Units, State Farming Universities, State Remote Sensing Application Centres, etc. A review of the soil mapping and land degradation mapping was conducted by an Inter-Agency Expert Committee constituted by the Ministry of Agriculture and the Department of Space, and on the basis of the recommendations, a National Mission on "Mapping of Soils and Land Degradation at 1:50,000 Scale" with the major objective of creation of uniform soil and land degradation database for the entire country is being contemplated. Forestry Survey of India, Geological Survey of India, Fisheries Survey of India, Botanical Survey of India, National Remote Sensing Agency, Survey of India, National Atlas and Thematic Mapping Organization, National Sample Survey Organization, Central Ground Water Board, etc., conducts resources surveys and develop "resources databases" using ground truths and applications of remote sensing data.

1. Soil survey
2. Geological survey
3. Forest inventories
4. Hydro-meteorological studies
5. Aerial photographs and contour maps
6. Ownership data and infrastructure information
7. Rainfall and stream flow data
8. Land use details
9. Development plans

Conclusion:

The central issue in farming development is the necessity to increase productivity, employment and income for poor segments of the farming population of whom the small and marginal farmers constitute a sizeable portion. Information Technology Tools viz., Data warehousing (Data Bases & Model Bases), Expert Systems & Knowledge Bases, Networking (Internet, Intranet and Extranet), Geographical Information System (GIS), Application of Remote Sensing Data, Decision Support Systems, and E-Commerce (b2b, b2c solutions), facilitate the Farmers to know the "farming situation" in Indian as well as abroad and accordingly undertake farming production.

Reference

- Federal Geographic Data Committee of U.S. Geological Survey Report No: FGDC-STD-001-1998, GDC-STD-006, and also see
- <http://www.startkart.no/isotc211/scope.html>
- Fisher, J.J : "The Role of Natural Resources in Economic Development: Principles and Pattern" in (Eds) H.F. Williamsons and J.A. Buttrick, 1964, pp 32
- G.B. Singh : "Green Revolution in India – Gains and Pains", 21st Indian Geography Congress, Nagpur (India), January 2-4, 2000.
- Guissepi A. Forgionne 1991 "Decision Technology Systems : A Step Toward Complete Decision Support", Information Management Systems, Vol. 8, No 4, Fall 1991, Auerbach Publishers

Effect of FDI on Agriculture in India

Dr. Sayyad Mahejabin Dildar

Agasti Arts, Commerce & Dadasaheb Rupwate Sci. College,
Akole, Dist.Ahmednagar.

Abstract

India is known as an agrarian nation as it's near about 60-65% of the population is engaged in agriculture. It plays a vital role in the economy of the nation. But the state of affairs of Indian farmers is not yet very progressive as is expected.

F.D.I. in retailing has taken an initiative for Indian farmers to free them from the clutches of a number of middlemen; it is a ray of hope which will take them away from darkness of exploitation, backwardness to the light of progress.

This paper is an attempt to highlight on FDI in retailing and tries to examine its pros and cons while examining the perceptions of small retailers on the government's decision especially for farmers.

Key Words - FDI, Retailing, Farmers, Agriculture, intermediaries, infrastructure etc.

Introduction

As a creator of wealth, corporate sector makes efforts for the growth of their business operations. FDI supplements the domestic capital mobilization, technology up gradation, infrastructure development, development of industries, enhancing both: technical skills and managerial capabilities. In these years of progress, India has become the 2nd most preferred destination for FDI next only to China.

The economic reforms initiated in 1991. It has contributed significantly to the inflow of FDI in India. At the same time, on account of liberalization of trade and other economic policies, FDI supported for ever expanding size of market, development in technology and telecommunication etc. The major recipient of FDI in India is the sectors like infrastructure, telecommunication, hospitality services, and information technology and so on. Investors from UK, USA, Mauritius & Singapore have contributed a major share of FDI in India. (Source-<http://economictimes.indiatimes.com/2010-11-12>)

Farmers are one of the pillars of Indian economy still are in worst condition. FDI will be helpful in upliftment and raising of standard of living of farmers if implemented carefully.

Objectives

1. To study the different views regarding FDI in retail sector.
2. To know the benefits that will be derived by Indian farmers through FDI.
3. To discuss how elimination of intermediaries will be beneficial for farmers.
4. To suggest remedial actions for fruitful implementation of FDI.

Research Methodology

The research paper is an attempt of exploratory research based on secondary data sources from reference books, magazines, journals, research papers and internet.

Introduction-

The World Bank defined FDI as, "Foreign Direct Investment can refer to the net inflow of funds to acquire a long term management interest in an enterprise operating in a foreign

economy. It is the accumulation of equity, reinvestment of retained earnings, other long-term sources of capital and short term funds as presented in the balance of payments.”(Source-<http://data.worldbank.org/indicator>)

Retailing is the interface between the producer and the individual consumer buying for personal consumption. As such retailing is the last link that connects the individual consumer with manufacturing and distribution chain.

Let's have a look at the different views of some eminent people or organizations.

In the view of Dr. A.P.J. Kalam, “FDI is beneficial to the rural community only if the farmers have the bargaining capacity when dealing with the multinational. This is possible through co-operative farming that would negate the ill-effects of small sized land holdings.

In the words of Montek Singh Ahluwalia, The Deputy of Planning Commission of India, he mentioned that there is a huge price gap between the price at which farmers sell their goods and the amount that a retailer pays for it. The whole cream is taken away by the middlemen. He suggested that India should pass a policy that China has passed 20 years ago. And also the policy requires approval so that states can go ahead and implement it.

Various farmers Association in India also announced their support for retail reforms like-Shriram Gadhav of All India Vegetable Grower's Association (AIVGA) admitted that, it is the middlemen, commission agents who get benefitted at the cost of farmers. He insisted that the retail reforms must focus on rural areas and that farmers should receive the benefit. A better cold storage would help since this could prevent the existing loss of 34% of fruit and vegetables due to inefficient systems in place.” AIVGA operates in 9 states including Maharashtra.

On Nov. 24, 2011, the Union Cabinet of the government approved a proposal of allowing 51% FDI in multi brand retailing and 100% in single brand retailing in India. The Indian retail market is currently unorganized and highly fragmented, with an estimated 13-15 min outlets country wide. The overall retail market is expected to grow at an average rate of about 11-13% by 2020-21 with the organized retail market expanding at 21-24%.

Table showing share of organized retail in India-

Year	1999	2002	2005	2009	2012	2013
Total Retail (in Billion INR)	7000	8250	10000	18450	19500	24000
Organized Retail (in Billion INR)	50	150	350	920	1350	2400
Share of Organized Retail (in %)	0.70	1.80	3.50	5.00	7.00	10

(Source- www.nietsen.com)

Retailing is a sector which has the highest connectivity as it reaches out from the top to the bottom of the society.

Indian Agricultural field mostly depends on the whim of the weather and inherent biological uncertainties. It is an important sector in India as it contributes more share in country's economy as well as it provides livelihood to about 2/3rd of the population. The other sectors are interdependent on agriculture. Naturally, the fluctuations in agriculture affect on other sectors too.

FDI opens up new frontiers to the farmers as today the present state of affairs regarding farmers in India is dissatisfactory, the endless and unnecessary chain of middlemen takes away

the fruits of the agriculture from its deserving party i.e. farmer. Farmers suffer as the middlemen add to the profit margin and provide the farmers with the price which is even sometimes below its cost of production. There are some other major problems also which add to the panic of these farmers. They are infrastructure problem, technological problem and distribution problem etc. The suicidal cases among farmers are an alarming issue and needs to be urgently taken care of by the government.

Food sufficiency is maintained by farmers in India. They engage themselves continuously in the agricultural activities. Still they won't get fair rewards in return for their endless efforts. Indian food chain is defective one as after 65 years of independence; it couldn't uplift the living standard of farmers. The farmers are still in the darkness of poverty, illiteracy, inequality and negligence.

Retailing can be taken as a complimentary sector to agriculture and new formats in retailing will bring about new horizons of growth and prosperity to farmers in India. New policies regarding FDI in retailing is going to be proved a major catalyst in upliftment of economy of farmers and country.

FDI will help in transforming retail sector from unorganized to organized sector. Foreign retail giants like Wal-Mart, Carrefour, Tesco, Metro AG etc. are eager to enter in the Indian retailing through FDI. They will try to eradicate long supply chain in the distribution process in India. They will purchase directly from farmers on large scale and will offer good prices at least more than that they are getting today.

Infrastructural facilities and assured markets for the farm produce are the pre-requisites for the growth of the rural agricultural sector. Most farmers tend to prefer wheat and traditional crops if they don't find adequate market for cash crops. FDI in multi-brand retail can create market for cash crops and may move the farmers to grow commercial products like fruits, vegetables depending on the suitability to the soil and climatic conditions of that area. Bharti Wal-Mart, a joint venture between India's Bharti Enterprises and US based Wal-Mart Stores, has plans to buy farm produce directly from over 35000 small and medium farmers in India by 2015. Bharti Wal mart envisages to usher in modern farm management practices and to train farmers to become more productive with less water usage and minimal use of fertilizers and pesticides. It has confidence that it will increase 20% income of farmers. Investment in infrastructure can cut the wastage and spoilage of farm product and help in elimination of intermediaries.

Problems faced by the farmers-

Infrastructure problem-

Most of the farmers are road vendors. No specific place to gather or for selling is available to them. It requires more investment to have such place. If it has been provided by someone, the fair or rent is too high that is unaffordable to them. Because of which they are unorganized.

Lack of cold storage facility-

Due to perishable nature of food like fruits and vegetables, and not having the option of safe and reliable cold storage, the farmer is compelled to sell his crop at whatever price he can get. He cannot wait until the better price and thus is exploited by the monopoly of commission agents or middlemen.

Middlemen/ Commission Agents-

Indian farmers are scattered in rural areas. They get only 1/3 of the price that consumers pay for food staples. The rest is taken away as commission and markups by middlemen and shopkeepers. For perishable horticulture produce, average price that farmers receive is barely 12 to 15% of the final price that consumers pay. Indian potato farmers sell their crop for Rs. 10 to 13 per kg. while the Indian consumer buys the same for Rs. 25 to 30 Rs. per kg.

Transportation Facility-

Most of the Indian farmers are from lower income group or from lower middle class families. They can do hard work in farm and produce well. But they can't bring their production to retail markets personally. It is not affordable for them due to poor quality roads, unavailability of transportation facility. So, they have to bear post harvest losses. It leads to spoilage of staples and wastes.

Conclusion-

Organized retailing is a tool to overcome the problems of wastage of farm produce and they also purchase farm product directly from farmers by eliminating long supply chain in distribution of farm goods as per the survey the farmers will get 10-30% of agricultural produce, that will definitely improve the economic conditions of farmers in rural India, giving them fair returns and prosperity. It will help farmers in realization of 10-30% increased price through sourcing directly or closer to farm. Also it would give them a direct access to the 4 big retailers.

Consumers will be benefitted through a variety of products under one roof, high quality merchandise, and superior customer services at reasonable prices. But worrying factor in this case would be if the big chain manage to create monopoly which a lot of skeptics predict would be happen; it would adversely affect the farmers. Monopoly would be created by big retailers & again the poor farmer would be exploited. Only the game will change & the game remain same. In order to avoid it -

Following suggestions are recommended.

Suggestions:

1. The Govt. should make it mandatory for organized retailers to buy 75 % of their production directly from farmers, by passing the middleman monopoly & Sabzi mandi auction system.
2. Study reveals that poor farmers & other loose income because of the waste & insufficient retail over us \$ 50 billion of additional income can become available to Indian farmer by preventing post harvest farm losers.
3. Organized retail should initiate infrastructure development creating millions of rural & urban jobs for Indians growing population.
4. Better infrastructure & retail network should be created by these retailers.
5. Transport facilities should be made available upto the door of farmers.
6. Govt. should provide support of legal framework to safeguard the interest of farmers & consumers.

References:

1. [http:// www.bsdcindia.org/pdf/organised Retail pdf.](http://www.bsdcindia.org/pdf/organised%20Retail%20pdf)
2. [http:// www.dnb.co.in/Indian Retail Industry/overview.](http://www.dnb.co.in/Indian%20Retail%20Industry/overview)
3. [http://www.nabard.org/file upload/databank/publication](http://www.nabard.org/file%20upload/databank/publication)
4. www.worldbank.org/indicators
5. www.nielsen.com
6. Department of Industrial policy & promotion 2010, 'Foreign Direct Investment (FDI) in multibrand Retail Trading,' Discussion paper available at <http://www.dipp.nic.in>.
7. Chandu K.L., 'The New FDI policy in Retail in India: Promises, problems and perceptions', Asian Journal of Management Research Vol. 3, Issue I, 2012.
8. Basker, Emek, 2007, "The causes and consequences of Wal-Mart's Growth", Journal of Economics perspective, vol. 21, No.3, pg.177-198.
9. Guruswamy, Mohan, J.P. Mohanty, Thomas J. Korah, 2005, "FDI in India's Retail Sector: More Bad than Good?" Economic & Political Weekly, Vol. 40, No.7, pg. 19-

Challenges of Agricultural Sector in Maharashtra

Dr. V. R. Desai,

Department of Economics,
Annasaheb Awate College, Manchar.

Introduction:

Maharashtra is the second largest state in India in terms of population and has geographical area about 3.08 lakh sq. km. As per population census, 2011 the population of the State is 11.24 crore which is 9.3 per cent of the total population of India and is highly urbanized with 45.2 per cent people residing in urban areas. The State has 36 districts which are divided into six revenue divisions viz. Konkan, Pune, Nashik, Aurangabad, Amravati and Nagpur for administrative purposes, with effective machinery for planning at the district level. Mumbai, the capital of Maharashtra and the financial capital of India, houses the headquarters of most of the major corporate & financial institutions. India's main stock exchanges & capital market and commodity exchanges are located in Mumbai. The State has 234 lakh ha of land under cultivation and area under forest is 52.1 lakh ha. Many irrigation projects are being implemented to improve irrigation. A watershed development programme is being implemented to ensure that soil and water conservation measures are implemented speedily in the unirrigated area. The Jalyukta Shivar Abhiyaan is launched to make Maharashtra 'a drought-free state by 2019' and every year 5,000 villages are targeted to make them free of water scarcity. Agriculture is the most important occupation for most of the Maharashtra families. About 65 per cent of the total workers in the State depend on agriculture and allied activities. Principal crops grown in the State are rice, jowar, bajra, wheat, tur, mung, urad, gram and other pulses. The State is a major producer of oilseeds. Groundnut, sunflower, soyabean are major oil seed crops. Important cash crops are cotton, sugarcane, turmeric and vegetables. The State has an area of 12.90 lakh hectares under various fruit crops like mango, banana, orange, cashew nut, etc.

Objective of the Study:

1. To study the Introduction to Agriculture Sector in Maharashtra.
2. To study the Major agricultural development schemes in Maharashtra.
3. To study the Challenges of Agriculture Sector in Maharashtra.

Research Methodology:

The study is based on secondary sources of data. The main sources of data are various economic surveys of Indian directorate of economics and statistics, online data based in Maharashtra economy, books, journals, articles and newspapers.

Introduction to Agricultural Sector in Maharashtra.

Maharashtra is the second largest state in India in terms of population and has geographical area about 3.08 lakh sq. km. As per population census, 2011 the population of the State is 11.24 crore which is 9.3 per cent of the total population of India. As per the advance estimates, the State economy is forecasted to grow by 7.3 per cent during 2017-18 over the previous year, this growth is against the 10.0 per cent growth during 2016-17, while the Indian economy is expected to grow by 6.5 per cent. During 2016-17 agricultural production was higher on account of good rains (94.9 per cent of the normal monsoon). The 'Agriculture & allied

activities' sector is expected to register (-) 8.3 per cent growth rate during 2017-18 due to comparatively less rains (84.3 per cent of the normal monsoon). During 2017-18, 'Industry' and 'Services' sectors are expected to grow at 6.5 per cent and 9.7 per cent respectively. As per the advance estimates, real (at constant 2011-12 prices) Gross State Domestic Product (GSDP) for 2017-18 is expected to be ₹ 19,59,920 crore and nominal (at current prices) GSDP is expected to be ₹ 24,96,505 crore.

The State received only 84.3 per cent of the normal rainfall during monsoon 2017. Out of 355 talukas (excluding talukas in Mumbai City & Mumbai suburban districts) in the State, 147 received deficient, 146 received normal and 62 received excess rainfall. During kharif season of 2017, sowing was completed on 150.45 lakh ha area. The production of cereals, pulses, oilseeds and cotton is expected to decrease by four per cent, 46 per cent, 15 per cent and 44 per cent respectively, while the production of sugarcane is expected to increase by 25 per cent over the previous year. During 2017-18, area under rabi crops is 46.88 lakh ha. The production of cereals, pulses and oilseeds is expected to decrease by 39 per cent, four per cent and 73 per cent respectively over the previous year. During 2017-18, the area under horticulture crops is 15.22 lakh ha and production is expected to be 207.54 lakh MT as against area of 16.73 lakh ha and production of 219.93 lakh MT during 2016-17. The 'Jalyukta Shivar Abhiyan' launched by the State primarily aims at making Maharashtra 'a drought-free state by 2019'. It involves deepening and widening of streams, construction of cement and earthen stop dams, works on nullahs and digging of farm ponds. The target is to make 5,000 villages free of water scarcity every year. During 2016-17, under 'Jalyukta Shivar Abhiyaan', out of 5,291 villages selected, in all 2,830 villages have been made water neutral by creating water storage of 5,897.6 lakh cubic metre. Under the Abhiyaan 5,018 villages have been selected for 2017-18.

Major agricultural development schemes

Agricultural development schemes of Govt. of India are implemented through State Government and the funds are allocated for various schemes. State Government also implements various important state schemes for development of agriculture sector.

Rashtriya Krishi Vikas Yojana (RKVY):

GoI has approved RKVY to be continued as Rashtriya Krishi Vikas Yojana – Remunerative approaches for agriculture & allied sector rejuvenation (RKVY-Raftaar) for the next three years (2017-18 to 2019-2020). RKVY Raftaar has the objective of making farming a remunerative economic activity through strengthening the farmers' effort, risk mitigation and promoting agri-business entrepreneurship. The distribution of funds will be in such a manner that 70 per cent of the total outlay is reserved for growth in production, infrastructure and assets to states, 20 per cent of the total outlay for special sub-schemes under RKVY Raftaar which are of national priority and 10 per cent of the total outlay for innovation and agri-entrepreneurship development projects. The grants utilised for this scheme during 2016-17 was ₹ 418.18 crore and an outlay of ₹ 690.15 crore has been sanctioned for 2017-18.

National Mission on Agriculture Extension and Technology :

The purpose of this mission is to reform & strengthen agricultural extension to enable delivery of appropriate technology and improved agronomic practices to the farmers. It includes sub-missions on Agriculture Extension, Seed and Planting Material, Agricultural Mechanisation

and Plant Protection. The grant utilised for this mission during 2016-17 was ` 53.40 crore as against ` 44.51 crore in 2015-16. During 2017-18 upto December, grant released was ` 100.88 crore.

National Food Security Mission (NFSM):

This mission was launched in 2007-08 to increase the production of rice, wheat and pulses through area expansion and productivity enhancement. Coarse cereals and commercial crops viz., cotton, jute and sugarcane have been included under revamped NFSM from 2014-15. During 2016-17, an expenditure of ` 11.97 crore for rice, ` 4.43 crore for wheat, ` 192.17 crore for pulses and ` 26.11 crore for coarse cereals has been incurred. During 2017-18 upto January, expenditure of ` 5.64 crore for rice, ` 83.03 crore for pulses and ` 15.01 crore for coarse cereals was incurred.

National Horticulture Mission (NHM):

This mission has been launched by GoI in 2005-06, with the main objective of increasing the area & productivity under horticulture and also to promote post-harvest management. Maharashtra State Horticulture & Medicinal Plant Board (MSHMPB) was established in 2005 to implement schemes of NHM and National Medicinal Plants Board (NMPB). The ongoing schemes of NHM are integrated in MIDH from 2015-16. 7.19.2 Under MIDH, the MSHMPB received total grants of ` 1,707.63 crore and total expenditure incurred is ` 1,666.81 crore since inception of NHM upto January, 2018.

Jalyukta Shivar Abhiyaan:

Under the theme of 'a drought-free state by 2019', the Jalyukta Shivar Abhiyaan is being implemented in the State since December, 2014 with a view to permanently overcome the water scarcity situation. The main aim of this abhiyaan is to increase ground water level by way of absorption of rain water in earth along with creation of sustainable irrigation facilities. It is targeted to make 5,000 villages every year and 25,000 villages in five years free of water scarcity. During 2017-18 as on 12th January, number of villages selected are 5,018 in which 7,683 works are completed and 6,440 works are in progress.

New Initiatives for development of agriculture sector

Unnat Sheti-Samruddha Shetkari Campaign:

GoM has initiated this campaign from kharif 2017-18 with the objective of Doubling Farmer's Income by 2022. The campaign is mainly to increase the income of farmers through increasing the productivity of major crops and maximum participation of farmers in the crop insurance schemes to protect them from the losses incurred due to natural calamity. From 2017-18, taluka has been decided as a basic planning unit for agricultural development & increase in productivity. Under the campaign, thrust of government is on efforts to increase the productivity of major crops upto the genetic yield potential, diversification of crops, reduction in cost of cultivation, farmers awareness to the method of marketing considering the ups and downs in the rates, to encourage ancillary activities of farming, to create association of farmers through farmers' productive companies and to develop their commercial capacity, post-harvest handling of farm produce and value addition etc.

MAHAVEDH:

To collect timely data on various weather components, MAHAVEDH project is operationalised by GoM which is a network of Automatic Weather Stations (AWS) in each revenue circle across the State. It is being established through Public Private Partnership (PPP) in Built, Own and Operate (BOO) mode. These AWS will record five weather parameters viz. rainfall, air temperature, relative humidity, wind speed and wind direction.

Baliraja Chetana Abhiyaan :

Integration of the schemes implemented by various government departments to get the maximum benefits for the farmers in the suicide prone areas thereby increasing their will power is the objective of this abhiyaan. Presently the abhiyaan is undertaken in two districts viz. Yavatmal and Osmanabad. Under the abhiyaan, distressed farmers are identified through village level committees by conducting survey and various activities like creating awareness about government schemes & ensuring the individual benefits through government schemes, counselling of the family head, health camps with psychologist and social workers services, trainings for use of modern technology for maximum crop production with minimum expenses & minimal use of water are undertaken. The committee is expected to use Corporate Social Responsibility (CSR) funds additional to ` 10 crore grant given to the district every year under the abhiyaan.

Development of Seed Park :

Development of Jalna Seed Park has been sanctioned by Government to boost the seed industries in this area. The estimated project investment is about 109 crore of which ` 50 crore funding is expected from Modified Industrial Infrastructure Upgradation Scheme of GoI, ` 25 crore state share and remaining investment from private investors.

Mukhyamantri Krishi Sanjeevani Yojana :

This scheme was declared from October, 2017 for all agricultural pump holder electricity consumers of the State to pay their electricity bills overdues. Under this scheme, for the electricity bills overdues more than ` 30,000, it is permitted to pay in ten equal installments of 45 days each and for the overdues less than ` 30,000, it is permitted to pay in five equal installments of three month each. GoM shall consider to waive off the interest and penalty on the basis of the installments being paid within time.

National Agriculture Market (eNAM) :

e-NAM is a pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market for agricultural commodities. This provides a single window service for all APMC related information and services and includes commodity arrivals & prices, buy & sell trade offers, provision to respond to trade offers, among other services. While material flow of agriculture produce continues through mandis, an online market reduces transaction costs and information asymmetry. Through this portal, 30 mandis from the State are already connected and work of connecting next 30 mandis approved by GoI has been initiated upto December, 2017.

Challenges of Agriculture Sector in Maharashtra

1. Maharashtra agriculture is that a large number of people depend solely on agriculture. It is obvious the, that not much can be realized unless this continuing pressure of population on land is reduced.

2. Comparing Maharashtra agriculture with that of other State of the india, we find that both productivity of crops are very low in Maharashtra.
3. Most of the Maharashtra farmers are illiterate, ignorant, superstitious, and conservative and bound by outmoded customs, etc. create an atmosphere which is not proving helpful for going ahead with farm productivity.
4. Maharashtra agriculture has been facing problems because of the inadequacy of such non-farm services, such as inadequate provision of finance, marketing etc
5. Institution like Co-operatives, Rural Banks, Panchayats, Community Development Projects, etc., are not rising adequately top the occasion to deliver the goods to the Maharashtra farmers in their efforts for going ahead with farm income and productivity.
6. Absence of adequate knowledge of inter-cultural practices, multiple cropping, crop-rotation, crop insurance, irrigational facilities, etc. is standing in the way of Maharashtra agriculture.
7. Lack of effective and meaningful agriculture enterprise in many parts of our vast countryside is also a great problem in Maharashtra agriculture.

Suggestions of Agriculture Sector in Maharashtra

To solve these problems in the Maharashtra agriculture the following points should be tackled by farmers and government intelligence.

1. They need to be educated about various facets of farming.
2. Farmer should get acquainted soil characteristics and its conservation.
3. They need to be given better access to credit and at better terms and conditions.
4. Adequate irrigation facilities should be provided.
5. Poor economic condition should be improved.
6. Use of HYV seeds should be encouraged.
7. Prices of agricultural commodities must be revised time to time.
8. Insurance is needed.
9. Problem of trading centers should be improved.
10. Large diversity of crops should be encouraged.

Bibliography:

1. Arpit Gaur and Ashok Malav, Agriculture at a Glance, Astral publication, New Delhi-2017
2. Datta and Sundaram's, Indian Economy, S. Chand Publication, New Delhi-2016
3. Dutt S., A Handbook of Agriculture, Jain Book Agency, New Deihi-2017
4. Economic Survey of Maharashtra, Directorate of Economics & Statistics, Mumbai-2017
5. www.mahaagri.gov.in

Farmer's Suicides in The Vidarbha Region of Maharashtra

Dr. Manohar Sitaram Kanawade

Hon.Balasaheb Jadhav Arts,
Commerce and Science College Ale
Tal-Junnar, Dist-Pune 412411

Abstract:

The present developmental research was embraced in the 25 towns encompassing the Anji Primary Health Center, situated in the Vidarbha district of Maharashtra, India. A triangulation of free rundown and heap sort practices was utilized. The information was examined by Anthropac 4.98.1/X programming. This was trailed by a semi-organized center gathering exchange. To expand the legitimacy of the outcomes, these discoveries were exhibited to the members and later they were flowed to the 26 agriculturists' clubs in the towns for input and discourse amid their month to month, town based gatherings.

Ranchers saw obligation, dependence, natural issues, poor costs for homestead create, stress and family duties, government lack of care, poor water system, expanded expense of development, private cash loan specialists, utilization of compound composts and harvest disappointment as the explanations behind agriculturists' suicides. Members proposed arrangements, for example, independence and limit working among ranchers, an observing and emotionally supportive network for defenseless agriculturists, support and advising administrations, a town level, straightforward framework for the dispensing of help bundles.

Agriculturists' suicides in Vidarbha are caused by the unpredictable transaction of social, political and natural limitations. Consequently, a thorough mediation to guarantee confidence and limit working among ranchers in current cultivating procedures, observing and emotionally supportive network for defenseless agriculturists, a town level, straightforward framework for payment of alleviation bundles is required to avert rancher suicides sooner rather than later. Aside from this, there is a need to fortify the National Mental Health Program at essential social insurance level to offer help and advising to powerless agriculturists in provincial region.

Keywords- Farmers Suicide, Kisan Vikas Manch, Economically backward, relief, sustainable development

Introduction-

In India, rancher suicides had been accounted for from different states, viz. Andhra Pradesh, Punjab Karnataka and Orissa.¹ Maharashtra, one of India's most prosperous states is at present confronting a pandemic of agriculturist suicides particularly in the Vidarbha locale. Concentrates in India, Sri Lanka, Canada, England and Australia have recognized cultivating as a standout amongst the most high-chance businesses with regards to having a suicide rate higher than in the general population.² In India, national information demonstrate that the suicide rate was 9.7/100000 populace for each year in 1995. The number of inhabitants in the Vidarbha locale is 1 200 000, so the normal number of suicides was 116 every year, except it was observed to be 572 out of 2005, 1065 out of 2006 and 600 in year 2007.³ A report by the Tata Institute of Social Sciences, Mumbai distinguished the explanations behind agriculturist's suicides: rehashed trim disappointments, failure to meet the expanding cost of development, and debt.⁴ Even when

the administration declared help bundles for the influenced families and therapeutic measures, this did not prompt any quick constructive outcome on suicide conduct. It was accounted for that agriculturists' worries were not considered while structuring these alleviation bundles.

The Kasturba Rural Health Training Center (KRHTC) in Anji effectively executed the 'Network Led Initiatives for Child Survival' (CLICS) program in the 25 towns encompassing the Anji Primary Health Center in the Wardha region amid the period 2003 to 2008. As a piece of network assembly, Kisan Vikas Manch (KVM, ranchers improvement discussions) were shaped in every town to guarantee the contribution of men in the program. This people group based stage was utilized for Participatory Research and Action, wellbeing message dispersal and town based agrarian guidance.⁶As a stage towards independence and maintainability, KVMs under KRHTC were up-reviewed from casual gatherings to self improvement gatherings. KVMs ensured investment funds and guaranteed credits on adaptable conditions to its poor individuals and in this way could forestall endeavored suicides by two obliged ranchers. In September 2008, we welcomed KVM individuals from the 25 encompassing towns to take an interest in a dialog to investigate the different saw explanations behind agriculturists' suicides in the Vidarbha locale of Maharashtra, their common connections and to recommend arrangements.

Methodology:

The present developmental research was embraced in the 25 encompassing towns of KRHTC, Anji, which is situated in the Wardha locale of the Vidarbha district, around 758 km east from the state capital, Mumbai. This financially in reverse locale is situated in the north eastern piece of Maharashtra state and its economy relies upon agriculture.⁷Wardha is a sister city for Sevagram, and both were utilized as real places for the Indian Independence Movement, particularly as central command for a yearly gathering of the Indian National Congress in 1934, and Mahatma Gandhi's Ashram. In late time, rehashed trim disappointments, the expanding cost of development and obligation have made a circumstance that is prompting ranchers submitting suicide in the Vidarbha area.

There were 26 KVMs in 25 towns. Each KVM had 15-20 little scale male agriculturists as individuals. Out of this, 17 KVMs had been dynamic in sorting out town level specialized rural direction for every single other agriculturist. We welcomed in one part from every one of these 17 KVMs, who was eager to take an interest and talk unreservedly on this issue. A one day meeting was composed at KRHTC, Anji on multi day and at once advantageous to the members. Delegates from ten KVMs went to the gathering. This example estimate was sufficient for heap arranging as after fifth members, results were probably going to get rehashed with more than 0.75 connections of results.⁸After acquiring composed assent, a triangulation of free rundown and heap arranging practices was utilized to recognize different saw explanations behind agriculturists' suicides, their apparent connections to these variables and conceivable answers for location these problems.⁹In the free rundown work out, the members were requested to make an individual free rundown of the different purposes behind ranchers' suicides. Eleven reasons with moderately high Smith's S esteem were then heap arranged. Smith's S (Smith's saliency score) alludes to the significance, representativeness or noticeable quality of things to people or to the gathering, and is estimated in three different ways: word recurrence crosswise over records, word rank inside records and a mix of these two.¹⁰In the heap arranging exercise, the individual members were requested to bunch those chose reasons which they felt went together and propose

the answers for anticipate them. It was trailed by a semi-organized center gathering discourse (FGD) with these ten individuals. A note taker recorded the discourse. The information was investigated by Anthropac 4.98.1/X software.¹¹To get the aggregate picture, multi-dimensional scaling and various leveled bunch examination of heap sort information were embraced. To build the legitimacy of the outcomes, the discoveries of the free rundown, heap sort exercise and FGD were introduced to the members.

Afterward, the discoveries were deciphered and composed in the neighborhood dialect Marathi and after that coursed to 26 KVMs (with 15-20 individuals each) in encompassing towns for sharing and talk amid their month to month town based gatherings. A social specialist encouraged this gathering in all KVMs and acquired criticism from the other gathering individuals. These month to month gatherings were of one to two hours term and were held at night when the greater part of the individuals has returned from their rural work. This movement was completed over the time of one month.

In view of the heap arranging exercise, a center gathering exchange with ten agent KVM individuals and input from every one of the 26 KVM individuals were abridged. The third segment shows the activity proposed or being embraced by the state and focal government. Italic content implies coordinate citing from the members.

Conclusion-

In the free list exercise, the various eleven reasons found for farmers' suicide in our area in descending order of Smith's S value were as follows. 1) debt, 2) addiction, 3) environmental problems, 4) poor prices for farm produce, 5) stress and family responsibilities, 6) government apathy, 7) poor irrigation, 8) increased cost of cultivation, 9) private money lenders, 10) use of chemical fertilizers 11) crop failure. These items were then subjected to pile sorting exercise (Table 1).

Table 1: Reasons for farmers suicides in the Vidarbha region of Maharashtra, India

Reasons for farmers' suicide	Frequency across list	Average rank	Smith's S value
Debt	10	4.4	1.184
Addictions	4	3	0.53
Environmental problems	4	3	0.514
Poor price for farm produce	4	4.10	0.448
Stress and family responsibilities	4	8	0.326
Government apathy	4	7	0.318
Poor irrigation	2	2	0.286
Increased cost of cultivation	4	7	0.286
Private money lenders	4	7	0.272
Use of chemical fertilizers	6	11.2	0.258
Crop failure	4	8	.248

As found in the analysis of the pile sort data, eleven perceived reasons for farmers' suicides were clustered into five groups, which they thought of as mutually related to each other and suggested solutions for each group of problems. The solutions suggested for each group of problems was compiled in the second column of Table 2.

Table 2: The participants then formed groups of related reasons and suggested solutions for these group of problems (obtained from multidimensional clustering)

Reasons (from pile sort)	Suggested solutions (from free list exercise with descending Smith's S value)	Actions proposed or taken by the government (Central and State) ¹²
Crop failure, poor irrigation and increased cost of cultivation	1.Improve soil quality (soil testing) 2.Organic farming 3.Irrigation (well, canal, water harvesting) 4.Low cost management of farming 5.Support business with farming 6.Crop insurance	Subsidiary income opportunities through horticulture, livestock, dairying, fisheries etc. Assured irrigation facilities. Effective watershed management
Government apathy and poor price for farm produce	1.Farmer should sell their farm produce on their own 2.Do not rely much on government 3.Farmers' group can process raw products 4.Farmers should have their own warehouse 5.Farming as per market demand	
Use of chemical fertilizers and environmental problems	1.Organic farming 2.Promote farm-saved seeds 3.Low cost farming	Seed replacement program. Organic Farming Technology Mission
Stress,family responsibilities	1.Ensure women's participation 2.Camps for stress relief	

	3.Counseling	
	4.Family planning	
Debt, addictions and money lenders	1.Avoid addictions	Ban on illegal private lending.
	2.Avoid loans from private money lenders	Disbursing crop loans through SHGs.
	3.Farmers club formation	Financial assistance for mass community
	4.Hard work on farm	marriages
	5.Avoid expenditure on rituals	

Subsequently, in a focus group discussion, a participant said, “Nowadays there is no respect and dignity for farm workers. The government announced the relief package for the farmers but they are mere passive recipients of it and no efforts are being made in the direction of farmers’ self-reliance for the future”. In order to ensure self-reliance, farmers wanted capacity building and training on newer techniques of farming. We should be taken on study visits to other states or neighboring countries where farmers are working successfully against the adverse environmental conditions.

Even when the government has announced the relief package for farmers, suicides are still going on. In response to this one of the participating farmers suggested the need to develop a ‘support system’ for the farmers and said, “This has become a disease now. Similar to disease conditions such as malaria, filarial etc, there should be a monitoring system to identify vulnerable, poor, small-scale farmers and solve their problems”.

The government encourages farmers to develop alternative sources of income. In response to this, farmers remarked, “the produce of such alternative sources should have market demand. Relief packages in the form of farm equipment are being distributed through the district or taluka level bureaucratic government system. Poor and needy farmers avoid going to district or taluka level as that requires frequent visits. Hence, to make the service accessible and bring transparency, participants said that such distribution should be done at village level ‘Gram-sabha’ [local self-help government] where all the villagers assemble and watch the process. This process will prevent manipulation by the distributing officers and the siphoning off of the poor farmers’ benefit by rich farmers”. Another farmer said, “The benefit from the government package goes to middle level or large scale farmers. Arranging a loan from the bank is a lengthy procedure and banks avoid giving loans to small farmers who have poor capacity to repay the loan. Hence, these poor small farmers go to private money lenders who verbally negotiate the business. He will be repaying such loans until his death.”

Analysis

In the present investigation, ranchers saw obligation, dependence, ecological issues, poor costs for homestead deliver, stress and family duties, government lack of concern, poor water system, expanded expense of development, private cash moneylenders, utilization of substance manures and harvest disappointment as the most critical explanations behind agriculturists' suicides. Members proposed answers for these gatherings of issues. The real subjects that rose up out of the FGD were independence and limit working of agriculturists, a checking and

emotionally supportive network for powerless ranchers and a town level, straightforward framework for the dispensing of help bundles.

As indicated by an examination directed by the Indira Gandhi Institute of Development Research, Mumbai, the real purposes behind agriculturists' suicides are obligation, edit disappointment and low return, sickness of relatives, inability to orchestrate marriage of little girls and an absence of elective wellsprings of income.¹²In our investigation, taking an interest ranchers saw rancher suicides as an intricate interaction of eleven reasons which cover social, political and natural imperatives. Members saw that the human exercises, for example, overabundance utilization of compound manures and utilization of hereditarily changed seeds cause lost land biodiversity and rehashed edit disappointment, which in this manner lead to mind-boggling expenses of development and obligation. It was bothered by government arrangements identified with market costs, misuse by private cash loan specialists and its definitive wellbeing result was dissatisfaction prompting suicide. As found in our examination, ranchers are losing confidence in the legislature because of its inability to structure and actualize ace poor strategies for the greater part of little agriculturists who make due on farming. Numerous states have offered money related help bundles just to the groups of expired ranchers who were not able oversee installments on their bank credits. Arrangement of alleviation offices alone isn't adequate as it has been seen on account of Andhra Pradesh where agriculturists submitted suicide to empower their families to share of the advantages of help packages.¹³In the present investigation, ranchers have recommended the advancement of a checking framework to distinguish defenseless agriculturists and offer them convenient help.

Without standardized fund, the agriculturists ordinarily resort to acquiring from private cash moneylenders. Fundamentally, the advances taken from the private moneylenders are hard to reimburse because of high financing costs. Henceforth, the administration ought to guarantee institutional fund and product protection to little ranchers. Maharashtra state government additionally plan to ease obligation, guarantee new yield advances for both little and enormous ranchers, dispense advances through the agriculturists' Self Help Groups, give appropriation of the product protection premium, energize the advancement of agro-preparing industry, give money related help to network marriage and empower natural farming.¹⁴As proposed by study members, to guarantee straightforwardness, its payment ought to be done through town level Gram-sabha which is significant to recover the confidence of poor little scale agriculturists and guarantee their survival. In the United States, there was an ascent in agriculturists' suicides after the Great Depression. To counter this, the administration began an agriculturists' protection program, which is the main major governmentally overseen protection program in existence.

Agriculturists communicated their anxieties for concoction composts and ecological debasement. The supplements of the dirt are being decimated by the over-utilization of pesticides and synthetic manures expected to effectively develop the hereditarily altered seeds. This rehashed debasement will result in the loss of land efficiency consequently putting future ages of ranchers at considerably more serious danger of neediness and famine.¹⁵In the present examination, members recommended the advancement of natural cultivating and decreasing reliance on products, for example, compound composts, pesticides, and hereditarily adjusted seeds. In rustic China, interminable pesticide introduction was observed to be related with self-destructive propensities, which bolsters discoveries from past studies.¹⁶Given the abnormal state of pesticide presentation and high suicide hazard, an illumination of the causal components

fundamental this affiliation and improvement of proper intercessions are needs for general wellbeing and wellbeing approach.

The requirement for stress alleviation camps and advising administrations for ranchers was communicated. Walker et al announced that even without mental horribleness, ranchers were bound to report that life does not merit living contrasted and the general population.¹⁷In Australia, a solid connection among's dry spells and suicide rates among agriculturists was found. Subsequently, if a dry season was anticipated, there was fast activation of social laborers, analysts and therapists to the dry spell hit locale alongside other strong measures while in India activity is transcendently constrained to political declaration of exgratia benefits and not towards counteractive action strategies.¹In India, there is a need to fortify the National Mental Health Program at essential medicinal services level to offer help and guiding to defenseless ranchers in country zones.

The present field-based developmental investigation investigated the ranchers' apparent reasons for suicides and their answers. These discoveries might be valuable for strategy detailing at neighborhood level. The impediments of the present investigation ought to be remembered. It was a little scale ponder directed in a restricted topographical zone. Consequently, further research at a more extensive dimension is required to affirm our discoveries. All in all, the agriculturists' suicides in Vidarbha are because of the mind boggling exchange of social, political and natural requirements. Subsequently, a far reaching mediation to guarantee confidence and limit working of agriculturists in current cultivating strategies, an observing and emotionally supportive network for helpless ranchers and a straightforward, town level framework for payment of alleviation bundles is required to keep ranchers' suicides sooner rather than later. These proposed intercessions are steady with the ongoing proposals by a self-sufficient regulatory preparing establishment by the legislature of Maharashtra.⁵ Apart from this, there is a need to reinforce the National Mental Health Program at essential human services level to offer help and directing to powerless agriculturists in country regions.

References

1. Behere PB, Bhise MC. Farmers' suicide: Across culture. *Indian J Psychiatry*. 2009 Oct;51(4):242–3. [PMC free article] [PubMed]
2. Fraser CE, Smith KB, Judd F, Humphreys JS, Fragar LJ, Henderson A. Farming and mental health problems and mental illness. *Int J Soc Psychiatry*. 2005 Dec;51(4):340–9. [PubMed]
3. Behere PB, Behere AP. Farmers' suicide in Vidarbha region of Maharashtra state: A myth or reality? *Indian J Psychiatry*. 2008 Apr;50(2):124–7. [PMC free article] [PubMed]
4. Causes of Farmer Suicides in Maharashtra: An Enquiry. Tata Institute of Social Sciences 2005, <http://www.tiss.edu/Causes%20of%20Farmer%20Suicides%20in%20Maharashtra.pdf> , accessed 18 December 2009.
5. Farmers Suicides – Facts and possible policy intervention. Yashwantrao Chavan Academy Development Admenstration 2006 , <http://www.yashada.org/organisation/FarmersSuicideExcerpts.pdf>, accessed 14 May 2010.
6. Medical Education. Mahatma Gandhi Institute of Medical Sciences,

7. http://www.mgims.ac.in/index.php?option=com_content&view=article&id=72&Itemid=84,
8. accessed 14 May 2010.
9. Vidarbha. Wikipedia, <http://www.vidarbha.in/vidarbha16T>, accessed 14 May 2010.
10. Card sorting: How many users to test. Jakob Nielsen's Alertbox 2004, <http://www.useit.com/alertbox/20040719.html>, accessed 14 May 2010.
11. Schrauf R, Sanchez J. The preponderance of negative emotion words in the emotion lexicon: A cross-generational and cross-linguistic study. *Journal of Multilingual and Multicultural Development*. 2004;25(2):266–84.
12. Anthropac software – version 4.98. Analytic Technologies 1996, <http://www.analytictech.com/anthropac/apacdesc.htm>, accessed 14 May 2010.
13. Wakude SM, Mumbai AC. Suicide of Farmers in Maharashtra – Causes and remedies. [http://www.nabard.org/.../Suicide %20of%20Farmers%20in %20Maharashtra.pdf](http://www.nabard.org/.../Suicide%20of%20Farmers%20in%20Maharashtra.pdf), accessed 24 October 2009.
14. Landon M. Environment, Health and Sustainable development. Berkshire (England): Tata McGraw-Hill Education, 2006:1-26.
15. Zhang J, Stewart R, Phillips M, Shi Q, Prince M. Pesticide exposure and suicidal ideation in rural communities in Zhejiang province, China. *Bull World Health Organ*. 2009 Oct;87(10):745– [PMC free article] [PubMed]
16. Walker JL, Walker LJ. Self- reported stress symptoms in farmers. *J Clin Psychol*. 1988 Jan;44(1):10–6.[PubMed]



Agricultural Growth in India : Opportunities and Challenges

Dr. Balasaheb Bapurao Lamdade
A.A.College, Manchar

Abstract:

Agricultural growth is essential for the sector's progress and for overall growth of Indian economy. This growth rate is also a sort of essential condition for improving living standard of those who are dependent on agriculture. Though green revolution has been widely diffused in irrigated areas throughout the country, the dry land areas have not seen benefit of technological breakthrough as witnessed through green revolution technology. Of late, improved varieties of oilseeds and coarse cereals have provided some opportunities for productivity growth in dry land areas. A new phase was started in India's economic policy in 1991 that marked significant departure from the past. Government initiated process of economic reforms in 1991, which involved deregulation, reduced government participation in economic activities, and liberalization. Though much of the reforms were not initiated to directly affect agriculture sector, the sector was affected indirectly by devaluation of exchange rate, liberalization of external trade and disprotection to industry. All these changes raised new challenges and provided new opportunities that required appropriate policy response. Besides, last three decades had witnessed mainly price intervention that had a very limited coverage, and there was a sort of policy vacuum. Because of this, there was a strong pressure on the government to come out with a formal statement of agriculture policy to provide new direction to agriculture in the new and emerging scenario. In response to this, government of India announced New Agricultural Policy in July 2000. In this article review the growth of agricultural, opportunities and challenges since the independence in India.

Keywords- Agricultural growth, Green revolution, Liberalization,

Objectives of the study

- 1 To review the agricultural growth since the independence in India
2. To study the opportunities of agricultural growth and Productivity in India.
3. To study the challenges agricultural growth in India.

Methodology

To analysis will be done with the help of only secondary data. The data collected mainly Reference books , websites, annual reports, research paper etc.

Agricultural growth since the independence in India

After independence, the Government of India gave more emphasis on increasing agricultural production. That's why during the First Five Year plans (1951-56) of India, agriculture sector came to the priority sector. Therefore, more emphasis was on modernization of agriculture. After independence, the review of the growth in agriculture production, yield and area under irrigation in India is taken in following table no.1.

Table No.1

The growth agriculture production in India

(Area - Million Hectares, Production - Million Tonnes, Yield - Kg./Hectare)

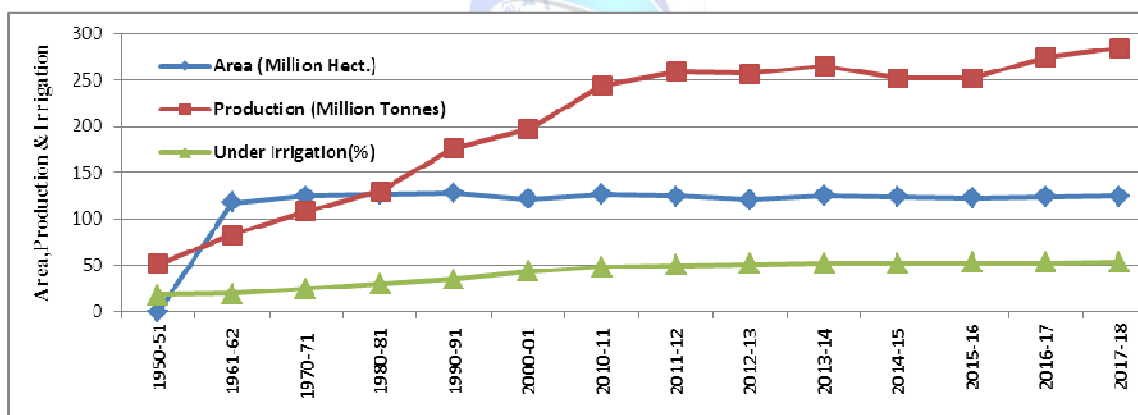
Year	Area	Production	Yield	Under Irrigation(%)
1950-51	97.32	50.82	522	18.1
1961-62	117.23	82.71	706	19.1
1970-71	124.32	108.42	872	24.1
1980-81	126.67	129.59	1023	29.7
1990-91	127.84	176.39	1380	35.1
2000-01	121.05	196.81	1626	43.4
2010-11	126.67	244.49	1930	47.8
2011-12	124.75	259.29	2078	49.8
2012-13	120.78	257.13	2129	51.2
2013-14	125.04	265.04	2120	51.9
2014-15	124.30	252.02	2028	52.02
2015-16	122.65	251.57	2056	52.29
2016-17	123.69	275.11	-	52.46
2017-18*	124.63	284.83	-	52.97

Source: Directorate of Economics & Statistics, DAC&FW

*4th Adv.Est.

Graph No.1

Yearwise growth of Foodgrains in India



Source: Table No.1

The uses of modern seeds, fertilizers, pesticides, and implements made the Green Revolution in India in the 1960's, thereby increasing the country's agricultural production. As a result, the agriculture production of India increased to 108.42 Million tonnes in 1970-71. During the liberalization and globalization era, India's agricultural production has increased from 176.39 Million tonnes to 284.83 Million tonnes up to 2017-18 and agricultural irrigated area has increased 52.97 % in the 2017-18 from 1950-51 in 18.1%.

The review of agriculture production in major States alongwith coverage under irrigation is taken in following table no.2.

Table 2

Major States Foodgrains: Area, Production and Yield during 2015-16

(Area - Million Hectares, Production - Million Tonnes, Yield - Kg./Hectare)

Rank	State	Area	(% Of India)	Production Area	(% of India)	Yield	Area	Under Irrigation (%)
1.	Uttar Pradesh	19.32	15.75	44.01	17.45	2278	20.08	78.4
2.	Madhya Pradesh	15.62	12.73	30.21	11.98	15.46	12.44	58.2
3.	Panjab	6.65	5.42	28.41	11.26	6.59	5.30	98.8
4.	Rajasthan	12.99	10.59	18.10	7.18	12.83	10.33	32.5
5.	West Bengal	6.39	5.21	17.78	7.05	6.13	4.93	48.4
11.	Maharashtra	10.12	8.25	8.07	3.20	797	11.45	18.6

Considering the during 2015-16 agricultural production in India Uttar Pradesh is the leading state in the field. where, 17.45% of the country's production is made and 78.4% areas is under irrigation. After this, the states of Madhya Pradesh, Panjab, Rajasthan and West Bengal are ranked of second, third, fourth and fifth respectively in agricultural production. And Maharashtra is ranked 11th in the overall agricultural production in the country, where only 18.6% of the areas is under irrigation and only 3.20% of overall India.

Opportunities of Agricultural Growth and Productivity in India—

There are three goals of agricultural opportunities for development according to the Planning Commission of India . These are: (a) achieve 4% growth in agriculture and raise incomes by increasing productivity (land, labor), diversification to high value agriculture and rural non-farm by maintaining food security; (b) sharing growth (equity) by focusing on small and marginal farmers, lagging regions, women etc.; (c) third is to maintain sustainability of agriculture by focusing on environmental concerns.

Increased Investment in Agriculture and Infrastructures:

The public investment in agriculture has been declining and is one of the main reasons behind the declining productivity and low capital formation in the agriculture sector. Private investment in agriculture has also been slow and must be stimulated through appropriate policies. Considering that nearl 70 percent of India still lives in villages, agricultural growth will continue to be the engine of broad-based economic growth and development as well as of natural resource conservation, leave alone food security and poverty alleviation. Accelerated investment is needed to facilitate agricultural and rural development through:

- I. Productivity increasing varieties of crops, breeds of livestock, strains of microbes and efficient packages of technologies, particularly those for land and water management, for obviating biotic, a biotic, socio-economic and environmental constraints.
- II. Yield increasing and environmentally-friendly production and post-harvest and value-addition technologies;

The above investments will need to be supported through appropriate policies.

Research, Extension and Technology Fatigue:

The yield growth for many crops has declined in the 1990s. Technology plays an important role in improving the yields. The National Commission on Farmers indicates that there

is a large knowledge gap between the yields in research stations and actual yields in farmers' fields. The public sector research has to increasingly address the problems facing the resource-poor farmers in the less endowed regions. The new agricultural technologies in the horizon are largely biotechnologies.

Credit:

According to the expert group on Financial Inclusion (GOI, 2008) only 27% of farmers have access to institutional credit. It is true that there have been some improvements in flow of farm credit in recent years (Table 5). However, the Government has to be sensitive to the four distributional aspects of agricultural credit. These are: (a) not much improvement in the share of small and marginal farmers; (b) decline in credit-deposit (CD) ratios of rural and semi-urban branches; (c) increase in the share of indirect credit in total agricultural credit and; (d) significant regional inequalities in credit.

Price Policy:

The major underlying objective of the Indian government's price policy is to protect both producers and consumers². Currently, food security system and price policy basically consists of three instruments: procurement prices/minimum support prices, buffer stocks and public distribution system (PDS). There is a need to provide remunerative prices for farmers in order to maintain food security and increase incomes of farmers. There has been a debate on price vs. non-price factors in the literature. In our view both price and non-price factors are important in raising agricultural production. One criticism of procurement policy is that it is limited to few crops and few states. Our field visits to different states reveal the following farmers' perceptions about agricultural prices. The cost of cultivation is increasing due to increase in input prices. Particularly agricultural wages have increased due to National Rural Employment Guarantee Scheme (NREGS) in several states.

Subsidies and Investments in Agriculture:

One major reform needed in agriculture sector relates to reduction in subsidies and increase in investments. Agricultural subsidies are fiscally unsustainable and encourage misuse of resources, leading to environmentally malignant developments. There is trade-off between subsidies and investments. Public investment declined from 3.4% of agri.GDP in the early 1980s to 1.9% in 2001¹⁰³. At the same time subsidies increased from 2.9% to 7.4% of agri.GDP (GOI, 2007). Rise in public and private investment is crucial for enhancing agricultural growth. Fortunately, gross capital formation in agriculture has increased from 12% of agricultural GDP in 2004-05 to 14.2% of GDP in 2007-08 (Table 4). Public sector investment has increased significantly during this period. However, we need 16% agricultural GDP as investment in order to get 4% growth in agriculture.

Irrigation and Water Management:

Agriculture development is depend on irrigation facility. In India 52% area under irrigated. Development of irrigation and water management are crucial for raising levels of living in rural areas. Major areas of concern in irrigation are: decline in real investment, thin spread of investment, low recovery of costs, decline in water table, wastages and inefficiencies in water use and, non-involvement of users Both investment and efficiency in use of water are needed. Major areas of reforms needed in irrigation are: stepping up and prioritizing public investment,

raising profitability of groundwater exploitation and augmenting ground water resources, rational pricing of irrigation water and electricity, involvement of user farmers in the management of irrigation systems and, making groundwater markets equitable (Rao, 2005). In a recent study, Shah et al (2009) indicate that the impact of the drought of 2009 is expected be less severe than the drought of 2002 due to ground water recharge in the last few years. Ground water can be exploited in a big way in Eastern region. Watershed development and, water conservation by the community are needed under water management. New watershed guidelines based on Parthasarathy Committee"s recommendations were accepted by the Central Cabinet in March 2009.

Challenges of Agricultural Growth and Productivity in India:

1) Emerging Challenge: Climate Change:

Climate change is a reality. India has reasons to be concerned about climate change. Vast majority of population depends on climatic sensitive sectors like agriculture, forestry and fishery for livelihood in the country. The adverse impact of climate change in the form of declining rainfall and rising temperatures and thus the increased severity of drought and flooding, would threaten food security and livelihood in the economy. For example, rise in temperature would affect wheat yields.

2) Proper management of irrigation:

Irrigation in India can be broadly classified into two parts, each having different issues. There are a few major problems with surface irrigation. Irrigation facilities are inadequate and there is no effective system management for how much water is stored, how much issued for irrigation or what value can be added to this water. Consequently, farmers depend on rainfall, specifically the Monsoon season. A good monsoon results in robust growth for the economy as a whole, while a poor monsoon leads to sluggish growth. With groundwater, the major problem is of equity. Those who are better able to extract water take away disproportionately from groundwater aquifer's, causing various problems. One is that if groundwater is close to coastal areas, it may get mixed with salt. In other places, the groundwater level drop drastically and wells go dry, making it difficult to get drinking water. Over-pumping made possible by subsidized electric power misleading to an alarming drop in aquifer levels.

3) The average size of land holdings is small:

The average size of land holdings is less than 20,000 m² and subject to fragmentation due to land ceiling acts and, in some cases, family disputes. Such small holdings are often over manned, resulting in disguised unemployment and low productivity of labour.

4) Poor socio-economic condition of farmers:

Illiteracy, the root cause of farmers' poor socioeconomic condition, should be tackled vigorously. Though the government is taking the initiative by adopting policies like universal education, a highly centralized bureaucracy with low accountability and inefficient use of public funds limits their impact on poverty. International Journal the availability of drinking water and access of groundwater to the poor.

5) Dependence of agriculture on weather:

Agriculture in India and many other developing countries depends on the monsoon because irrigation facilities are not fully developed. If the monsoon fails or it rains heavily or untimely, it ruins agricultural production. Agriculture is also a gamble with temperature. Too

high temperature negatively affects the productivity of a crop. The present insurance system in India does not cater much for any loss of crop due to unfavorable and unavoidable climatic conditions or pest epidemics.

Conclusion:

Raising productivity in already agriculturally advanced regions would involve more cost in terms of inputs compared to underdeveloped regions as the developed regions are at a higher level on the production frontier. Since the domestic supply would be facing competition from imports, the emphasis should be on increase in productivity in a cost effective manner. This, in turn, require paradigm shift from output growth or maximizing production to efficient growth. The twin goal of increase in productivity and efficiency can be achieved by harness sing potential of underdeveloped regions and through development of specialization pockets. The focus must shift to area specific enterprises as has been the case of dairying in Gujarat, rice-wheat in Punjab, apple in sub-temperate West Himalayan region, grapes in Nasik region of Maharashtra, mangoes in Rayalseema region of Andhra Pradesh. Large scope exists for raising productivity of most of the crops by ensuring that improved technologies already developed in various states are adopted by farmers. Efforts in technology generation go waste if it is not disseminated to end users. This requires rigorous efforts on extension front. NAP should evolve ways and means to strengthen existing extension mechanism and involve NGOs, Panchayats and private sector in extension activities. Beside technology, shift in crop pattern from low value to high value offers vast scope for output growth. Irrigation is vital resource for raising agricultural output but strain on water resources is growing. This requires adoption of improved irrigation technologies that improves efficiency of water use. New policy should provide effective incentive for adoption of drip, sprinklers and other water efficient technologies.

References :

1. 'Agricultural Statistics at a Glance 2016' :Government of India Ministry of Agriculture & Farmers Welfare Department of Agriculture, Cooperation & Farmers Welfare Directorate of Economics and Statistics
2. Datt and Sundharam, 'Indian Economy' C.Chand publishing LTD, New Delhi, Edition 2012
3. Dev. and K.Subbarao (2006 eds.), India in a Globalizing World: Some Aspects of Macro economy, Agriculture and Poverty, Essays in honour of C.H. Hanumantha Rao, Academic Foundation
4. Mishra.P.K.(2007): "Agricultural Market reforms for the benefit of Farmers", Kurukshetra, October. Vol.55, No.12.
5. Rao, C.H. Hanumantha (2005), Agriculture, Food security, Poverty and Environment,
6. <http://agricoop.gov.in>
7. <http://economictimes.indiatimes.com/>

A Role of Agriculture Sector in Indian Economy

Dr. Parag P. Kadam

Head, Post-Graduate Dept. of Economics,
Ahmednagar College,
Ahmednagar. Mo-8605125115.
Kadamparag1.2011@rediffmail.com

Abstract-

A developing country like India, agriculture sector is the backbone of the economy. It provides livelihoods, employment, income, food security, etc. This is the only sector from where labor force is available to other sectors of the economy. Agriculture sector also provide raw material and demand for the final goods and services. In short, agriculture sector is the lifeline of the Indian economy. Therefore, it is observed with the developmental process of the developed countries that the share of the agriculture is decline and the share of the industry and service sector increases as the development goes ahead. In Indian economy the same thing is happening the share of agriculture is declining but the pressure on that sector is quite same. So, it is necessary to make agricultural sector more profitable for rural masses. As the Indian economy is the second largest populated country of the world and its major problem are related to a large number of population as- employment generation, food security, poverty alleviation, fulfillment of basic needs of the peoples i.e. transport, medicine, infrastructural facilities, etc. Indian agricultural sector is changing its crop pattern to make sustainable development in agriculture. Now the Indian government focuses on above mentioned problems and carried out several policies to overcome on it.

Introduction-

Indian economy is a developing economy. It is a fast growing economy compare to developed economies of the world as the GDP growth rate of Indian economy is near about 6 to 7 percent, it is world's 6th largest economy. Indian population is second largest in the world having a majority of young population. Service sector alone contributes more than fifty percent to GDP and growing fast, as compare to industrial sector is contributing steady share to GDP near about 26 percent. The agriculture sector is the backbone of the Indian economy, majority of the population is engaged in agricultural activities for their livelihood and employment but the share of agricultural sector in GDP of Indian economy is declining, it is near about 17 percent¹. There were 520.4 million labor forces available in India out of this 47% was engaged in agricultural sector, 22% in industry and 31% was engaged in service sector in year 2016-17². India's total export in 2016-17 was \$275.8 billion and export goods from agricultural sector products was 13.2%, fuels and mining products 15.7%, manufacturers 68.4% and others 2.7%. India's total import in 2016-17 was \$384.3 billion and import goods agricultural sector products

1. Government of India- 'Share of different sectors in Indian GDP' Chapter 10, (February 2014), originated from <https://en.wikipedia.org>
2. "Labor force, total". World Bank. World Bank. Retrieved 2 September 2016.
was 7.1%, fuels and mining products 33.1%, manufacturers 47.8% and others 12%¹.

Indian economy accepted mixed economy where public and private exists together in economy. Heavy and monopolistic type nature industries put it in government's basket and others opened to private sector. Therefore, after green revolution in India since 1965, the

condition of agricultural sector has been improved through using high yielding varieties of seeds, fertilizers and more irrigation facilities; the agricultural production trend showed increasing and profitable to agriculturists. Increased production and productivity increased the income and standard of the agriculturists. Therefore, the development is very limited to some products; it should be spread towards whole field of agriculture sector of the economy.

Objectives of the Study-

1. To understand the role of the agricultural sector in Indian economy.
2. To study the reasons of unsatisfactory contribution of agricultural sector in Indian economy.
3. Properly identification of the reasons is necessary to suggest measures to overcome on it.

Hypotheses-

it is observed that the situation is not far different as agriculture is depends upon rainfall. The nature of agricultural sector is depends on the nature. Therefore, allied business operations will help agriculturists to make up loss with these activities.

Research Methodology-

The character of the research study is descriptive research. To fulfill the requirement of this topic of research study researcher has selected secondary data to study the problem. The secondary data collected through government published reports, journals, books and internet.

Progress Agricultural Sector in Indian Economy-

In India Government has taken several steps to carry on sustainable development in agricultural sector. Indian agriculture is depend upon the mercy of rainfall and the climate, if it is suitable then productivity gives tremendous profit but in reality it never happened. More than fifty percent of the agriculture is dependent on rainfall; they do not have irrigation facility.

The growth rates of agriculture & allied sectors have shown a fluctuating trend over the period of 2012-13 to 2016-17 (Table 1) Agricultural sector in India is divided into a small, medium and marginal yields, due to small lands irrigation or advanced technology is not possible to apply for it, farmers do not have a finance for heavy machinery, digging well, etc. these are some basic needs of the agriculture sector which are not yet fulfilled and naturally resulted into backwardness of the sector.

1. "India - WTO Statistics Database". World Trade Organization. Retrieved 1 March 2017.

Table No. 01 -Agriculture sector – Key indicators

Sr No.	Period	GCF in Agriculture & Allied Sector (in Rs. Crore) at 2011-12 prices			GVA in Agriculture & Allied Sector (in Rs. Crore)	GCF in Agriculture & Allied Sectors as percentage of GVA of Agriculture & Allied Sector		
		Public	Private	Total		Public	Private	Total
01	2011-12	35696	238175	273870	1501947	2.4	15.9	18.2
02	2012-13	36019	215075	251094	1524288	2.4	14.1	16.5
03	2013-14	33925	250499	284424	1609198	2.1	15.6	17.7
04	2014-	3671	24070	27741	1606140	2.3	15	17.3

.	15	4	1	5				
05	2015-	4495	22008	26503	1617208	2.8	13.6	16.4
.	16	7	1	8				

Source: Central Statistics Office(CSO), M/o Statistics & Programme Implementation. Originated from Govt. of India, Economic Survey 2017-18 Volume 2, Page No. 100. *As per provisional estimates of Annual National Income, 2016-17 and quarterly estimates of GDP for the 4th Quarter (Q4) of 2016-17 (latest available) released on 31st May 2017.

The Gross Capital Formation (GCF) in Agriculture and Allied Sectors relative to Gross Value Added (GVA) in this sector has shown a fluctuating trend from 18.2 per cent in 2011-12 to 16.4 per cent in 2015-16 (Table 2). Gross Value Added in agriculture and allied sector showed a steady growth from Rs.1501947 crore to Rs.1617208 crore during 2011-12 to 2015-16. The Gross Capital Formation in agriculture and allied sectors showed a decline trend as the private investment reduced.

Table No. 02 - Production of Major Agricultural Products (in Million Tonnes)

Sr. No.	Crop	2013-14	2014-15	2015-16	2016-17
01.	Total Cereals	245.79	234.87	235.22	251.98
02.	Total Pulses	19.25	17.15	16.35	23.13
03.	Total Food grains	265.04	252.02	251.57	275.11
(in Lac Tonnes)					
04.	Total Nine Oilseeds	327.49	275.11	252.51	312.76
05.	Cotton #	359.02	348.05	300.05	325.77
06.	Jute # #	110.83	106.18	99.40	104.32
07.	Mesta # #	6.07	5.08	5.83	5.30
08.	Jute & Mesta # #	116.90	111.26	105.24	109.62
09.	Sugarcane	3521.42	3623.33	3484.48	3060.69

Sources: Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare. Originated from Govt. of India, 'India in Figures-2018', Ministry of Statistics and Programme Implementation, New Delhi. #: Lakh bales of 170 kgs each. ##: Lakh bales of 180 kgs each.

Table No.02 explains the productions of major agricultural products during 2013-14 to 2016-17 in India. It is observed that every production produced during the same period shown a fluctuating trend. Obviously, due to abnormal conditions of climate that directly affect the production and productivity of the farm. Agricultural production is used as a raw material for industries and for food for peoples but the fluctuations in production and its prices directly effects on the development of the economy.

Table No. 03 - Selected categories of land use in India

(Area in Million Hectares)

Year	Net Area	Total Cropped	Area Sown	Net Irrigated	Gross Irrigated	Area Irrigated
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	Sown	Area	More Than Once (3-2)	Area	Area	More Than Once (6-5)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2010-11	141.56	197.67	56.12	63.67	88.94	25.27
2011-12	140.98	195.80	54.82	65.71	91.79	26.08
2012-13	139.94	194.25	54.31	66.29	95.25	25.96
2013-14	141.43	200.95	59.52	68.12	95.77	27.66
2014-15	140.13	198.36	58.23	68.38	96.46	28.07

Source: Agricultural Statistics at a Glance , Directorate of Economics & Statistics, Department of Agriculture Cooperation & Farmers Welfare. Originated from Govt. of India, 'India in Figures-2018', Ministry of Statistics and Programme Implementation, New Delhi. Note : Data is provisional.

Table No. 03. explained that during 2010-11 to 2014-15 net area sown, total cropped area and area sown more than once are shown a fluctuating trend. Net irrigated, gross irrigated and area irrigated more than once is increased during the same period. However, the progress is very less or slower growth.

Findings and Observations-

it is cleared that in Indian economy agriculture sector has a vital important role to play for the sustainable development. Agriculture is a lifeline for the developing like India as it provides employment, livelihood, income, food security, raw material for industry, demand for goods and services, etc. in short, agriculture pushes the economy towards the higher development overcoming the other sector weaknesses.

If agriculture wants to be a profitable business then its productivity must increase. Management of farms for the higher productivity depends upon the appropriate use of inputs like land, labor, machines, seeds, fertilizers, capital or loans, irrigation, seeds, marketing and transportation, etc.

In Indian agricultural sector has a potential to provide food to its second largest population of the world. No one country depends upon another country for the basic needs like-food, shelter and clothes, otherwise it would be difficult to maintain its independence. And from that point of view agriculture has immense importance to feed their citizens.

Indian agriculture sector produces near about every type of production within its farms and fulfill the requirement of economy and at the same time export also gives good amount of foreign currency to the economy.

Employment generation is the biggest problem for the highly populated developing countries like India. In India agriculture is uses labor intensive technique to produce production,

majority of the rural population get employment in rural areas and pressure of employment generation is releases.

Indian economy is spread over five lacks villages and the main business of the rural masses is farming. If agriculture sector achieve its developmental goals then it would be benefited to the large number of masses those lives in country side.

Urban areas are facing several problems due to migration of rural population in search of employment and livelihood, the pressure is increasing day by day, crime and violence is increased, big issues of law and order stands before the community, slum areas are increasing very rapidly. Increase in the density of population in urban areas through migration increase the burden upon resources. Increasing prices of food and shelter, inflation, health issues, medical facilities, etc. creates new challenges to government.

Conclusion-

Understanding all these above mentioned issues it is clear that the agricultural sector is predominant sector of the Indian economy for the sustainable development. Development in agriculture is most important not only for the development in agriculture but for the industrial and service sectors, too. In the context of a developing country like India, agriculture is the key element to achieve the success. Government realizes it and from the very beginning of the planning more and more attention paid towards the development of agriculture through policy making.

References-

1. Ruddar Dutt, KPM Sundharam, "Indian Economy", 54th edition, S.Chand & Company Ltd. New Delhi, 2006. P.No.821-822
2. Marathi Arthashatra Parishad, "Arthsawad" Quarterly -National Reaearch Journal, various issues. (ISSN 0973-8452)
3. Agrawal A N, "Indian Economy: Problems of Development and Planning", 23rd Edition, Wishwa Prakashan, New Delhi- 1997.
4. Misra, and Puri, "Indian Economy". 23rd Edition, Himalaya Publishing House, Mumbai, 2005.
5. Rudder Dutt and K P M Sundharam, " Indian Economy", S Chand & Co., 2005.
6. V S Vyas, 'Agriculture: Second Round of Economic Reforms', EPW, Vol.XXXVI, No.10, March 10-16-2001.
7. Govt. of India, 'India in Figures-2018', Ministry of Statistics and Programme Implementation, New Delhi.
8. Agricultural Statistics at a Glance , Directorate of Economics & Statistics, Department of Agriculture Cooperation & Farmers Welfare.
9. Central Statistics Office(CSO), M/o Statistics & Programme Implementation.
10. Govt. of India, Economic Survey 2017-18 Volume 2, Page No. 100.
11. World Trade Organization, "India - WTO Statistics Database". Retrieved 1 March 2017.
12. Government of India- 'Share of different sectors in Indian GDP' Chapter 10, (February 2014), originated from <https://en.wikipedia.org>

Indian Agricultural Sector

Dr. Suhas Avhad

Professor & Head

Department of Economics

S.M.B.S.T.College,Sangamner

Dr. Balasaheb Wakchure

Department of Economics

S.M.B.S.T.College, Sangamner

Introduction

Agriculture is a way of life, a tradition, which, for centuries, has shaped the thought, the outlook, the culture and the economic life of the people of India. Agriculture, therefore, is and will continue to be central to all strategies for planned socio-economic development of the country. Rapid growth of agriculture is essential not only to achieve self-reliance at national level but also for household food security and to bring about equity in distribution of income and wealth resulting in rapid reduction in poverty levels.

Indian agriculture has, since Independence, made rapid strides. In taking the annual food grains production from 51 million tones in early fifties to 206 million tones at the turn of the century, it has contributed significantly in achieving self-sufficiency in food and in avoiding food shortages.

Over 200 million Indian farmers and farm workers have been the backbone of India's agriculture. Despite having achieved national food security the well being of the farming community continues to be a matter of grave concern for planners and policy makers. The establishment of an agrarian economy which ensures food and nutrition to India's billion people, raw materials for its expanding industrial base and surpluses for exports, and a fair and equitable reward system for the farming community for the services they provide to the society, will be the mainstay of reforms in the agriculture sector.

Problems of Agriculture Sector :

1) Agriculture Still a Gamble in the Monsoons:

Despite almost six decades of the planning, agriculture in India has continued to be a gamble in the monsoons, while western Rajasthan and a part of Thar desert have a very uncertain rainfall of 4 to 5 inches a year, cherapunji in assam has an annual rainfall of 450 inches, while considerable areas face drought conditions in a particular year, some areas encounter the fury of floods, some areas face the problems of water logging and salinity

2) Heavy Pressure Of Population :

The Indian agriculture is characterized by heavy pressure of population. About 70 per cent of the total population of the country is directly or indirectly dependent on agriculture. At present, the per capita agricultural land is only about 0.10 hectare as against 0.30 hectare in 1951. The world average of per head availability of agricultural land is about 4.5 hectares. The fast growth of population industrialization and urbanization are putting enormous pressure on arable land.

3) 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.

4) Declined in Investment in Agriculture :

We have generally been given to understand that government investment was significant in boosting growth in agriculture. Besides, the roll of the government was not only raise investment but also induce private investment in agriculture. The worrying aspect is that private investment in agriculture is almost completely concentrated in the northern regions particularly Punjab, Haryana and Western Utter Pradesh and almost completely absent in the other parts of the country

5) Limited use of New Agricultural Technology:

Indian agricultural productivity is very less compare to world standard due to use of absolute farming technology coupled with this, lack of understanding of the need for sustainability in the poor farming community has made thing worse. Since 1961 the emphasis shifted to use of seeds fertilizers-water technology, know as the new agricultural strategy. But the new strategy succeeded only wheat and to a small extent in rice. Other food and non-food crops did not show perceptible improvement in production. Dry land cultivation was not touched at all by the new agricultural strategy.

6) Failure of the Land Reforms :

Till the middle of the 1970 the government hoped to implement land reforms, specially tenancy legislation and ceiling on land holdings. The Government failed to implement the land reform measures and there was very little of land redistribution in favor of marginal farmers and landless labors or protection of tenants from exploitation or from eviction. The bitter conflict between land lords and the landless in Bihar, Andhrapradesh and other states-the rapid expansion of the nasality movements-is in the result of the failure to implement land reforms.

7) Unbalanced Agricultural Development :

Bulk of the increase in output, particularly food grains had been concentrated in a few progressive regions which were already enjoying high levels of consumption of food grains. Many region had continued to be a poor and backward, indicating the necessity for the balanced growth of a agriculture as between different regions. Indian agriculture display another type of imbalance in the form of disparities growth between food grains and non-food grains and between different food grains part of these inter crop disparities in growth also reflected regional imbalance.

8) Usuries Capital and Rural Indebtedness :

During the pre-independence period, moneylenders and Mahajans ruled the roost as there was no other credit agency worth the same name. Taking advantage of there position, these people exploited the farmers in a number of ways. The small and marginal farmers continue to depends on money lender for fulfilling there credit requirements to a large extent and thus become victims of exploitation by the latter. The phrase "Once in debt, always in debt" expresses the condition these graphically.

9) Agriculture is unorganized activity today :

Indian agriculture is largely an unorganized sector. No systematic institutional and organizational planning is involved in cultivation, irrigation, harvesting etc. Institutional finances are not adequately available and minimum purchase price fixed by the government do not reach the poorest farmer.

10) 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.

Solutions to Solve the Agricultural Problem :

1) Special agricultural zone :

There is an need to establish special agricultural zones, where only farming and agriculture related activity should be allowed.

2) Multiple crops :

The Cultivation of multi crops such as coconut, turmeric, pine apple, banana, apple, papaya, ginger will yield profitable results to the farmers.

3) Need to modernize agriculture :

To Introducing a new techniques in the agricultural Sector which guarantee a definite success, an increase in youth participation on agricultural fields is economically possible. This can be attained only by implementing new technologies. Research efforts should continue for the production of crops with higher yield potential and better resistance to pests. Technological advancement in agriculture should be passed down to the small farmers. Where the existing crops would not do well under drought and weather conditions, the farmers should be helped to shift to cultivating crops that would be easy and economical to cultivate.

4) To Educate the farmers :

In India many farmers are not aware of crop rotation due to his education. Though education in urban areas has improved a lot, the government has ignored the same in rural areas in general and in agriculture sector in particular. This is the reason why farmers are not adequately aware of the various schemes provided by the government.

5) Clubbing of small fields may help :

Several farmers who own small piece of land can join together and combine all small fields into one large chunk. This may help in variety of ways.

Conclusion :

Indian Agricultural provides around 60% employments work force in the country and contributes only about 14% to the overall GDP it's impacts is felt in the manufacturing as well as the service sector as the rural population has become a significant consumer of goods and services in the last couple of decades. India was a developing country, the agricultural condition is poor and the agricultural Production & Production following down rapidly. In the world of Globalization we need to change the policies to develop the Agricultural Sector to improve the quality of food grains and increase the productivity of agriculture through modern agro technology.

Reference :

1. Indian Economy:Prospects & Challenge,Dr.Suhas Avhad, Dr.Chintamani Nirali Prakashan
2. Pratiyogita Darpan-Indian Economy
3. <http://rrtd.nic.in/agriculture>
4. Kolambe Ranjan, Indian Economy,Bhagirath Publication, pune.

Problems and Consequences of Farmers in Maharashtra

Dnyanesh Dilip Mahatekar

Research Scholar
Post Graduate Research in Economics,
S.M.B.S.T. College, Sangamner,
Dist-Ahmednagar, State-Maharashtra

Rupali Nivrutti Jadhav

M.A.(Eco), M.Phil
A/P-Rahata, Dist-Ahmednagar,
State-Maharashtra

India is an agricultural nation and agriculture is the main tool of livelihood and Maharashtra's share is bigger on the national level. However, there is a great challenge ahead of today's farming due to drought, high rainfall, change in environment, water levels decreased and sowing agriculture. In the face of these challenges, the farmer lives in the area.

Even today, through various schemes and guidance, the government is trying to spread many schemes to the farmers, yet why is the farmers uncomfortable? Why does he feel that injustice is happening to him? And why does he do any agitation or agitation for his demands? Why are the number of suicides rising day by day? It is necessary to go to the root of these questions. The same misfortune of our country is that nobody is ready to go to the bottom of these questions. Considering the exact problem of farming, it is necessary to find an answer on time. It is necessary to change the thinking process of farmers, scientists, agricultural officers, extension machinery, agricultural graduates and government. This is only after interacting with people working in different areas of the state.

It is not possible to say that the schemes implemented by the government are not for the needy farmers. Government plans many schemes for farmers. They are also good. But the mechanism of access to farmers is not enough. It is the government's priority to convey the government's plan to the farmers. It is also important for the farming industry and strategic planning for farmers.

Since agriculture is not a guaranteed quality, today's agriculture is in crisis. Therefore, it is also necessary for the farming to get good prices. The farmers in the farmer and the customer will suffer loss due to farmers. In order to avoid these losses, farmers need to expand their systems to a large extent by directing them. So the farmer will get good prices. The current manpower is a question of a peasant right next to a farmer. Even today's farming industry is in trouble. Farmers do milk business as an addiction business, but milk business is also in loss due to lack of proper prices of milk.

Many times it is said that India is an agricultural country. But it is equally true that this agricultural head has put a farmer in trouble with many problems. Presently, the Indian agricultural business is found to be in the grip of uncertainty, and it is being seen migrating to rural masses day by day. Agriculture in India is dependent on 55 to 60 percent rain water. Farmers have suffered due to excessive rainfall, drought, uneven rainfall, and hailstorm of nature. If the rain is accompanied by a shortage of seeds and fertilizers. Farmers are in trouble today due to such problems like poor quality of farmland, if there is a good crop. Farmer is the only country in the country who has no right to decide the prices of its own produce. The higher

the product, the more loss the farmer has to bear due to the effect of the farming cost. That is why the situation of the farming class has been pathetic. Our farmer is a tragedy of farmers' king, victim king but hard work, life of hard work, untimely wander for water, lifting a debt by farming loans, and not taking any option as a substitute, if we do not suggest as a substitute for our lives, then we should be committing suicide.

Political parties come to power by capitalizing the sentiments of farmers, but once the power comes into power, the demands of the farmers are eased aside. During the BJP government, the alliance of farmers in Maharashtra has always been the subject of discussion. After receiving the loan from the BJP government, more than 2414 farmers in Maharashtra have received information that they have committed suicide due to aggravated farm-related problems, according to a report. In the year 2017 -2018 farmers of Maharashtra have seen the agitation for various demands. But carrots were shown to the farmers by the government. The agitating movement started by the protesters, or the protest march towards Nashik, has got the assurance only from the government.

Major issues of Maharashtra farmers -

1) Large corruption in fertilizer & seed sales -

Through the Government of Maharashtra, the farmers will be provided various seeds and fertilizers. But these fertilizers and seeds often have adulteration. Farmers have to face losses due to groundwater seeds. There are many instances of not only corruption in these seeds but also large scale corruption in the official administration of Maharashtra government for the sale of fertilizers and seeds to the seller. According to a trader, these licenses are given to the dealers in central central building of Pune but when the cost of the passengers is Rs 1500, a bribe of 5 lakh rupees is sought for the same. So a result of this, the result of this product is that the product being offered directly to the farmers is notified by the name of a trader.

2) These politicians dominate the credit society –

Often farmers choose to take loans because they do not have enough money available to provide loans to farmers in rural areas and there is not enough money for the cost of production. At such times, the operators see them as farmers' choice. But in these banks, the dominance of political leaders is the fact that there is a phenomenon in Maharashtra. These co-operatives are used to rehabilitate political leaders rather than rehabilitating farmers. Often, these funds have been swallowed by the government by the government without getting to the farmers the funds available for various crop schemes. Many examples of crop insurance or compensation received from the government have been brought down in the middle of the rural backward backward farmer. It is certain that the poor schemes of government schemes and victimization of the government Political leaders, however, are not limited to the Board of Directors, while the picture is being opened by independent operatives.

3) Capital of the feelings of farmers made by leaders -

RajuShetty and SadabhauKhot, who received West Maharashtra as farmer leaders, have proved to be useful for the farmers, it is a matter of research in real sense. RajuShetty, a MP from Sangli'sHatkanangale constituency, has often made agitations for the farmers through Swabhimani Party. But due to political vendetta between RajuShetty and SadbhauKhot, the question of farmers' problems is getting worse. President of All India KisanSabha Dr. Under the chairmanship of Ashok Dhawale and Secretary AjitNavale, on 6th March 40 thousand farmers

migrated to Mumbai from the long march 180km through Nashik. These farmers, who arrived in the Azad Maidan, took the loan waiver, ineligible claims under the Forest Rights Act in 6 months, give proper price to the farmland, if there is evidence of missing places given before 2006, then it should be held inaccessible or ineligible cases. There were several demands including check again. This question is currently being present if these farmers decide to go ahead.

4) Suicide in the Ministry for Justice -

Dharma Patil, who lives in Vikharan village of Shindkheda in Dhule district, committed suicide in Mantralaya. The State Government has started land acquisition for agricultural land at Shindkheda for the thermal power project. Dharma Patil had acquired five acres of land in this area. Dharma Patil received a compensation of just Rs 4 lakhs for the government. Dharma Patil had a claim that the neighboring land owner was compensated by the market price. Dharma Patil had planted 600 mango trees in the field. Similarly, after receiving a bore well, well-received land for the project, the government's policy of giving four times the amount of land was given only to the beneficiaries of Rs 4 lakh 3 thousand rupees. An aggrieved farming policy led to an old farmer losing his life. What is the biggest tragedy in the history of Maharashtra for the first time in the history of the Ministry of Civil Aviation for the protection of citizens?

5) Most Suicide Farmers and agricultural laborers of Maharashtra

The highest number of farmers and agricultural laborers suicides has been committed in Maharashtra. In the country, 11,370 people committed suicides by farmers and livestock. Of these, 3661 belonged to Maharashtra. The government has given these shocking statistics. As per the provisional data given by NCRB, 1111 laborers and 2550 farmers who have been active in farming in Maharashtra have committed suicide. According to the NCRB, in 2014, 12,602 farmers and agricultural laborers committed suicide in 12,360 and 2015 in the country. In Maharashtra, in 2014, a total of 4,004 farmers and agricultural laborers committed suicide. It had 1,436 agricultural laborers and 2,568 farmers. In 2015, a total of 4291 farmers and agricultural workers committed suicide. This includes 3,030 farmers and 1,261 farm laborers.

It is not possible to say that if the present government is unable to solve the problems of the farmers.

Reference –

- 1) Dhule Police Arrested Dharma Patil's Wife And Son For No Reason, Maharashtra Times, 27 Dec 2018
- 2) Punam Kulkarni, Corruption is more important than the problems of farmers, hwmaraathi, 5 July 2018
- 3) Maharashtra Agriculture Day: Scheme attractive 'though ..', Pudhari, 1 July 2018

Beekeeping for Sustainable Development of Agricultural Sector of India

Mr. Devdatta Dhondiram Shete

Asst.Professor- Agasti Arts, Commerce And

D.R. Science College Akole, Tal-Akole.

E-Mail-Prof.Shete2013@Gmail.Com

Contact No-965700327

Abstract:

In India, beekeeping is being practiced traditionally since time immemorial. In 1953, the All India Khadi and Village India started the work of organizing the honey industry which was subsequently taken over by Khadi and Village Industry Commission (KVIC) in 1957. Like dairy farming beekeeping is also practiced mostly by marginal and landless farmers. The farmers earns additional income which is a supplement income to agricultural income. Apiculture provides employment and helps in nutritional intake of rural population. According to the International Labor Organization (ILO), India's unemployment rate is expected to be 3.5 percent in 2018. In India, apiculture provides employment to about 3 lakh rural people. Honeybees are important in sustaining plant bio-diversity and also improves yield of crop by cross pollination. In 2015-16 KVIC targeted to train 2 lakh people and support new bee-keepers under Entrepreneurship Development Program under P.M.E.G.P. In 2015-16 super i.e. 20 frames producing approximately 25 kg honey per annum which was 18-20 kg in 2014-15. As per 2016-17 estimates, about 30 lakh bee colonies will produce 94.5 thousand MT of Honey.

Keywords:Bee-keeping, Apiculture, Sustainable Development,Bio-diversity,pollination.

Introduction:

The Indian economy is agriculture based economy. Agriculture sector is one of the most important sector of Indian economy. As per first five year plan of 1951 near about 70% of population depends on agriculture. The major part of total population of India is living in rural area where agriculture is the only source of primary occupation. Thus development of rural area and obviously development of agriculture should become first priority of government. 43% of the geographical land of the total land of India has occupied by agriculture sector. Since independence agriculture is contributing a major portion in our National Income. As per first five year plan of 1950-51, agriculture and agro based industries contributed near about 59% of total national income. The contribution in NNP of agriculture is gradually declined to 48% and further to 23% in 2004-05. Gross Value Added (GAV) by agriculture, forestry and fishing is estimated at Rs.17.67 trillion (US\$274.23 billion) in FY 2018. In 2014 an agriculture sector contributes around 18% to the total Gross Domestic Product of India. ¹The share of agricultural commodities in total export of India for 2015-16 is near about 12.55%². Agriculture products exports include quantity of 22285458 Metric Tons (MT) which contributes in value of Rs.1,19,72,490.25 lakhs. Agriculture also plays an important role in supplying raw materials to various important industries of the country. Near about 50% of the income generated by manufacturing sector comes from agro-based industries of the country. The key of the progress of Indian economy is

¹ Department of Agriculture & Statistics, 2014.

to give due emphasis on agricultural and non-agricultural sector. The industrial growth will increase the demand for raw materials, wages etc. It helps to increase the agricultural employment and income. This increased agricultural income creates market demands for industrial products which results in providing stimulus to industrialization and market development. Since independence the Indian government give priority to the development of agriculture and number of steps had been taken to increase the agriculture production. Agricultural sector provides employment to near about 49% of the workforce of total population.

In external and internal trade of India, agriculture sector playing a very crucial role. As per estimates near about 70% of total exports are originated from agricultural sector. Agriculture sector also helps country in earning foreign exchange which utilized to meet the required import bill of the country. Agriculture sector also plays a major source of revenue to both the Central and State Government of the country. The government are getting a substantial income from raising land revenue. As a result the prospect of planning in India much depends on agricultural sector. A prediction of good crop will used to ensure better business conditions. Contradictory a bad crop prediction leads to a worst business climate of the country which ultimately leads to failure of economic planning. Therefore the development of agriculture sector is the basic pre-requisite of sectorial diversification and development of the economy.

Problems Faced by Indian Agriculture Sector:

The condition of Indian agriculture is very backward though it is considered as the backbone of Indian economy. Agricultural products are not alike of industrial products as it takes stipulated time to produce. Agricultural products have been supplied to living people and animal on some uncertain things like adverse climate conditions, heavy rainfall, drought, uncertainty of market, backward technology, marginal landholding etc. Some of the factors of low agricultural productivity are belongs to the natural factors and these are not controllable e.g. soil quality, climate, natural resources of water and irrigation etc. But other factor can be controlled and productivity of agriculture can be increased. These controllable factors are belong to density of population, accumulation of capital, technology, land tenure system, credit and marketing structure etc.

In spite of agricultural sector is dominating sector among all sectors, it has been subjected to number of problems. Since independence the agricultural sector of India has been facing the problems like inequality in land distribution, defective land tenure system, poor farming techniques and agriculture practices, inadequate use of input, inadequate irrigation facility, absence of crop rotation, and low agriculture productivity. Agriculture productivity which composed of both productivity of land and productivity of labor too. The productivity of land and crop is among the lowest in the world. Average yield per hectare in India is much below the world's average in many crops. The productivity of many crops and labor is much lower as compare with the productivity of undeveloped countries in the world. Therefore there is tremendous need to increase the productivity of agriculture in India.

Apiculture for Sustainable Development of Agricultural Development:

To increase the productivity of crop and labor there is a need to search new resources of income generation based on agriculture which help to increase the productivity of crop and labor too. Dairy farming, fishery, poultry, sericulture etc. are the agro based activities which helps Indian farmers to generate additional source of income. These agro based industries increase

only the productivity of labor. The manufacturing of honey popularly known as 'apiculture' or 'beekeeping' is a means via which the productivity of labor as well as crop can be increased. All over the world, current transformation in agriculture if linked with honey production i.e. apiculture/beekeeping activity will offer a wide scope for productivity generation of labor and crop too. (D.P.Abrol, 2016). Agriculture plays an important role in improving socio-economic indicators of India. After the independence, India was largely dependent upon food imports. The successive efforts taken in each five year plan has made India self-sufficient in grain production. India had witnessed crisis of food after 1960. Afterwards lots of efforts of Indian Government had led India towards 'Green Revolution'. The 'Green Revolution' came into existence with the aim to improve the agriculture in India.

India is one of the largest honey producer country the world. For the year 2016 the production of honey natural is around of 17,86,996 tons, and also the bee-wax production is around 66622 tons.² China, India, Mexico, USA, Argentina, Ukraine, Turkey, Russia are the major honey producing country.

Timeseries on selected data

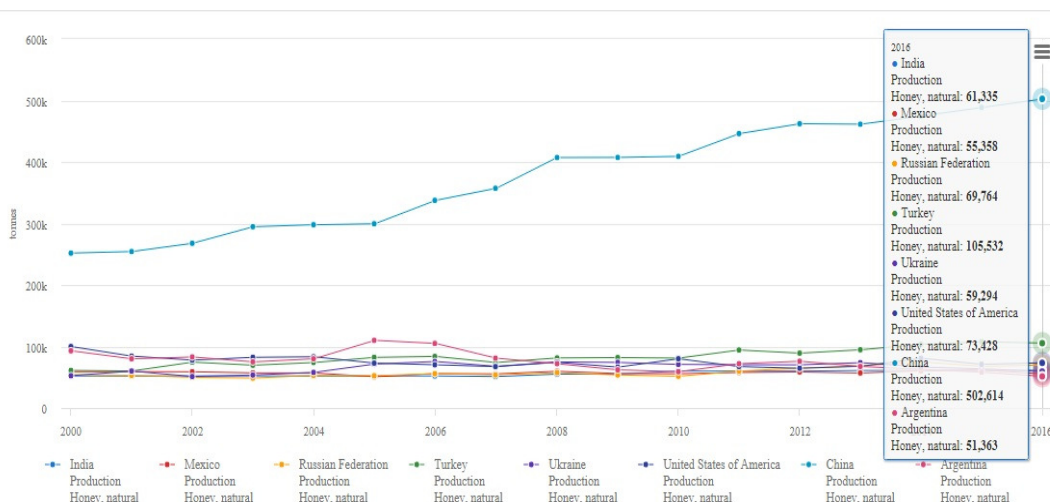


Figure 1: Leading Honey Production Countries

The above figures shows the top natural honey producing countries throughout the world. As per Food and Agriculture Organization of United States (FAO) the production of honey natural is as follows:

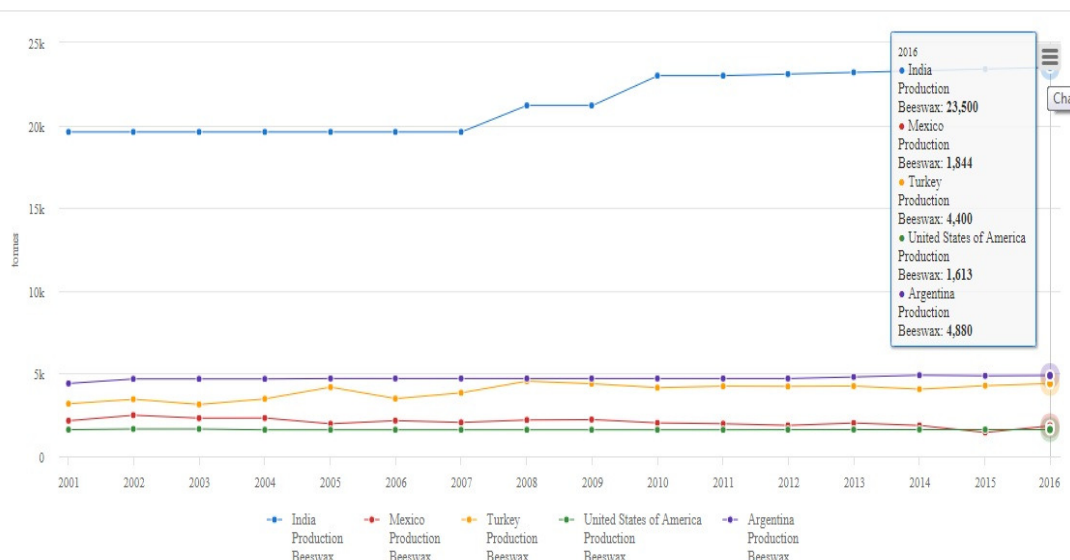
Sr. No.	Name of the Country	Production of Natural Honey for 2016 (MT)	Production of Bee-wax for 2016 (MT)
1	China	502614	---
2	Turkey	105532	4400
3	USA	73428	1613
4	Russia	69764	---
5	India	61335	23500

²<http://www.fao.org/faostat/en/#data/QL>

6	Mexico	55358	1844
7	Ukraine	59294	----
8	Argentina	51363	4880

Source: FAO statistics, 2016.

Timeseries on selected data



As per the data of FAO, India leads in production of bee-wax by producing 23500 Metric Tons of bee wax for the year. The bee-wax production of India is the highest production in world as most the bee-keepers engaged in traditional bee-keeping which produces bee wax as a byproduct of honey harvesting, in modern bee-keeping no bi-products other than honey can be obtained in an ordinary process of honey extraction(Japan Association for International Collaboration of Agriculture & Forestry , March, 2009).

Conclusion:

The bees greatest value to man is the pollinating of flowers and agricultural plants. Without bees it would be difficult to grow agricultural crop like cucumbers, almonds, avocados, blue berries, pears, carrot seeds, melons, apricots, cherries, apples, almonds, and many other fruits and vegetables. In order to have healthy economy and diversity of food products, it is important to maintain healthy bee colonies. Today many people start their bee colonies even in urban areas and contributing to the well balanced ecosystem. Apart from their agricultural work bees are also valued for producing bee wax, pollen, propolis, bee venom and most importantly natural honey. Land, labor, capital, management are the four main input required for agriculture. The efficacy of these for inputs used in agricultural crop is directly related with the apiculture. Therefore it is rightly said that adoption of apiculture is the fifth input to get higher yields and quality production in cross pollinated agricultural and horticultural crops. Bee pollination results in yield increase as well as improvement of quality of produce. Increase in yield have been shown in the range of 5% to 3000% depending upon the type of crop. Along with these benefits 10-15 kg of honey per colony will be produced additionally during the crop season. Value of additional yield from pollination services by honeybees alone is about 15 to 20 times more than

the value of all hives products together. So it is rightly conclude that there is time for promoting 'sweat revolution' for sustainable development of agricultural sector of India.

References:

1. Beekeeping.org
2. Bees for Development: <http://www.beesfordevelopment.org/info/info/species/bee-diversity-across-atr.shtml>
3. Economic survey of Maharashtra, 2016-2017.
4. "About Honey" National Honey Board <http://www.honey.com/nhb/about-honey/>
5. Crane, E. (1975). Honey. A comprehensive survey. Honey. A comprehensive survey.
6. Verma, S., & Attri, P. K. (2008). Indigenous beekeeping for sustainable development in Himachal Himalaya. Indian J. Tradit. Knowl,
7. 221-225. 7. Verma, L.R. (1990). Beekeeping in Integrated Mountain Development: Economic and Scientific Perspectives: Oxford and IBH Publ. Co. Ltd. New Delhi.
8. <http://www.sadctrade.org/files/Honey%20Trade%20Information%20Brief.pdf>
9. <http://www.efymag.com/admin/issuepdf/Honey.pdf>



Agriculture in Maharashtra: Strength and opportunities

Mr. Mangesh Shirsath

(Assistant Professor)

Department of Commerce,

Adv. B. D. Hambarde Mahavidyalay,

Ashti Tal. Ashti Dist. Beed

E-mail. mangeshshirsath2@gmail.com.

Contact.8275324358

Intoduction:

As agriculture is the back bone of the country, any change in agriculture sector, positive or negative has multifold effects on the entire economy. Maharashtra is the second largest state in India in terms of population and geographical area. Like other states about 55 percent population is directly or indirectly depends on agriculture. The state accounts for about 11.81% of the India's gross cropped area (GCA) and contributes to 13.31 % of the country's gross domestic product (GDP) from agriculture in 20013-14. The agriculture & allied activities sector contributes 11 % to the state's income. The key issue of this sector in the state is low productivity in food grains as compared to national and interstate productivity. It is observed that Maharashtra contributed to half the country's production 42% of Jawar, 21% of cotton, 29% of sugarcane and 30% of onion during the year 2013-14. The state has also emerged as an important producer of important fruits, vegetables and flowers especially in-house. Major horticultural crops grown in Maharashtra are Mango, Cashew nut, Banana, grapes, pomegranate, Orange vegetables like Onion, chilli, flower crops like gerbera, carnations, roses especially under protected cultivation.

Through Maharashtra is one of the richest states in terms of per capita income, its agriculture performance is not up to the mark. This is mainly due to predominant cultivation of the crops under rain fed conditions and thereby having its low productivity. The share of different sectors in the state income is undergoing major changes over the years. The share of Agriculture sector in the state income was 31% during the year 1961, while the population directly depend on the farm income was 65% . Rapid economic development in the state led to continuous decline in the contribution of agriculture sector to the state income which was as low as 11% during the year 2013-14, while the population directly dependent on the farm income is still 55% of the total population. Secondary and tertiary sector has played major role in the economic development of the state. However employment continued to perpetuate in the agriculture sector leading to low productivity in this sector.

The Agriculture Policy of the State Government aims at the following:

- Development of the sector on a sustainable basis by using the available resources economically, efficiently, effectively and in an environmentally sound manner with a view to increase farmers income and production.
- to envelope the needs of vulnerable sections, generate both skilled and unskilled employment and make a positive intervention towards poverty alleviation.
- to promote agriculture development on commercial and industrial lines.
- to prepare plan of action for full exploitation of the limited water resources.
- to improve the working of Agricultural Universities.

- to promote farm and infrastructural facilities for post harvest management, storage, transport, marketing and export to ensure that farmers will get due price for their produce.
- to improve the systems relating to Agricultural Produce Market Committees.

Maharashtra is one of the most industrialized and urbanized states In India. Paradoxically, however, it also enjoys the dubious distinction of a state having highest rural-urban disparity in standard of living of its population. The share of agriculture in the net state domestic product of Maharashtra declined steeply from 36% in 1961-62 to 18.7% in 1992-93. The comparable shares for Indian agriculture were 47% and 27%. Yet, in terms of the proportion of labour force engaged in agriculture which was 60% in 1991, Maharashtra's economy continues to be predominantly agrarian. Indeed, the share of State's rural labour force employed in agriculture (main workers only) was as high as 83 per cent even in 1991, nearly half of the agricultural workers being laborers. Thus, the crucial dependence of its rural labour force on agriculture is quite evident and is unlikely to diminish drastically in the near future. It is against this scenario, that importance of accelerated growth in Maharashtra's agriculture must be judged.

Apart from the direct impact of agricultural growth on generation of rural employment and incomes its significant secondary linkages with the development of rural non-farm sectors are more crucial. Trade in agriculture's outputs and inputs and services required by it and processing of its products open up additional and more significant avenues for labour absorption. Maharashtra being an important producer of cotton, sugarcane, groundnut and quite a few horticultural crops, such secondary linkages of agriculture assume added importance to its rural economy, more so now, in the context of new liberalized trade environment for farm products. That is why, careful assessment of agriculture's past performance and based on it, future prospects of growth is needed. The present study undertakes this exercise, focusing on the comparison between the early phase i.e., the years from 1967-68 to 1979-80, vis-a-vis the latter phase i.e., 1980-81 to 1992-93 of the post green revolution period. More specifically, our

objectives are :-

1. To examine trends in and sources of growth in production of major crops and crop groups and changes in them over the two phases of the period under study both at the state and the district level.
2. To investigate possible causes responsible for differential performances in growth in the two phases and thereby identify the constraints on future growth.
3. To study the degree of and trends in instability in crop output, analyze the sources of instability and identify the factors associated with changes in degree of instability over the two phases of the study period.
4. To analyze the inter-district disparity in output growth and input concentration and further to examine inter-relationship between the output and input concentration for the two phases.
5. To identify technology and non-technology variables having significant association with productivity growth in agriculture in the two phases of the entire period with the help of regression analysis and comparison of the characteristics of selected districts with distinctly differential intertemporal patterns of growth performance.
6. finally, to comment on the prospects of growth and emerging constraints on growth in Maharashtra's crop sector.

Developments Of Agriculture In Maharashtra:

The major developments of Agriculture in Maharashtra are -

- ❖ First State to adopt Dry Land Farming Technology
- ❖ Emphasis on the development of horticulture along with Agriculture
- ❖ State Seed Corporation – First farmers company in seed sector
- ❖ Pioneers in Co-operative network - Sugar factories, Dairies, Water user associations
- ❖ Four State Agricultural Universities
- ❖ Presence of very effective and research based Farmers Organizations
- ❖ Acceptance of latest technology by Grape farmers like Eurepgap, Agmark, Bar-coding & Residue Monitoring system etc
- ❖ Concept of contract farming & corporate farming is in the way of promotion
- ❖ An area of 13.66 lakh hectares under horticultural and 4 lakh ha under vegetables
- ❖ Largest producer of seedless Grapes (78%) banana (75%) Mandarin oranges (75%) Onion (63%), Tomatoes (42%) of the total production in India. Alphonso Mangoes accounts for 90% of India's export in mangoes.
- ❖ The highest number of poly houses (1271) owned by small farmers for cultivation of flowers
- ❖ Leads the sugar industry sector with 200 sanctioned and 150 productive cooperative sugar mills
- ❖ 40% turnover of the seed industry in the country
- ❖ More than 60% of the area under drip irrigation thus stands first in the country
- ❖ Implementation of Agriculture Export Zones.

Strength:

The major strengths include-

- Topography and agro-climatic conditions conducive for promoting horticulture and facilitate diversification into high-value horticultural crops;
- Large population in urban areas (42 per cent) that has concentration of financial and industrial activity – industrial sector supports agricultural sector through forward and backward linkages as it provides a ready market for agricultural commodities and manufactures and supplies of inputs like seeds, machinery etc to agriculture;
- Large production of fruit & vegetable (onion, mangoes, grapes, pomegranates, oranges etc.) present tremendous export potential;
- Investment in onion storage infrastructure/onion chawls for storing onions and avoiding distress sales by farmers;
- Installed Vapor Heat Treatment Facility prevents fruit fly and helps promote exports of mangoes;
- Agri Export Zones for grapes, grapevine, pomegranate, onions, mangoes etc.;
- Close proximity to international and sea ports;
- Large number of agro-processing units;
- Infrastructure to support the growing floriculture industry;
- Major producer of milk (7.4 million tons), eggs and poultry meat;
- Long coast-line of 720 kms. facilitates fishing; and
- Strong road network of 2,37,668 kms road length that connects 97 per cent villages.

Weakness:

The weaknesses include-

- Predominantly rain-fed agriculture (only 18 per cent of Gross Cropped Area is irrigated);
- Scattered rainfall across regions with one-third area receiving scanty rainfall – State has 24 per cent of drought-prone area of the country;
- Well-irrigation accounts for 65 per cent of State's gross irrigated area;
- Despite heavy investments in surface irrigation, unsatisfactory irrigation potential created and delay in project-completions

Opportunities:

The opportunities include-

- Rising demand for horticulture products as consumption pattern shifts in favor of fruits & vegetables;
- Huge urban population can serve as a driver of State's agricultural and horticultural development by providing ready markets;
- Large-scale production of grape-varieties with high demand at world-level presents export opportunities;
- Being largest producer of fruits in the country, food-processing units have great scope, as a ready market exists due to huge urban population;
- Floriculture provides scope of high-income generation to farmers due to huge demand for flowers in urban areas and presence of export-market.

References:

1. GOI (various years), Agricultural Situation in India, Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, New Delhi.
2. (1998), Agricultural Statistics at a Glance, Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, New Delhi.
3. GOM (various years), Economic Survey of Maharashtra, Directorate of Economics. and Statistics, Planning Department, Government of Maharashtra, Mumbai.
4. (1999, various years), District wise Agricultural Statistical Information of Maharashtra, Part I and II, Commissioner ate of Agriculture, Government of Maharashtra, Pune.
5. (2002, 2003), Economic Survey of Maharashtra, Directorate of Economics and Statistics, Planning Department, Government of Maharashtra, Mumbai
6. Ahluwalia, Deepak (1991), 'Growth Performance in Indian Agriculture', Journal of Indian School of Political Economy', Volume 3, No. 4, October-December.
7. Desai B.M. (ed., 1997), 'Agricultural Development Paradigm for the Nintii Plan Under New Economic Environment', Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.

Crop Insurance Scheme in India

Niwrutti Narayan Nanwate

Assistant Professor Arts,
Commerce and Science College,
Ashti, Dist-Beed.

Introduction:

The Indian agricultural sector is dependent on vagaries of weather – particularly rain-fed areas which constitute more than 60% of the total sown areas. Large scale damage to crops for various reasons including weather is very common and the farming communities, whose sole livelihood depends on crops, bear the brunt of this. Due to the high element of risk involved in farming because of unfavorable weather, it becomes all the more important to protect the farmers from the losses that can occur due to large scale destruction of crops. Agriculture has been the backbone of Indian economy for several centuries. Indian agriculture is characterized by lack of technology, low productivity, under employment, multiplicity of crops, unequal distribution of land, predominance of small farmers, etc. agricultural production therefore is inherently a risky business and farmers face a variety of weather, pest, disease, input supply and market related risks. Given an uncertain income each year, farmers must worry about their ability to repay debt, to meet overhead costs (eg. land rents and taxes) and, in many cases, their ability to meet essential living costs for their families. These same risks are also of concern to agricultural lending institutions. The vast majorities of India's 116 million farms cultivate rain fed crops and are particularly vulnerable to the vagaries of the Indian monsoon. In this context, agricultural risk management products, particularly for the small and marginal farmers, are of critical importance. Weather variability and uncertainty of crop yields is a basic risk faced by agriculturalists worldwide. However the magnitude and intensity of this is particularly high in India owing to extreme dependency of the farm sector on weather conditions and the poor economic condition of the majority of farmers who have extremely limited means and resources to cope with the disastrous consequences of a crop failure. The impact of crop failure is more severe in the dry land areas, which purely depend on rainfall and climatic conditions. Crop insurance is purchased by agricultural producers, including farmers and others to protect themselves against either the loss of their crops due to natural disasters, such as hail, drought, and floods, or the loss of revenue due to declines in the prices of agricultural commodities.

Historical background

First Individual Approach Scheme 1972-1978 Different forms of experiments on agricultural insurance on a limited, ad-hoc and scattered scale were started from 1972-73 when the General Insurance Corporation (GIC) of India introduced a Crop Insurance Scheme on H-4 cotton and later included groundnut, wheat and potato. The Scheme was implemented in Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Tamil Nadu and West Bengal. It continued up to 1978-79 and covered only 3,110 farmers for a premium of Rs.4.54 lakh against claims of Rs.37.88 lakh. Pilot Crop Insurance Scheme (PCIS) 1979-1984 The Pilot Crop Insurance Scheme was launched by the GIC in 1979, which was based on the 'Area Approach' for providing insurance cover against a deficit in crop yield below the threshold level. The Scheme covered cereals, millets, oilseeds, cotton, potato and chickpea and it was confined to loaner farmers of institutional sources on a voluntary basis. The PCIS 1979 was implemented in 12

states till 1984-85 and covered 6.23 lakh farmers for a premium of Rs.195.01 lakh against claims of Rs.155.68 lakh during the entire period. iii) Comprehensive Crop Insurance Scheme (CCIS) 1985-99 The Comprehensive Crop Insurance Scheme (CCIS) launched in 1985 was the first nation-wide Scheme. Previous Schemes were either experimental or Pilot Projects, on a small scale and in a scattered manner. This scheme was linked to short-term credit and was based on the 'homogenous area approach'. The Central Government introduced the CCIS during the year 1985-86. Till Kharif 1999, the Scheme was adopted by 15 States and 2 Union Territories (UTs). Both, PCIS and CCIS were confined only to farmers who had borrowed seasonal agricultural loans from financial institutions. The main difference between PCIS and CCIS was that PCIS was on voluntary basis while CCIS was compulsory for loaner farmers. The CCIS covered 763 lakh farmers for a premium of Rs.404 crore against claims of Rs.2303 crore². A more comprehensive Scheme, 'National Agricultural Insurance Scheme was launched in 1999 with aim to cover all farmers irrespective of loaner or non-loaner.

Crop insurance is purchased by agricultural producers, including farmers and others to protect themselves against either the loss of their crops due to natural disasters, such as hail, drought, and floods, or the loss of revenue due to declines in the prices of agricultural commodities. For this purpose, the Government of India introduced 4 crop insurance schemes in the country as follows:

1. National Agricultural Insurance Scheme (NAIS).
2. Modified National Agricultural Insurance Scheme (MNAIS).
3. Weather Based Crop Insurance Scheme (WBCIS).
4. Coconut Palm Insurance Scheme (CPIS).

National Agriculture Insurance Scheme (NAIS):

The National Agricultural Insurance Scheme (NAIS), with the aim to increase coverage of farmers, crops and risk commitment, was introduced in the country from Rabi 1999-2000 replacing the erstwhile Comprehensive Crop Insurance Scheme (CCIS). The main objective of the Scheme was to protect the farmers against the crop losses suffered on account of natural calamities, such as, drought, flood, hailstorm, cyclone, pests and diseases. The Scheme was implemented by the Agriculture Insurance Company of India Ltd. (AIC). The Scheme was available to all the farmers both loanee and non-loanee irrespective of their size of holding. It envisages coverage of all the food crops (cereals, millets and pulses), oilseeds and annual commercial/horticultural crops, in respect of which past yield data is available for adequate number of years³. The Scheme was continued till Kharif 2013, however, some States are allowed to implement NAIS during Rabi 2013-14 also The Scheme was optional for States/Union Territories (UTs) and it had been implemented by the 25 States and 2 Union Territories in one or more seasons. Since the inception of the Scheme 2084.78 lakh farmers for a premium of Rs.8,67,121 lakh against the claim of Rs.25,37,558 lakh were covered until 2012-13. The total area insured was Rs.3137.70 lakh hectares during the same period.

Modified National Agriculture Insurance Scheme (MNAIS):

To improve further and make the Scheme easier and more farmer friendly, a proposal on Modified National Agricultural Insurance Scheme (MNAIS) was prepared and was approved by Government of India for implementation on pilot basis in 50 districts from Rabi 2010-11 season⁶. During the Five seasons of its implementation in 17 States, the MNAIS covered 45.80

lakh farmers for a premium of Rs.1, 08,800 lakh against the claim of Rs.86,400 lakh until Rabi 2012-13. The total area insured was 46.79 lakh hectares during the same period. PILOT

Weather Based Crop Insurance Scheme (WBCIS):

With the objective to bring more farmers under the fold of Crop Insurance, a Pilot Weather Based Crop Insurance Scheme (WBCIS) was launched in 20 States in 2007. Apart from Agriculture Insurance Company of India, some private companies have also been allowed to implement the Scheme. The WBCIS is intended to provide insurance protection to the farmers against adverse weather incidences, such as deficit and excess rainfall, high or low temperature, humidity etc. which are deemed to impact adversely the crop production. It has the advantage to settle the claims within shortest possible time. The WBCIS is based on actuarial rates of premium but to make the Scheme attractive, premium actually charged from farmers has been restricted at par with NAIS8. The WBCIS was implemented in 18 States and 469.38 lakh farmers were covered for a premium of Rs.7,51,920 lakh against the claims of Rs. 52,860 lakh under the Scheme from 2007-08 to 2012-13. The total area insured was 632.01 lakh hectares during the same period9

Indemnity claims are worked out as per the following formula:

Shortfall in yield

_____ X Sum insured for the farmer

Threshold Yield

(Shortfall = Threshold Yield – Actual Yield for the Defined Area).

Evolution of Crop Insurance Schemes in India :

Pradhan MantriFasalBimaYojana (PMFBY) -

Realizing the limitations of existing system of crop insurance that was not able to meet the needs of farmers, the NDA government announced a new crop insurance program. PMFBY scheme became operational from Kharif, 2016 with an objective to provide adequate insurance coverage and financial support to the farmers in the event of crop failure.

Features of the new scheme :

Sum Insured- The sum insured is equal to the Scale of Finance (SoF) for that crop as fixed by District Level Technical Committee. Sum Insured for individual farmer is now equal to the Scale of Finance per hectare multiplied by area of the notified crop proposed by the farmer for insurance. The scale of finance takes into account the cost of cultivation on the basis of land quality, irrigation expenses and facility as well as cost of fertilizers, seeds and labour which varies from one district to another.

Premium Rates: The premium rates payable by farmers for Food Crops and Oilseeds (FCOS) is fixed at 2 percent of the Sum Insured or Actuarial rate, whichever is less, for Kharif season and 1.5 percent for Rabi season. For commercial/horticulture crops, premium rate of 5 percent is fixed to be paid by the farmer. The difference between premium rate and rate of insurance payable by farmers will be shared by the Central government and the State government equally as premium subsidy

Estimation of Crop Yield: The minimum number of Crop Cutting Experiments (CCEs) required at village level is 4 for major crops and 8 for other crops. Inputs from RST/satellite imagery would also be utilized in optimizing the sample size of CCEs.

Use of modern technology: The CCEs have been lacking in reliability and speed in estimation of crop yield. The use of mobile based technology with GPS stamping was recommended to improve the quality of data and make faster assessment of claims. The expense in procuring handheld devices/smart phones are to be borne equally by the Centre and the State, with a cap on total funds to be made available by the Central government. The use of technology available in the fields of remote sensing, aerial imagery, satellites etc. would reduce manpower and infrastructure. It is estimated that using a mix of modern technology can be expected to minimize the number of CCEs by about 30 percent.

Role of Private players: The public sector company, Agriculture Insurance Company (AIC) of India along with other public and private insurance companies are participating in the new crop insurance scheme. The selection of Implementing Agency (IA) is made by state governments by adopting a cluster approach consisting of 15-20 'good' and 'bad districts', based on risk profile, with reference to the bid to be laid out. Selection of IA is to be made through competitive bidding up to 3 years.

Time frame for loss assessment: The cut-off date for the receipt of yield data is within one month of final harvest. Processing, approval and payment of final claims is based on the yield data and it is to be completed within three weeks from receipt of yield data.

Timely release of premium subsidy to Insurance Companies: The government (both Central and State) must release 50 percent share of premium subsidy to insurance companies, in the beginning of every crop season, based on fair estimates submitted by them, and settle balance of actual premium subsidy for season as soon as final figures are submitted by insurance company.

Publicity and awareness: Adequate publicity is to be given in all villages of the notified districts through fairs, exhibitions, SMS, short films, electronic and print media and documentaries. The crop insurance portal should be regularly uploaded with all published material information.

Challenges

Coverage of non loanee farmers: Two years down the line, the coverage of non loanee farmers is still very less in most of the states, which is a matter of great concern. In fact, the enrollment of non loanee farmers can be touted as the biggest challenge. Most of the non loanee farmers belong to small and marginal category or in some cases even landless. Neither they have proper land related documents, nor do they have any agreement of share cropping with the landlords. All this makes it difficult for non loanee farmers to avail the benefits of crop insurance scheme. The government should ease the process so as to increase the reach of PMFBY to the farmers falling under non loanee category.

Lack of awareness: The awareness campaigns should be designed aggressively to reach these farmers through various means such as radio, spread of mouth, farmer meetings, etc. In fact, strengthening of State Level Coordination Committee on Crop Insurance and District Level Monitoring Committee should be the top priority, so that they can coordinate state-level plans. This would also enable to suggest timely adjustments in implementation schedule for maximum coverage that too in alliance with financial institutions and insurance companies.

Low coverage in rained & remote areas: Crop insurance also needs to be endorsed in rained districts to cover risk. There have not been sufficient bidders from the rained and remote

districts. In the wake of this, the premium rates had shot up as high as 25% in some backward areas of Telangana. This situation arose due to lack of competition among the insurance companies. As a result, the insurers were able to garner huge profits that too purely from subsidy given by the government. Hence, more companies should be encouraged into this so as to increase the competition, which would eventually bring down the premium rates.

Delayed/ non-payment of claims: Though the PMFBY was successful in achieving the targets in terms of number of farmers and area, but majority of farmers complained about delayed or non-payment of claims. There is a need to emphasize on the timely disbursement of the claim; otherwise, it may be a huge discouraging factor.

Conclusions:

Dry land farming purely depends on rainfall and Climatic conditions. The impact of financial losses due to vagaries of nature and climatic condition can be minimized by participating in the National Agriculture insurance scheme. This scheme can be very helpful for dry land farmers to restore the credit eligibility in years of disaster and for developing the farms by implementing new techniques for better yield. The banks can play a crucial role here by convincing the loanee farmers to avail insurance while taking loans for their crop. It is in the interest of the banks as they would be direct beneficiaries of crop insurance. This is because in case of claim, payment would be directly credited to farmer's loan account or bank account. Other than banks institutes with agriculture linkages such as suppliers of fertilizer, pesticide, seeds and farm equipment; trade associations, processors of the produce, marketing organizations, various government departments, agricultural universities and research institutions; can also be involved in marketing crop insurance scheme.

References:

- 1) Knowledge Paper Accelerating Agriculture Insurance FICCI Agriculture Division New Delhi -110001.
- 2) Handbook crop insurance scheme 2017.
- 3) K. P. Sravanavalalakshmi (2014) A Critical Study on Impact of Weather Based Crop Insurance Scheme on Chill Farmers of Guntur District of Andra Pradesh.
- 4) Operational Guidelines(March 2016) Restructured Weather Based Crop Insurance Scheme, Department of Agriculture, Cooperation and Farmers Welfare Ministry of Agriculture & Farmers Welfare Krishi Bhawan, New Delhi-110001
- 5) Agricultural Statistics at a Glance (2016) Government of India Ministry of Agriculture & Farmers Welfare Department of Agriculture, Cooperation & Farmers Welfare Directorate of Economics and Statistics.
- 6) S.S. Raju and Ramesh Chand (March 2008), Agricultural Insurance in India Problems and Prospects National Centre for Agricultural Economics and Policy Research (Indian Council of Agricultural Research) New Delhi.
- 7) Union Government (Civil) Ministry of Agriculture and Farmers' Welfare Report No. 7 of 2017 Report of the Comptroller and Auditor General of India on Performance Audit of Agriculture Crop Insurance Schemes.
- 8) Ashok Gulati, Prerna Terway, Siraj Hussain (February 2018), Crop Insurance in India: Key Issues and Way Forward ICRIER Working Paper No. 352.
- 9) [http:// www.NAIS.IN](http://www.NAIS.IN)
- 10) www.crop insurance scheme in India
- 11) Shrikrishna S. Mahajan, Amol H. Bobade (2012) Growth of NAIS: A Study of Crop Insurance in India Volume-3, NO.-1, Jan-April.

An Evaluation of the Performance of Agri Export Zones in Maharashtra

Prof. Kiran Shivaji Gholap
Department of Economics,
Annasaheb Awate College, Manchar.

Abstract:

Most of the agro product not exports in India after green revolution. Agriculture was identified as one of the most promising sector with potential competitive advantage. The sixty Agri Export Zones (AEZs) sanctioned by the Steering Committee chaired by the Commerce Secretary envisaged an investment of ₹ 1717.95 crore and export of ₹ 11821.47 crore over a period of five years from the date of signing of MoU between the Central and the State Government. The actual investments made in these zones are ₹ 820.08 crore and actual exports are ₹ 5316.31 crore since their commencement.

Maharashtra has been able to attract the maximum amount of investments in its Agri Export Zones which is about ₹ 365 crore against an entailed outlay of about ₹ 186 crore. Moreover, the state has exceeded the anticipated exports by 66 per cent. The AEZs envisaged a total cost of ₹ 270.65 crore in the first stage leading to likely exports of ₹ 601.1 crore. Actual incremental exports of ₹ 1055.15 crore have rather outperformed with an investment of ₹ 365.32 crore in Maharashtra. The State government has taken initiative to set up wine parks in Sangali and Nasik districts with total export are 384.67 crore and total investment are ₹ 110.17 crore has been achieved so far. The grape and grape wine zone envisaged a total cost of ₹ 112 crore in the first stage leading to likely exports of ₹ 68.47 crore. Actual incremental exports of ₹ 287 crore have rather outperformed with an investment of ₹ 110.17 crore.

Keywords: AEZs (Agri Export Zones), Agriculture, Investment, Export.

Introduction:

In EXIM policy 2001-02 government announced the proposals to set-up AEZs for the purpose of developing and sourcing raw materials and their processing/packaging leading to final exports. APEDA is the nodal agency of the central government to promote setting-up of AEZs. With the removal of quantitative restrictions on imports, efforts were being made to strengthen the integration of Indian economy with the global economy. Agriculture was identified as one of the most promising sector with potential competitive advantage. However, there were too many issues to be addressed in the entire supply chain.

Agri Export Zone was an attempt to take a look at an identified produce/product or a group/ a group of produce/products sourced from a geographically contiguous area with a view to comprehensively address all the issues relating to each stage of the entire value chain.

Areas of focus:

The concept aimed at providing remunerative return to the farmers' community in a sustained manner. An improved access was to be provided to the produce or products of the agriculture and allied sectors in the international markets. It was expected to address all aspects of agriculture such as production, research, development, extension, post-harvest management and marketing in a focused manner for successful implementation.

It entailed appropriate interventions at the government level and producer-exporter level. The scheme is implemented by the Ministry of Commerce, through Agricultural and Processed Food Products Export Development Authority (India), the nodal agency for AEZs.

Importance of Subject:

Most of the agro product not exports in India after green revolution. A number of specific activities or interventions, agencies responsible for implementation and funding were

planned to be identified. Interventions were suggested in the areas of production, post-harvest management, marketing and research and development areas. The nodal agency with support and cooperation from the State's Department of Horticulture, the Department of Agriculture, the Department of Industries, the Department of Finance, State Electricity Board and other agency/agencies were responsible for implementation of AEZs in a time bound and effective manner.

Objectives:

1. To study the performance of AEZs in Maharashtra.
2. To study the performance and present status of AEZs for Grape and Grape Wine in Maharashtra.

Research Methodology:

The current study is based secondary data. The present research paper covered qualitative analysis to describe the performance of AEZs in Maharashtra.

The necessary secondary data collected through the government reports; Books, Various Annual Reports of Agriculture, RBI report, Website of Ministry of Commerce of India etc.

Growth in agriculture export, investment, FDI, etc and also the quality of governance, incentive packages, infrastructure facilities offered by the AEZs across the country and Maharashtra in a comparative analytical framework and comprehensive analysis of the export performance of the AEZs in Maharashtra using the available information. The collected secondary data processed through the statistical practices such as percentage, average, growth rate etc. The charts used in the study.

An overview of the AEZs:

There are sixty Agri Export Zones sanctioned so far spread across twenty states with fifty nine operational AEZs. Maharashtra has the maximum number of zones, followed by West Bengal and Madhya Pradesh with eight, six and five zones respectively. Uttaranchal, Andhra Pradesh, Uttar Pradesh, Tamil Nadu and Karnataka each have four sanctioned zones. While Gujrat and Punjab have three, Jammu and Kashmir, Rajasthan, Kerala and Sikkim have two zones each. Rest of the six zones is located in Himachal Pradesh, Assam, Tripura, Bihar, Jharkhand and Orissa.

Sr. No.	AEZ Project	MoU Date	Districts/Area
1	Grape & Grapevine	07/01/2002	Nashik, Sangli, Solapur, Satara & Ahmednagar
2	Alphonso Mangoes	12/02/2002	Ratnagiri, Sindhudurg, Raigarh & Thane
3	Kesar Mango	11/04/2002	Aurangabad, Beed, Jalna, Ahmednagar & Latur
4	Flowers	10/06/2002	Pune, Nashik, Kolhapur, & Sangli
5	Onion	16/01/2003	Nashik, Ahmednagar, Pune, Satara, Jalgaon & Solapur
6	Pomegranate	09/06/2003	Solapur, Sangli, Ahmednagar, Pune, Nashik, Osmanabad & Latur
7	Banana	07/07/2005	Jalgaon, Dhule, Nandurbar, Buldhana, Parbhani, Hingoli, Nanded & Wardha

8	Oranges	07/07/2005	Nagpur & Amravati
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The sixty Agri Export Zones sanctioned by the Steering Committee chaired by the Commerce Secretary envisaged an investment of ₹ 1717.95 crore and export of ₹ 11821.47 crore over a period of five years from the date of signing of MoU between the Central and the State Government. However, against these projections the investments and exports made so far as per the figures reported by APEDA in January 2007 are less than half of the expectations.

Table No. 1 - Maharashtra's AEZs

Source: Press Information Bureau, Govt. of India, Ministry of Commerce & Industry, 11/03/2013.

The actual investments made in these zones are ₹ 820.08 crore and actual exports are ₹ 5316.31 crore since their commencement. Maharashtra has been able to attract the maximum amount of investments in its AEZs which is about ₹ 365 crore against an entailed outlay of about ₹ 186 crore. Moreover, the state has exceeded the anticipated exports by 66 per cent. Table no. 2 are described the grape and grape wine zone envisaged a total cost of ₹ 112 crore in the first stage leading to likely exports of ₹ 68.47 crore. Actual incremental exports of ₹ 287 crore have rather outperformed with an investment of ₹ 110.17 crore. Grapes worth ₹ 105 crore were exported in the current financial year alone.

Table No: 2 - Performance of AEZs in Maharashtra

AEZs Project	Envisaged Exports (In Crore ₹)	Actual Exports (In Crore ₹)	Envisaged Investment (In Crore ₹)	Actual Investment (In Crore ₹)
Grape & Grapevine	68.47	384.67	112	110.17
Mango	145.59	123	35.12	36.86
Kesar Mango	44	12.17	18.56	3.43
Flowers	75	35.50	13.34	168
Onions	154.49	588	32.24	38.33
Pomegranate	35	20.24	14.98	1.53
Banana	52.55	0.04	16.45	6.99
Oranges	26	2.72	27.96	0.01
Total	601.1	1166.34	270.65	365.32

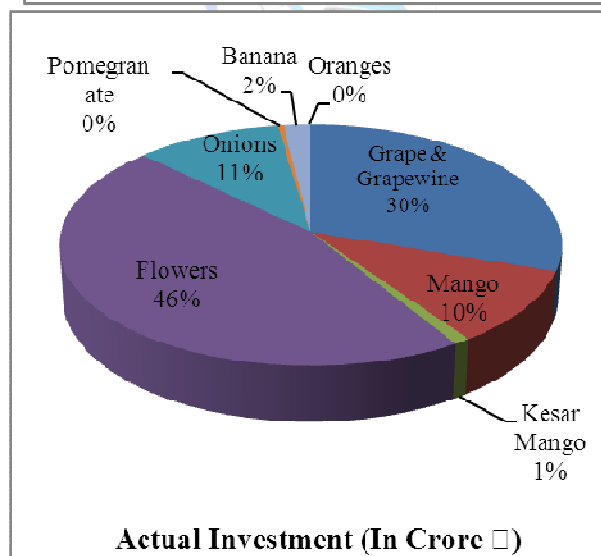
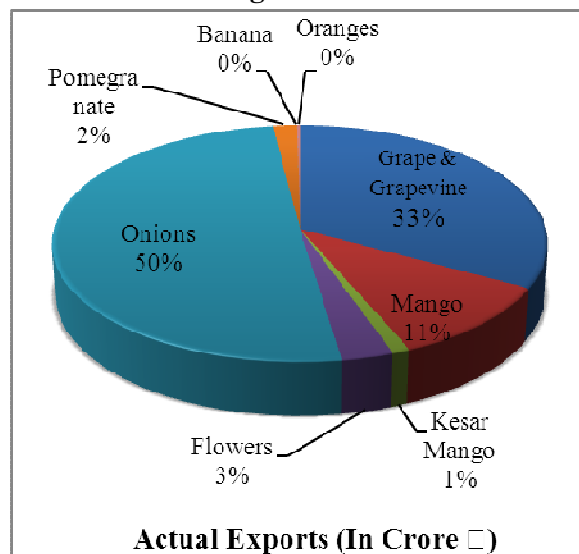
Source: ASSOCHAM Report. March 2008

Mango zone has marginally exceeded the expected level of investment at about ₹ 37 crore, but lags behind the aspired export by ₹ 22 crore. The exports made so far are worth ₹ 123 crore approximately. Kesar-Mangoes zone projected an outlay of about ₹ 18.5 crore, but so far it has attracted only ₹ 3.5 crore. Similarly, the zones of Pomegranate, Banana and Oranges have not been successful in drawing the envisioned investments. Mango zones will cover districts of Ratnagiri, Sindhudurg, Raigarh and Thane. This project entails a total investment of around ₹ 35 crore out of which ₹ 10 crore will flow from various central govt. agencies and ₹ 16 crore from state govt. agencies. The remaining investment is likely to be made by the private sector. The incremental export is likely to reach the level of ₹ 68 crore per annum in 7 years. However

the incremental export of around ₹ 18 crore will start from the first year itself. Around 5000 farmers are likely to get direct benefit under this scheme.

AEZs for Floriculture have got ₹ 168 crore invested against the projections of a mere ₹ 13.34. Internal roads have been developed within the AEZs. Work on road and river bridge is also completed for joining the national highway. Exports however have been a disappointment with the reported number being ₹ 18 crore. Out of this exports worth ₹ 10 crore were executed only during 2003-04.

Diagram No: 1



Onion zone has delivered good results with exports worth ₹ 588 crore by far as compared to the envisaged amount of ₹ 154.49 crore. According to the AEZs status report of APEDA (January 2007), Maharashtra contributed 66.34 % in India's export of around 8.29 lakh million tones of onion in the current year. Government of Maharashtra has declared to adopt Model Act for Agricultural Produce Marketing Committee, due to which permission for Contract farming and private markets will be granted. The state has waived off the APMC Cess.

Agri Export Zone for Grape and Grape Wine in Maharashtra

The project in the first stage entails a total cost of Godavari Wine Park, Vinchur, Nasik is ₹ 9.37 crore & Krishna Wine Park, Palus, Sangali is ₹ 18.37 crore. Out of which ₹ 4.00 crore for each Park will come from various Central Govt. agencies like APEDA, National Horticulture Board, Ministry of Food Processing Industries, and Ministry of Agriculture. The rest of the expenditure will be borne by the State Government. The AEZ would lead to exports of ₹ 68.47 Crore. It was also proposed to setup Maharashtra Grape Board, an autonomous development agency, which will work as a facilitator to ensure a smooth and orderly development of the grape & grape wine industry in the state.

Present Status:

The MOU for this AEZ was signed on 7th Jan 2002 and 120 applications have been finalized by the nodal agency from entrepreneurs for plots for Wine Park and the plots are allotted. These AEZ taken intensive training for 474 farmers have also been identified by the State Government and 92 training programmes organized to cover 5042 farmers. MIDC has allotted 2,000 Sq. Meters Plot to M/s. Vinchur Grape Wine & Krishna Wine Park. And 80 hectare of land is developed at Palus area where roads are constructed.

Grape wine is exported from this zone from the year 2003-2004 onwards from the new units. Four units have already started exports of wine from the zone. The State government has taken initiative to set up wine parks in Sangali and Nasik districts. MFPI has sanctioned/dispensed ₹ 2.0 crore as grant-in-aid assistance for setting up a food park for grape wine at Vinchur in Nasik. Total 120 plots have already been allocated. 36 wineries in the AEZ are already producing wines. A Concession of 25% in excise duty has been offered by the state government. (100% exemption from Excise duty for Ten years from 2001) also state government declared exemption in Sales Tax (4%) for grape wine.

MIDC has requested Crisil, Kirloskar, Tata, NRC and Cebeco, for submitting project report for establishment of Wine Institute in Nasik District. In Sangali, Palus grape processing & research centre has been already established. During the year 2003-04, export of fresh grapes was made to Europe for a quantity of approx. 18,000 MTs and to the Middle East for a quantity of 8000 MTs. The export of fresh grapes and wine has amounted to ₹ 108 Crore.

Challenges to the way of AEZs development in Maharashtra:

AEZs have failed to attract due attention of the Central & State Governments owing to lack of ownership among the Governments at both levels. They have been ineffective in attracting investments due to lack of incentives, absence of investment window and inadequate infrastructure. The incentives extended hitherto are derived from the existing schemes, without offering any additional incentives.

Also, in many cases the investments made have been random and unplanned. Moreover, in some cases the evaluation reports are unrealistic. AEZs should be seen as growth propellers for rural India. It is needless to overemphasize that to maintain the high growth levels being scaled by the Indian economy agriculture must grow by at least 4 per cent on a sustainable basis. AEZs are the vehicles which have the ability of not only ensuring growth of the rural economy but also helping in their integration with the global Economy.

With the government's decision to put an embargo on sanctioning of new AEZs, efforts are needed to make sure that the existing zones deliver. Making the concept a success would require huge investments for addressing the complete supply chain. The areas like pre and post

harvest management, food processing, export promotion related activities, specific crop related support activities, applied research, extension and monitoring of programme need consideration.

Suggestions for revamping AEZs in Maharashtra:

- 1) A separate fund may be allotted for the funding of AEZs exclusively and to give direct finance by NABARD on concessional terms could be extended.
- 2) A tripartite agreement must be signed between the farmer, banker and exporter thereby ensuring ready market for the farmer, availability of exportable produce to the exporter and adequate finance for both the parties.
- 3) Addition of one or more commodities must be encouraged if the present infrastructure and supply chain supports it and removal of the market cess on the exports is required.
- 4) It is necessary to communicate the feedback of the domestic produce in the international market to the farmers apart from the food processors and exporters to encourage the production of food processing variety.

References:

1. Economics Survey of Maharashtra 2014-15, DES, Planning Dept., Govt. of Maharashtra, Mumbai.
2. 'Study Tour Report of agri export zone officers visited in jalgaon, APEDA-Mumbai, MAPMC-Mumbai & Air Cargo Unit in Maharashtra', Agriculture Department, Govt. of Kerala, July 2004.
3. "Performance of Export Processing Zones: A Comparative Analysis of India, Sri Lanka and Bangladesh", Aradhna Aggarwal, Indian Council for Research on International Economic Relations March 2005.
4. Websites:
 - a. <http://agriexchange.apeda.gov.in>

Agricultural Marketing: Problems and Prospects

Prof. Nilofar S. Shaikh

M.Com., NET, M.Phil.

JMCT College,(YCMOU-MBA) Nashik.

Contact no.: 9011133455

E-mail: nilu.shaikh2@gmail.com

Abstract:

Agriculture is the backbone of Indian economy plays a vital role in the economic development of the country. Agriculture provides not only food for the nation's population but also provides opportunities for employment generation, saving, contribution to industrial goods market and earning foreign exchange. It is therefore agricultural production should be stepped up. Marketing of agricultural products means a series of activities involved in the movement of agricultural produces from the point of production to the point of consumption. But the agricultural sector today is facing serious threats and challenges. This paper is an attempt to identify various problems faced by the Indian agricultural sector with solutions done by the government till today and still to do.

Key Words: Agricultural marketing, Agricultural Development

Introduction:

Agricultural marketing involves many operations and processes through which the food and raw materials move from the cultivated farm to the final consumers. Agriculture provides goods for consumption and exports and manufacturing sectors. The suitable marketing system should be designed so as to give proper reward or return to the efforts of the tiller of the soil. Market information is a means of increasing the efficiency of marketing system and promoting improved price formation. It is crucial to the farmers to make informed decisions about what to grow, when to harvest, to which market produce should be sent and whether are not to store it. Agricultural marketing covers the services involved in moving an agricultural product from the farm to the consumer. Numerous interconnected activities are involved in doing this, such as planning production, growing and harvesting, grading, packing, transport, storage, agro-and food processing, distribution advertising and sale.

Objectives:

- 1) To know the meaning and concepts of agricultural marketing
- 2) To study the problems of agricultural marketing
- 3) To study the future prospects of agricultural marketing

Research Methodology:

Primary Data: Primary data was gathered by Interview schedule and Observation as a tool for data collection.

Secondary Data: Secondary data was collected by the researcher with the help of journals, magazines, newspapers, websites, e-library and various publications of the governmental and non-governmental reports.

Reviews Of Previous Studies:

Kashyap and Raut, (2006), in their paper suggested that, marketers need to design creative solutions like e-marketing to overcome challenges typical of the rural environment such

as physical distribution, channel management promotion and communication. The “any time anywhere” advantage of e-marketing leads to efficient price discovery, offers economy of transaction for trading and more transparent and competitive setting.

Brithal, et.al., (2007) ,in their study suggested that by building efficient and effective supply chain using state of the art techniques it is possible to serve the population with value added food, while simultaneously ensuring remunerative prices to farmers.

Tripathi and Prasad, (2009) ,reported that Indian agriculture has progressed not only in out-put and yield terms but the structural changes have also contributed .

Pathak, (2009) ,in his research paper stated that the contribution of agriculture in growth of a nation is constituted by the growth of the products within the sector itself as well as the agricultural development permits the other sectors to develop by the goods produced in the domestic and international market.

Agricultural Marketing:

Marketing is as critical to better performance in agriculture as farming itself; therefore, market reform ought to be an integral part of any policy for agricultural development. The term agricultural marketing is composed of two words-agriculture and marketing. Agriculture, in the broadest sense, means activities aimed at the use of natural resources for human welfare, i.e., it includes all the primary activities of production. Marketing connotes a series of activities involved in moving the goods from the point of production to the point of consumption.

Agricultural marketing involves ‘essentially the buying and selling of agricultural produces’. This definition of agricultural marketing may be accepted in olden days, when the village economy was more or less self-sufficient, when the marketing of agricultural produce presented no difficulty, as the farmer sold his produce directly to the consumer on a cash or barter basis. But, in modern times, marketing of agricultural produce has to undergo a series of transfers or exchanges from one hand to another before finally reaches the consumer.

Agricultural marketing system is defined in broadest terms, as physical and institutional set up to perform all activities involved in the flow of products and services from the point of initial agricultural production until they are in the hands of ultimate consumers. This includes assembling, handling, storage, transport, processing, wholesaling, retailing and export of agricultural commodities as well as accompanying supporting services such as market information, establishment of grades and standards, commodity trade, financing and price risk management and the institutions involved in performing the above functions.

According to Khols”, marketing is the performance of all business activities involved in the flow of goods and services from the point of initial agricultural production until they are in the hands of the ultimate consumer. The National Commission of Agriculture defined agricultural marketing as a process which starts with a decision to produce a saleable farm commodity and it involves all aspects of market structure of system, both functional and institutional, based on technical and economic considerations and includes pre and post-harvest operations, assembling, grading, storage, transportation and distribution. The Indian council of Agricultural Research defined involvement of three important functions, namely (a) assembling (concentration) (b) preparation for consumption (processing) and (c) distribution. Agricultural markets are special types of markets that have special characteristics that differ from other markets. These are mainly due to factors affecting supply of agricultural products,

and the situation of producers in this business. First of all the agricultural market is very competitive because the producers are all very small and large in number. Therefore, they don't have a great influence on the price of their products. Agricultural producers are what are known as price takers, producers that have little or no influence on the price of their output.

Problems And Challenges Of Agricultural Marketing:

There are several problems and challenges involved in marketing of agricultural produce. There are also many imperfections in the marketing system of agricultural commodities in India. So much has been done to improve the agriculture sector of India, but still it is facing a lot of problems. Some of these can be listed as below.

- Rising domestic demand for food due to rise in population, restricting our exports.
- Private intermediation.
- Limited access to the market information
- Infrastructural weakness.
- Lack of agricultural education.
- low level of literacy among the farmers
- Multiplicity of market changes and malpractices.
- Neglect of Rural Markets
- Absence of a Common Trade Language
- Controls under Essential Commodities Act
- Variation in Entry Tax/ Octroi and Sales Tax
- Other Barriers

Problems And Prospects Of Agricultural Marketing :

There are several challenges involved in marketing of agricultural produce. There is limited access to the market information, literacy level among the farmers is low, multiple channels of distribution that eats away the pockets of both farmers and consumers. The government funding of farmers is still at nascent stage and most of the small farmers still depend on the local moneylenders who are leeches and charge high rate of interest. There are too many vultures that eat away the benefits that the farmers are supposed to get. Although we say that technology have improved but it has not gone to the rural levels as it is confined to urban areas alone. There are several loopholes in the present legislation and there is no organized and regulated marketing system for marketing the agricultural produce. The farmers have to face so many hardships and have to overcome several hurdles to get fair and just price for their sweat. The globalization has brought drastic changes in India across all sectors and it is more so on agriculture, farmers and made a deep impact on agricultural marketing. It is basically because of majority of Indians are farmers. It has brought several challenges and threats like uncertainty, turbulence, competitiveness, apart from compelling them to adapt to changes arising out of technologies. The basic objective of setting up a network of regulated markets has been to ensure reasonable gain to the farmers by creating environment in markets for fair play of supply and demand forces, regulate market practices and attain transparency in transactions.

Other Problems

One of the worst problems faced by the farmers is that of marketing their products for which majority of the farmers fail to get remunerative prices and compel to dispose their products at a very low price and thereby the middlemen avail the opportunity of deriving undue

benefits. It is no denying the fact that the present scenario of agricultural marketing in India is very unacceptable and unfavourable which is mainly due to the major constraint that the farmers usually do not have information about the prevailing market prices of commodities. These shortcomings help the middlemen to play a dominating role in collecting the produce from the producers than what they pay in return. Marketing is critical to agricultural farming

Agricultural Market Reforms:

Below are the certain measures that can be affected to bring out the reforms in agricultural marketing so as to ensure just and fair price for the farming community. Provide loans to the farmer at low rate of interest so that they will be freed from the clutches of local moneylenders who squeeze them. It is said that farmer in born into debt, lives in debt and dies in debt. Right from the beginning of the life, the poor farmers approach money lenders for investing into cultivation who levies very high rate of interest and who takes away the maximum amount of the share from the produce. In case if the crop fails due to natural calamities then the situation would be worse as the farmer is not in a position to pay his loans. And ultimately he is forced to sell the land at throw away price to the money lender.

- ❖ It is essential to provide subsidized power supply and loans to the farmers as the expenses towards power consumption takes considerable amount of investments.
- ❖ The cooperative marketing society should provide the maximum storage facilities to the farmers to save the wastage of crops.
- ❖ Generate a new distribution network that connects the farmers directly to the consumers to get maximum returns as the present channel of distribution involves multiple mediatory who take away the major portion of profits which otherwise the farmers is supposed to get.
- ❖ Incentives/Premium bonus payments must be introduced in marketing societies on the basis of the sales revenue, generated by the salesmen, which persuade them to attain more sales.
- ❖ In this modern world, most of the co-operative processing units were using traditional and obsolete machinery for production. By utilizing depreciation fund, modernize the plant and machinery.
- ❖ Elimination of the existing loopholes in the present legislations is warranted. There should be stringent action against black marketers and hoarders who buy the stocks from farmers at cheap prices and create artificial demand and then sell the stocks at higher prices.
- ❖ Creating local outlets at each village where the farmers sell their stocks directly to the consumers or the authorized buyers at fixed prices would help to a great extent. Intervention of government in this network is essential to bring the fruits to the farmers.
- ❖ At the village level there should be counselling centres for farmers about the worth of their stocks so that they can get fair price. The crucial role of Non Governmental Organizations (NGOs) is needed in this context.
- ❖ The existing legislations are outdated and are not in tune with the changing trends and technological inventions and the same need to be updated forthwith.
- ❖ The retail revolution has brought several changes in the retail sector where the retail giants buy in bulk directly from the suppliers and sell to the consumers directly and in

this process they pass the benefits to the consumers as well. In the past the consumers were paying more for less as there were many channels of distribution system and now the consumers pay less for more.

- ❖ All the members of the staff must undergo compulsory training/ orientation/ refresher courses at least four times in their service period, which should be considered as a prerequisite for promotion.
- ❖ The government is already fulfilling the objective of providing reasonable prices for the basic food commodities through Public Distribution System with a network of 350,000 fair-price shops that are monitored by state governments. It is more effective in states like Punjab, Haryana and some parts of Uttar Pradesh. And the same needs to be strengthened across the country.
- ❖ Government should levy single entry tax instead of levying multiple entry taxes either directly or indirectly for the transactions and activities that are involved in agricultural marketing such as transportation, processing, grading etc., as it would benefit both farmers and consumers directly

Conclusion :

Marketing is the crux of the whole food and agricultural problem in almost all developing countries. It would be useless to increase the agricultural production as well as productivity, unless means could be found to move the agricultural produce from the producers' field to the consumers' store room at a price which represents fair remuneration to the producers on the one side and the consumers' ability to pay on the other side. A major portion of this investment is expected from the private sector, for which an appropriate regulatory and policy environment is necessary. Also enabling policies need to be put in place to encourage the procurement of agricultural commodities directly from farmers' fields and to establish effective linkage between the farm production and the retail chain and food processing industries. The government must take all the necessary steps to enable the agriculturists to get the maximum possible prices.

References:

- 1) Brithal, P. S., Jha, A. K. and Singh, H. (2007) "Linking Farmers to Market for High Value Agricultural Commodities", *Agricultural Economics Research Review*, Vol. 20, (conference issue), pp. 425-39
- 2) Kashyap, P. and Raut, S. (2006) "The Rural Marketing Book", Biztantra, New Delhi, India.
- 3) Tripathi, A. and Prasad, A. R. (2009) "Agricultural Development in India Since in Determinants: A Study on. Progress, Progress, Performance and Determinants", *Journal of Emerging Knowledge on Emerging Markets*, Vol. 1(1), pp. 63-92.
- 4) Pathak, N. (2009) "Contribution of Agriculture to the Development of Indian Economy", *The Journal of Indian Management and strategy*, Vol. 14(1), JanMar., pp. 52- 57.
- 5) Acharya, S.S. and Agarwal, N.N. "Agricultural Marketing in India, Pub. By Oxford & IBH Publishing Co., New Delhi
- 6) J A. Vadivelu and B.R. Kiran, problems and prospects of agricultural marketing in India: An overview, *International journal of agricultural and food science*, August 2013
- 7) <http://www.nistads.res.in>
- 8) <http://www.echoupal.com>
- 9) <http://en.wikipedia.org>

Analysis of Dr. B. R. Ambedkar's Model of State Socialism

Mr. Rajshekhar K. Nillolu

Asst. Prof., Dept. of Business Economics,
D.G.College of Commerce, Satara

State Socialism of Dr. Ambedkar presents the blueprint of the model of economic development. It advocates for nationalisation of key industries, basic industries and of agricultural land. In his concept of State Socialism Dr. Ambedkar maintained equilibrium between individual liberty and State control. He was not opposed private sector of the economy. Dr. Ambedkar attempted to establish State Socialism in the Democratic setup by the law of the Constitution and to make it unalterable part of the Constitution. He thought to incorporate State Socialism in the Fundamental Rights of the Constitution as part III of the Chapter on Fundamental Rights, so that no parliamentary majority can amend, suspend or abrogate it. But Constituent Assembly turned down his notion on grounds that the provision did not relate to Fundamental Rights. Instead, India adopted policy of Democratic Socialism, which assigned the job of implementing socialist policy to the will of the legislature, i.e., to the parliamentary majority.

Dr. Ambedkar's Model of State Socialism

'States and Minorities' is a memorandum which Dr. Ambedkar prepared and submitted to the Indian Constituent Assembly, on behalf of the All India Scheduled Caste Federation. It presents the blueprint of Dr. Ambedkar's Model of Economic development. His model of economic development represents a modified form of socialism. In his model Dr. Ambedkar stood for the principle of State intervention in moulding the economic life of the people in the country, for which he suggested the model of State Socialism. Dr. Ambedkar said "The main purpose behind the clause is to put an obligation on the State to plan the economic life of the people on lines which would lead to highest point of productivity without closing every avenue to private enterprise, and also provide for the equitable distribution of wealth."¹ In State Socialism, views of Dr. Ambedkar differs from Marxian concept of socialism. A Marxian view goes against private enterprise and stands for complete socialisation of economy and State monopoly.

Dr. Ambedkar presented his model of State Socialism in Article II, Section II, of his memorandum 'States and Minorities' while suggesting remedies against invasion of Fundamental Rights. Dr. Ambedkar wanted his scheme of State Socialism to be incorporated in the Fundamental Rights in Part III of the Constitution of India.² The Model of State Socialism presented by Dr. Ambedkar is as follows.³

1. That industries which are key industries or which may be declared to be key industries shall be owned and run by the state.
2. That industries which are not key industries but which are basic industries shall be owned by the State and shall be run by the State or by corporations established by the State.
3. That Insurance shall be a monopoly of State and that the State shall compel every adult citizen to take out a life insurance policy commensurate with his wages as may be prescribed by the legislature.
4. That agriculture shall be State Industries.

Thus from the above model it is evident that Dr.Ambedkar is against complete monopoly of the state, but he favours state ownership in the field of agriculture, land, industry and insurance with the provision to safeguard the socio-economic interest of all the people. He observes that it is the primary function of the state to put an effective check on socio-economic exploitation of its people. The plan of State Socialism has two special features as explained by Dr.Ambedkar “one is that it proposes State Socialism in important fields of economic life. The second special feature of the plan is that it does not leave the establishment of State Socialism to the will of the legislature. It established State Socialism by the Law of the Constitution and thus makes it unalterable by any act of the Legislature and the Executive.”⁴ Dr.Ambedkar observes that it is the primary function of the State to put an effective check on socio-economic exploitation of its people. Dr. Ambedkar opposed the notion of minimum State intervention in economic and social affairs. He was of the opinion that the “liberty from the control of State is another name for the dictatorship of private employer.”⁵ While advocating for the socialist structure of the economy, Dr.Ambedkar also maintain equilibrium in between individual liberty and the State control. He said, “The purpose is to protect the liberty of the individual from invasion by other individual which is the object of enacting Fundamental Rights. The connection between individual liberty and the shape and form of the economic structure of society may not apparent to everyone.”⁶ While explaining relationship between individual liberty and State control he opines that, if the state refrains from intervention in private affairs the residue is liberty. According to Dr. Ambedkar, this liberty is for a few people in the society. Dr. Ambedkar observed this sort of liberty is “the liberty to landlords to increase rent and liberty to their capitalist to increase hours of works and reduce rate of wages.”⁷

The people without economic resources become victims at the hands of private enterprises. If the State does not make rules and handover the powers to private persons to govern others, the private employers will make the rules as per their convenience and benefits. Dr. Ambedkar therefore observed that “what is called liberty from the control of the State is another name for the dictatorship of the private employer.”⁸ In this concern R.C.Gupta in his book ‘Socialism Democracy and India’ rightly observed that, “State cannot sit idle and allow bad and inhuman practices flourish in Society. It is all the more essential in a society where democracy has been accepted as a way of life.”⁹

In case of industry, Dr. Ambedkar does not favour nationalisation of all the industries of the country. He advocated for nationalisation of the key and basic industries only. He was not opposed private sector of the economy. Dr.Ambedkar realized that the private enterprise cannot bring about rapid industrialisation of Indian economy because of its motives of maximum profit. Even if it attempts to industrialise the economy it would produce inequality, exploitation of workers. It is evident from the statement of Dr.Ambedkar “State Socialism is essential for the rapid industrialisation of India. Private enterprise cannot do it and if they did it would produce those inequalities of wealth which private capitalism has produce in Europe and which should be a warning for Indians.”¹⁰ According to Dr.Ambedkar nationalisation of key industries is essential from the point of view of public welfare and progress of national economy.

Dr.Ambedkar further advocated for the nationalisation of Insurance. He suggested that the State should compel every adult citizen to take out a life insurance policy. He advocated for nationalisation of insurance with a view to give greater security to the individuals and adequate funds to the State for financing economic plans.At last Dr.Ambedkar advocated for

nationalisation of agricultural land and collective farming as a method of cultivation in order to abolish intense inequality which exists in the rural India.

Notes and References

1. Ambedkar B.R., States and Minorities, Dr.Babasaheb Ambedkar Writings and Speeches, Vol-I, Published by Govt. Education Dept. Govt. of Maharashtra, Bombay, 1987, pp.408
2. How the State Socialism can be a part of Fundamental Rights is explained in draft Memorandum, States and Minorities
3. Ambedkar B.R., Op.Cit. pp.369
4. Ambedkar B.R., Op.Cit. pp.409
5. Ambedkar B.R., Op.Cit.PP.410
6. Ibid., pp409
7. Ibid., pp410
8. Ibid. pp.410
9. Gupta R.C., Socialism Democracy and India, Ram Prasad and Sons Publication, Agra, 1965, pp.1965
10. Dr.B.R.Ambedkar, Op.Cit. pp.408



Agricultural Finance in India

Prof. Pravin More

Assistant Professor, Dept of Economics
Shri Padmamani Jain college
Of Arts & Commerce,
Pabal, Tal-Shirur, Dist-Pune

Abstract :

Agriculture is backbone of Indian economy. Agriculture sector provide raw material to industry and service sector With more than two third of the population engaged in agriculture related activities. Around 56 percent work force is engaged in agriculture. Development of Agriculture sector and rural economy depends on good development and flow of credit system. Credit supply is an important Determinant of investment in agriculture. In india ,access to credit remains significant challenge for farmers .Finance in agriculture is as important as development of technologies .Technical inputs can be purchased and used by farmers only if sufficient money is available with farmers .Most of the times farmers suffer from the problem of inadequate financial state. agriculture has greater role in the development of industries such as textiles ,sugar and many agro based industries.This helps standard of living of farmers and rural development.

Key Words : Agriculture finance, small farmers, Agricultural inputs

Introduction :

Indian agriculture plays an important role in the development of the country. Agriculture is the main source of livelihood of majority of Indian population. About 72 percent population was working in 1950-51 and 52 percent population is working in agriculture sector at present (Economic survey 2013-14). Agriculture still remains the backbone of our Indian economy. Agriculture sector accounts 13.9 percent of Indian GDP in the year 2013-14. Share of this sector in the GDP has falling since independence, in the year 1950-50 agriculture held 56.5 percent of GDP. In 1970-71 share of this sector was 45.9 percent and in the year 1990-91 it was 34 percent after continue falling it came up to 14.6 percent in the year 2010-11 and in the year 2013-14 it was 13.9 percent. It means trend of agriculture production share in GDP is continuing decreasing till present. Indian agriculture has many crucial problems; Agricultural development in India has been given due importance right from India's First Five Year Plan (1951-56). The key problem of agriculture, carried on in rural areas mostly by poor, small and marginal farmers and weaker section of the society, is credit. Credit is one of the critical inputs for agricultural development. It capitalizes farmers to undertake new investments and/or adopt new technologies, production and marketing activities. Agricultural credit is an important input for improving agricultural production and productivity and mitigating farmer distress. Bank credit is available to the farmers in the form of short-term credit for financing crop production programs and in the form of medium-term/long-term credit for financing capital investment in agriculture and allied activities like land development including purchase of land, minor irrigation, farm mechanization, dairy development, poultry, animal husbandry, fisheries, plantation, and horticulture.

Research Methodology:

This is a descriptive research paper based on secondary data. Data have been found out from R.B.I, NABARD, Commercial Bank, Cooperative Banks and RRBs on different view point.

Agriculture Finance In India -

The importance of farm credit as a critical input to agriculture is reinforced by the unique role of Indian agriculture in the macroeconomic framework and its role in poverty alleviation. Availability and access to adequate, timely and low cost credit from institutional sources is of great importance especially to small and marginal farmers. All India Rural Credit Survey Committee (1954) observed that "The credit fell short of the right quantity, was not of the right type and did not serve the right people". The flow of credit to the agriculture sector failed to exhibit any appreciable improvement due mainly to the fact that commercial banks were not tuned to the needs and requirements of the small and marginal farmers, while the co-operatives, on the other hand, lacked resources to meet the expected demand. The finance to agriculture is broadly in two parts direct and indirect it is later in which more emphasis has been and thus direct support to agriculture has been minimal. All India Rural Credit Survey (AIRCS) has confirmed that formal credit institutions provided less than 9% of rural credit needs in India. Money lenders, traders and rich landlords accounted for more than 75% of rural credit

Sources of Agriculture Credit: There are mainly two source of credit to agriculture (a) Non-Institutional/informal sources. (b) Institutional/ Formal sources Non-Institutional:- They include money lenders, traders, commission agents, relatives and land lords. There are rich farmers or land lords, who combine farming with money lending, freely supply credit to farmers for productive and non-productive purpose. Traders and commission agents supply funds to farmers for productive purpose especially for crop production. These types of sources of finance are important in the case of cash crops. Farmer often borrows from their own relatives in cash or kind for various purposes. Institutional: - Earlier agriculture credit requirement was depends upon private money lender and they charged high interest rate and land or other assets were kept as collateral. This arise the need for institutional credit arrangement for agriculture. The institutional arrangement for agriculture credit comprises cooperatives, commercial banks, RRBs, NABARD and micro Finance Institution in India.

Cooperative credit Societies – Commonly known as the primary agricultural credit society, is the gross root arm of the short term credit structure, dealing directly with farmer borrowers and also undertaking farm input marketing and distribution function

. Commercial Banks – They are providing direct and indirect finance to the farmers and distribution firms or agencies and cooperative engaged in supply of farm implements and machinery on a hire purchase basis. They finance the operations of state and central government for procurement and storage of food grains.

Co-operative Agriculture and Rural Development Banks – They grant loans on the basis of agricultural properties. They provide credit for a variety of purpose such as redemption of old debts, land improvement, to purchase expensive agricultural machinery and construction of wells. Regional Rural Banks (RRBs) – RRBs were setup under the recommendation of the working group on rural banks headed by M.Narsimham in 1975 to provide banking facilities in

rural and backward areas. The main objective of RRBs is to provide credit and other banking facilities particularly small and marginal farmers, agricultural labourers and rural artisan.

National Bank for Agricultural and Rural Development (NABARD) – Recommendation of the committee to review arrangements for institutional credit for agricultural and rural development, The NABARD was set up in 1982 as the apex of rural institutional credit network. Status of Institutional Credit to Agriculture and Allied Sector:

As a result of the institutional expansion policy thousands of bank branches were opened in rural and semi urban areas and government established a new network of RRBs in 1975 for strengthening the rural credit delivery mechanism. Consequently, RBI in 1982 transformed its agricultural credit department with a new bank-NABARD. The opening up of rural bank branches was not only the supply side push of credit but increase in demand side due to population increase and diversification of agriculture in the post-Green Revolution era. In order financial institutions has been established over the years. The initiatives taken by the Reserve Bank and the Government of India towards promoting financial inclusion since the late 1960s have considerably improved the access to the formal financial institutions. Banking sector plays considerable role in to expand the credit and financial services to the wider sections of the population, a wide network of bringing financially excluded people in to formal financial sector as policies of the government and Reserve Bank towards financial inclusion are implemented through banking sector. Distribution of banking system is another indicator of level of financial inclusion in a country.

conclusion :-

Agricultural credit is still big problem before indian farmers. Agriculture business is going into loss due to many factors like uncertain monsoon, pest attack on crops, rising costs of input, no minimum support price and previous ancestral debt, and high interest rates.

References :-

1. Agricultural economics- Desai bhalerao
2. Indian and global development - dr s.v dhamdhare
3. RBI website

Agriculture Problems and Prospects in Maharashtra with Special Reference To farm Loan Waiver

Siddhi Jagdale
Ma (Economics), Part I,
Savitribai Phule
Pune University (Sppu), 2019

Introduction –

Agriculture is the primary source of livelihood for about 58 per cent of India's population. Gross value added by agriculture, forestry and fishing is estimated at Rs 17.67 trillion (US\$ 274.23 billion) in FY18.

According to the Department of Industrial Policy and Promotion (DIPP), the Indian food processing industry has cumulatively attracted Foreign Direct Investment (FDI) equity inflow of about US\$ 8.57 billion between April 2000 and June 2018.

With Sahyadri ranges running along the coast of Maharashtra, the state is geographically divided into two regions: the Konkan coastal plains which are paddy fields and coconut gardens and the great river basins formed by the rivers flowing out from the Western Ghats (Sahyadri). Agriculture is the main occupation of the state of Maharashtra. Almost 82% of the rural population depends on agriculture for livelihood. Both food crops and cash crops are grown in the state. It also contributes a significant figure to the Gross Domestic Product (GDP). Therefore it becomes important to address the various problems which are faced by the farmers in Maharashtra.

Problems Of Agriculture In Maharashtra:

1.Instability:

Agriculture in Maharashtra largely depends on monsoon. As a result, production of food grains changes year after year. A year of abundant output is often followed by a year of acute shortage.

2. Cropping Pattern:

The crops that are grown are divided into two broad categories: food crops and non-food crops. The former comprises of food-grains, sugarcane and other crops, the latter includes different kinds of fibres and oilseeds.

3. Land Ownership:

Although the ownership of agricultural land is fairly widely distributed, there is some degree of concentration of land holding. Inequality in land distribution is also due to the fact that there are frequent changes in land ownership. It is believed that large parcels of land in India are owned by a relatively small section of the rich farmers, landlords and money-lenders, while the vast majority of farmers own very little amount of land, or no land at all.

4. Sub-Division and Fragmentation of Holding:

Due to the growth of population and breakdown of the joint family system, there has occurred continuous sub-division of agricultural land into smaller and smaller plots. At times small farmers are forced to sell a portion of their land to repay their debt. This creates further sub-division of land.

5. Conditions of Agricultural Labourers:

The conditions of most agricultural labourers in Maharashtra are far from satisfactory. There is also the problem of surplus labour or disguised unemployment. This pushes the wage rates below the subsistence levels.

6. Agricultural Credit:

The typical Indian farmer is almost always in debt. Once the farmer falls into debt due to crop failure or low prices of crops or malpractices of moneylenders he can never come out of it. In fact, a large part of the liabilities of farmers is 'ancestral debt'. Thus, along with his landed property, he passes on his debt to his successors.

Need For Agricultural Loans For Farmers In India:

Agriculture is the main source of income for 65% families in India. But due to financial conditions, farmers are unable to get good results. The government, financial institutions and banks support the farmers by giving them financial assistance through different types of loans to suffice their agricultural needs.

Agricultural loans are loans given to the farmers at very low interest for their agricultural activities. These loans give good financial support with less burden. Agricultural loans are given for all types of farming operations, farming equipment, construction of infrastructures, marketing operations, etc.

Who Gives Loans?

All the government and private banks, rural and urban banks, co-operative societies offer agricultural loans to the farmers. They offer low interest rate as compared to other banks.

Advantages Of Agricultural Loans:

1. Easy loan process
2. Low interest rates
3. Less documentation
4. Flexible payment options
5. Quick processing and less time-consuming



Main Causes Of Rural Indebtedness:

- (a) Low earning power of the borrower
- (b) Use of loan for unproductive purposes
- (c) Excessively high rate of interest charged by the moneylenders
- (d) Manipulation of accounts by the lenders

Suicides Of Farmers – A Growing Concern:

Maharashtra is by far the epicentre of the farmers' suicide crisis, with over 10,000 recorded farm suicides between 2011 and 2013. This year, the Marathwada region alone has seen over 200 farmer suicides in just three months.

According to figures from the Ministry of Agriculture, the total of number of suicides committed by farmers for agrarian reasons in the last three years stands at 3313. The five States — Maharashtra, Telangana, Karnataka, Andhra Pradesh and Kerala — accounted for 3301 of them.

The number of farmers who committed suicide from 2001 to October 2017 is 26,339. Of them, 12,805 farmers killed themselves due to unproductive land, indebtedness and insistence on repayment of loan. Maharashtra alone accounted for close to 38% of all farmer related suicides in the country in 2015.

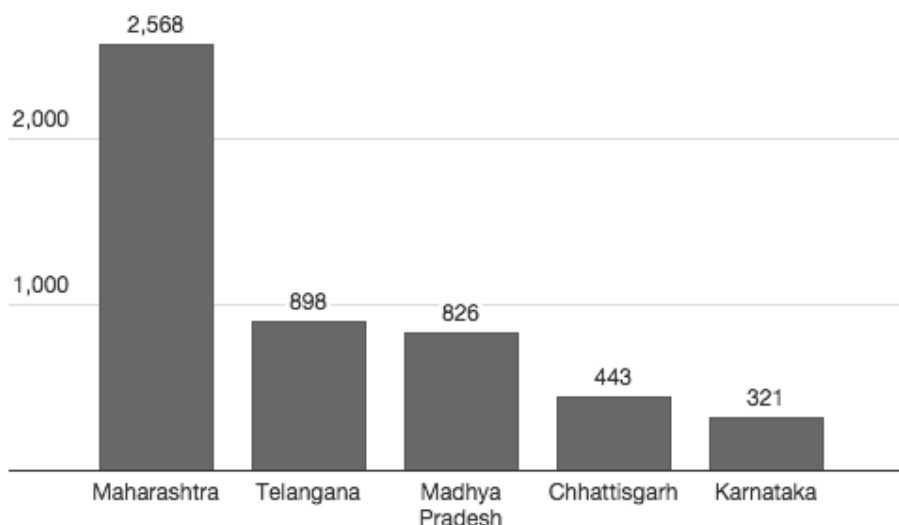
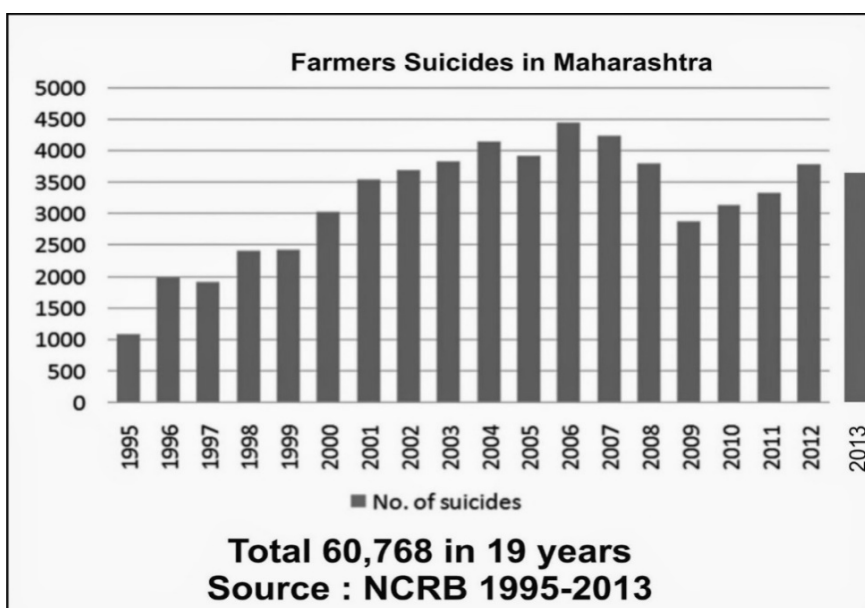
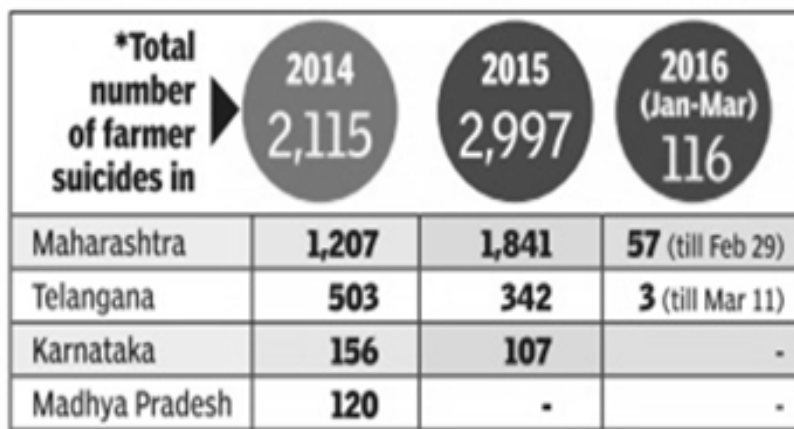
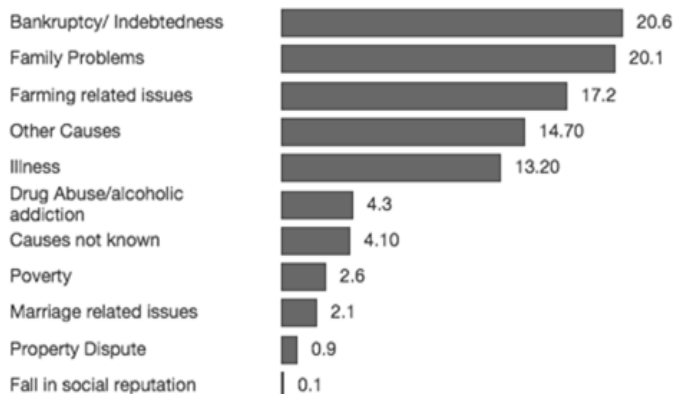
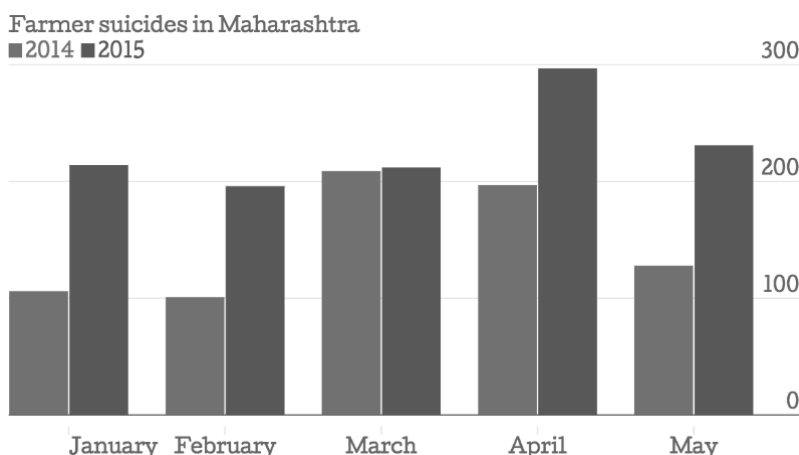


Fig.: States with most cases of farmer suicides, 2014





Source: NCRB

Fig.: Causes of farmer suicides in 2014, %

4

Loan Waiver – Introduction :

A loan waiver is the waiving of the real or potential liability of the person or party who has taken out a loan through the voluntary action of the person or party who has made the loan.

History Of Farm Loan Waivers In India :

The UP and Maharashtra governments recently announced a huge loan waiver package for their farmers. This is not the first time a government has announced such a package. Let us look at the previous instances of farm loan waivers and how the state fared following the move.

➤ Timeline of major farm loan waivers in India -

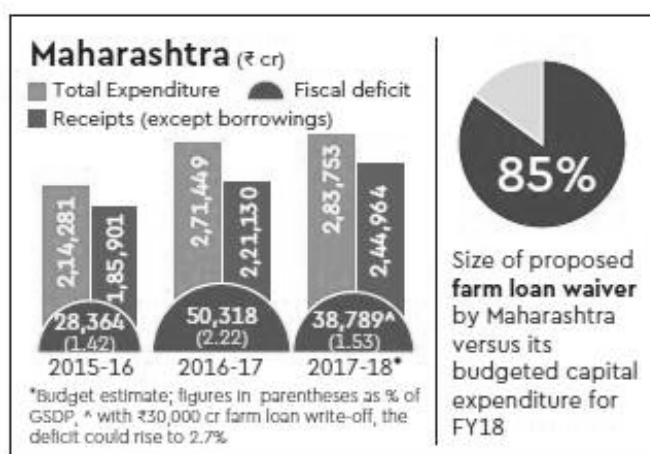
- **1990:** The first ever nation-wide farm loan waiver was announced in 1990 and cost the state Rs 10,000 crore.
- **2008:** Rs 52,000 crore were released by the Indian government as part of the Agricultural Debt Waiver and Debt Relief Scheme (ADWDRS) in May 2008, in order to address the financial indebtedness of the farmers right before the 2009 general election.
- **2014:** In Andhra Pradesh a farm loan waiver of Rs 40,000 crore was announced while a Rs 20,000 crore farm loan waiver was announced in Telangana.

- **2017:** Uttar Pradesh announced a farm loan waiver of Rs 36,000 crore. Maharashtra soon followed suit with a Rs 35,000 crore waiver, though the actual amount is expected to be much greater.

Who Bears The Cost?

For loans taken from Cooperative banks Nationalized banks, the state is responsible for paying the interest and the principle. The loans taken from private moneylenders will be simply nullified.

Urjit Patel, then governor of the Reserve Bank of India has stated that "...leads to crowding-out of private borrowers as high government borrowing tends to increase the cost of borrowing for others." He said that waivers could eventually affect the national balance sheet.



Who Are The Of Loan Waivers?

Studies show that big farmers are the ones most from farm loan also point that the loan waivers during the one loan cycle prompt banks to reduce credit outlay for small or marginal farmers during the next loan cycle.

Beneficiaries

and mid-size who gain the waivers. They

Loan Waiver In Maharashtra:

Maharashtra has a debt burden of Rs 3.56 lakh crore. Prior to the loan waiver, it was expected to cross Rs 4 lakh crore by the next fiscal. With the current loan waiver, the debt is set to increase massively. The state pays a massive Rs.31,000crore as interest annually on its loans.

Current Status Of Loan Waiver In Maharashtra :

The state government has already declared that the loan waiver scheme will be valid for the farmers throughout Maharashtra state. It is also certain that any farmer in the state who has till date not defaulted in repaying the loan amount or is having some loan amount pending in the present year is eligible for taking full benefit under the scheme.

The current loan waiver schemes offered by the government of Maharashtra are :

- Chhatrapati Shivaji MaharajShetkariSanmanYojana (CSMSSY)
- ShetkariSanmanKisanKarjMafiYojana

Impact Of Waiver On The Indian Economy:

A Mint analysis suggests that the cumulative impact of farm loan waivers is likely to be lower than that of the power-restructuring package, UjwalDiscom Assurance Yojana (UDAY), unless they are extended to all Indian states. However, the debt waiver packages will likely prove to be counter-productive and offer little gains to farmers over the long run.

So far, three major states—Uttar Pradesh (UP), Punjab and Maharashtra—have announced large-scale farm debt waivers. The cumulative debt relief announced by the three states amounts to around Rs77,000 crore or 0.5% of India's 2016-17 GDP. UP's debt waiver of Rs36,400 crore is equivalent to one-fourth of the total estimated farm debt in the state. Punjab's debt waiver worth Rs10000 crore is equivalent to less than one-seventh of the total estimated farm debt in the state. Maharashtra's farm debt waiver appears slightly more generous as it appears to cover almost one-third of the state's farm loans.

Effectiveness Of Farm Loan Waiver In Long Run And Short Run :

Although the effect of increased public debt will play out over the **long run**, the increased interest burden due to higher debt will hit state finances immediately. Even in situations where debt waiver amounts to only one-fourth of all farm debt, as in the case of Uttar Pradesh, the aggregate interest payment burden of states will rise by 8% (over their 2016-17 levels). Interest payments of states are already quite high, and often eclipse their spending on important infrastructure areas such as roads and irrigation.

Since the poorest farmers in India typically rely on non-institutional sources of credit, farm loan waivers can discourage subsequent lending by banks in districts with greater exposure to the debt waiver, harming farmers over the long run.

Banks might gain in the **short run** as their loan book gets lighter and they get rid of some non-performing assets. But such waivers and their anticipation in future would damage credit culture. It is not surprising that after the farm debt waiver in 2008, the drop in banks' agricultural bad loans or NPAs (Non-performing assets) lasted for barely a year before rising sharply once again.

But to put things in perspective, the share of agricultural loans in the total basket of NPAs today is low. In fact, banks with more NPAs tend to have a smaller share of agricultural loans in total NPAs. This means that even temporary relief for stressed banks will be quite modest.

Why Do Farmers Suffer Despite Waivers And Institutional Lending?

The lack of accountability and proper monitoring reduces the effectiveness of the loan waivers. This coupled with the fact that not all the debt is formal, reduces their effectiveness even more.

When a farmer's loan is waived off by the bank, the chances of them getting subsequent loans from the same banks is at great risk because the farmer is now a risky borrower. Given how the farmer's income is at the mercy of so many factors starting from the weather to the water (but most importantly the minimum support price offered by the govt. for the produce), the income is never enough to cover for the expenditure. This pushes the farmer into further debt and since the banks won't offer the loans, their only option is the private money lenders.

Hence, unless the real issues that push the farmers into debt are addressed, no matter how many loan waivers are announced they are never going to make farming and farmers sustainable.

A Solution To Increase The Effectiveness Of Loan Waiver :

Loan Waivers Affect Only Bank Loans, Excluding The Non-Banking Finance Companies (Nbfcs) that also lend in rural areas for buying farming equipment. The NBFCs often restructure loans taken by farmers who are unable to pay back. Banks also have similar tools to deal with debt defaults. They have used these for many years to restructure corporate loans. Why not apply some to agri-loans too? Consider the 'funded loan', which defers interest and repayments for a year, adding the first year's interest to the principal. It will mean adding Rs32,000 crore to the Rs 4 lakh crore, deferring repayments by one year — effectively pushing the problem away by a year and buying time. It will remove the immediate cause for distress. New repayment schedules for the current loans will need to be stretched over five, or even ten years. This 'restructuring' will also allow the farmer to take a loan for his next crop, and then

start repaying both loans together. They will have different tenures. The solution will be complete when a margin-protection type of insurance product is introduced across the country for farmers to protect them against future losses and, therefore, future defaults. Effectively, there would be a waiver of loan repayments in immediate terms, and, at the same time, the burden would not affect state or central deficits. These will have to be repaid by farmers over a long tenure, but with a comprehensive margin protection-based insurance plan in place, and with the availability of further credit, it might be possible to sell the benefits of a plan like this to the electorate.

Farmers' Demands :

In the protest march to Azad Madan in Mumbai in March 2018 and November 2018, the farmers demanded -

1. Unconditional waiver of loans and electricity bills,
2. Implementation of the Swaminathan Commission Report which aimed at working out a system for food and nutrition security, sustainability in farming system, enhancing quality and cost competitiveness of farm commodities.
3. Announcement of Minimum Support Price for agricultural produce and,
4. A pension scheme for farmers.

The reason for these demands being the destruction of crops due to unpredictable weather and poor rainfall.

The Way Forward :

1. Not more, but better lending institutions with transparency and accountability.
2. There is a greater need to bring technology closer to the farmers.
3. The farmers should be empowered to store, process and package their produce so they can maximize their profits.
4. Better access to information, technology, market and various other resources for the farmers.

Conclusion :

- More than 50% of the Indian population still depends on agriculture. This is where the real potential of "Make in India" lies.
- Land continues to be a major reason which makes or breaks the farmers. The 2013 Land Acquisition must be enforced rather than diluted.
- Involving farmers in these kinds of discussions and debates will help not just formulate these policies, but also allow for a better implementation.

References:

1. Mint analysis :
2. <https://www.livemint.com/Politics/HcS9M9n9rus7h5JiLQC2ZM/How-will-farm-loan-waivers-impact-the-Indian-economy.html>
3. The Economic Times :
4. <https://economictimes.indiatimes.com/news/politics-and-nation/view-an-outstanding-alternative-to-farm-loan-waiver/articleshow/67278103.cms>
5. <https://economictimes.indiatimes.com/news/politics-and-nation/march-to-azad-maidan-why-agrarian-distress-forcing-farmers-to-protest-in-mumbai/videoshow/66750728.cms>
6. Website of the government of Maharashtra :
7. <https://www.pradhanmantriyojana.co.in/apply-maharashtra-farmer-loan-waivers-yojana-kisan-mafi/>
8. Agricultural Finance & Cooperation book by Tamil Nadu Agricultural University (TNAU)

A Study on Development of Co-Operative Movement in Five Year Plans

Dr. Suvarna Ashok Kurkute

Assistant Professor,
Dhananjayrao Gadgil College of
Commerce, Satara

Abstract:

The cooperative sector is the life blood of economy; the cooperatives have more reach to the rural India, through their huge network of credit societies in the institutional credit structure. The cooperative sector has played a major role in the development of economy. The cooperative covers almost cent percent villages. The place of cooperatives in Indian economy and its role in social and economic affairs has developed a new dimension with the beginning of five year plans in India. The cooperatives which are the life blood of the economy and the mechanism for any development programs. The cooperative credit structure is serving the Indian society since 1904 and since then it has seen several ups and downs. Since independence the cooperative movement has made substantial progress. This paper attempts to analyze the development of cooperative movement in five year plans.

Keywords: Cooperative Movement, Economy, Five Year Plan, Development.

Introduction :

Cooperation is as old as humanity and cooperation is older than the cooperative movement. The cooperative movement brought overall improvement in the economic condition of its members. Since independence Government and Reserve Bank of India have taken an active interest in boosting co-operative movement, due to which more than 60 percent of the credit needs of the farmers are met by the cooperative societies. The marketing and processing societies have helped members to buy their requirements cheaply and sell their agricultural produce at good prices. It has also provided good storage facilities to the farmers. Indian economy is still predominated by rural part of the country in general and agriculture in particular. The movement began in India with an objective to relieve peasants from clutches of moneylenders and to encourage and promote thrift and mutual help for the development of persons of small means such as agriculturists, artisans and other segments of the society.

Origin Of Word Cooperation:

The term cooperation is derived from the Latin word cooperari, where the word co means 'with' and operari means 'to work'. Thus, cooperation means working together. So those who want to work together with some common economic objective can form a society which is termed as "cooperative society". It works on the principle of self-help and mutual help.

Principles:

- Voluntary and Open Membership
- Democratic Member Control
- Member Economic Participation
- Autonomy and Independence
- Education, Training and Information
- Cooperation among Cooperatives

- Concern for Community

Objectives Of Study

- To study the development of cooperative movement in five year plan.
- To study the strength of cooperative movement during the period of planned economic development.

Significance Of The Study :

The research study is significant to evaluate the contribution of Five Year Plans in the development of cooperatives. The present study is useful to the policy planners in their efforts to improve the working of the present system. It is useful to the academicians and students in their study of the present system.

Scope And Limitation Of Study:

The present study deals with the development of cooperative movement in Five Year Plans. This study is limited only to the cooperative movement only.

Method Of Data Collection :

The study is mainly based on secondary data which is collected from journals and websites.

The First Five Year Plan (1951-56):

It recognized cooperation as an instrument of planned economic action in democracy. The Plan emphasized the adoption of the cooperative method of organization to cover all aspects of community development. It provided for setting up of urban cooperative banks, industrial cooperatives of workers, consumer cooperatives, housing cooperatives, diffusion of knowledge through cooperative training and education and recommended that every government department follow the policy of building up cooperatives. In 1953, the Government of India and the Reserve Bank jointly constituted a Central

Committee for Cooperative Training to establish necessary training facilities for cooperative personnel. The plan set for the provisions of cooperative credit thus; Short term loan Rs.100 crore, Medium term loans Rs.25 crore and Long term loan Rs.5 crore.

The Second Five-Year Plan (1956-1961):

This plan emphasized on “building up a cooperative sector as part of a scheme of planned development” as being one of the central aims of National Policy. It aimed at enabling cooperatives to increasingly become the principal basis for organization of economic activity. The Plan drew up programmes of cooperative development based on the recommendations of the All India Rural Credit Survey Committee (AIRCS). It was suggested that every family in a village should be a member of at least one cooperative society. Linking of credit and non-credit societies to provide better services to the farmers was also targeted. The Plan recommended the establishment of a National Agricultural Credit Long-term Operations Fund. The Industrial Policy Resolution of 1956 emphasized the need for State assistance to enterprises, organized on a cooperative basis for industrial and agricultural purposes, and “to build up a large and growing cooperative sector”. Cooperative marketing and processing of agricultural produce formed an important part of the Integrated Scheme of Cooperative Development in the Second Plan. About 1900 primary marketing societies were set up and State Marketing Federations were established

in all the States, as well as the National Cooperative Marketing Federation at the Centre. A sum of Rs.52 crore was earmarked in the plan for the implementation of the schemes. Besides, to make the co-operatives strong finance was provided to RBI.

The Third Five Year Plan (1961-1969):

This plan stressed that "Cooperation should become, progressively, the principal basis of organization in branches of economic life, notably agriculture, minor irrigation, small industries and processing, marketing, distribution, rural electrification, housing and construction and provision of essential amenities for local communities. Even the medium and large industries and in transport an increasing range of activities can be undertaken on cooperative lines". The Agricultural Refinance Corporation was set up in 1962 by the Government of India to provide long-term loans to cooperatives, through Central Land Mortgage Banks. In 1963, the National Cooperative Development Corporation (NCDC) was established as a statutory corporation by an Act of Parliament. The main provision in the Plan was to cover all the villages and 60 percent of the agricultural population by 1965-66; to revitalize Primary Agricultural Societies to make them economically viable, to develop Cooperative Marketing Processing and link credit with marketing; to develop non-credit cooperatives; to strengthen cooperative personnel at all levels; and to provide Rs.530 crore for short and medium term credit; and Rs.150 crore for long term credit during the plan period. A provision of Rs.80 crore was made for the development of cooperation.

The Fourth Five Year Plan (1969-1974):

This plan gave high priority to the re-organization of cooperatives to make cooperative short-term and medium-term structure viable. It also made necessary provisions to provide cooperatives with management subsidy and share capital contribution and for the rehabilitation of Central Cooperative Banks. It also focussed its attention on the need to orient policies in favour of small cultivators.

The Fifth Five Year Plan (1974-1979):

This plan took a serious note of the high level of over-dues. It recommended strategy for cooperative development, regional balances and reorienting the cooperatives towards the under-privileged. Based on the recommendations of an Expert Group appointed by the Planning Commission in 1972, structural reform of the cooperative set-up was envisaged. The Plan recommended the formulation of Farmers Services Cooperative Societies as had been envisaged by the National Commission on Agriculture and stressed the need for professional management of cooperatives. The major objective of the Fifth Plan was to build up a storage and viable cooperative sector with special emphasis on the need of cultivators, workers and consumers. The cooperative development has four specific objectives, viz. to strengthen the network of agriculture cooperative credit, supply, marketing and processing so as to bring about agricultural development.

The Sixth Five Year Plan (1979-1985):

The Plan recommended steps for re-organizing Primary Agricultural Credit Societies into strong and viable multipurpose units. It also suggested strengthening the linkages between consumer and marketing cooperatives. Consolidation of the role of Cooperative Federal Organizations, strengthening development of dairy, fishery and minor irrigation cooperatives,

manpower development in small and medium cooperatives were some of the planned programmes. The National Bank for Agriculture and Rural Development (NABARD) Act was passed in 1981 and NABARD was set up to provide re-finance support to Cooperative Banks and to supplement the resources of Commercial Banks and Regional Rural Banks to enhance credit flow to the agriculture and rural sector. With the objective of introducing a comprehensive central legislation to facilitate the organization and functioning of genuine multi-state societies and to bring uniformity in their administration and management, the MSCS Act of 1984 was enacted.

The Seventh Five Year Plan (1985-1990):

This plan pointed out that there has been all round progress in credit but poor recovery of loans and high level of overdues were matters of great concern. The Plan recommended amongst others development of Primary Agricultural Credit Societies as multiple viable units; realignment of policies and procedures to expand flow of credit and ensure inputs and services particularly to weaker sections; special programmes for the North Eastern Region; strengthening of consumer cooperative movement in urban as well as rural areas and promoting professional management. For the agriculture and rural development the seventh plan provided Rs.22233 Crore (12.4 Percent of Plan outlay). The opening up of the economy in 1990, and the liberalized economic policies followed by the government since then, led to increasing pressures for various governments, state and central, to bring about changes that would provide cooperatives a level playing field to compete with the private sector.

The Eighth Five Year Plan (1992-97):

It emphasized the need to follow the Narsimham committee report and tried to make cooperative banking more strong. It was formulated when the country was passing through difficult circumstances, viz.-drastic curbs on imports, high rate of inflation and recession in industry. The Eighth Plan laid emphasis on building up the cooperative movement as a self-managed, self-regulated and self-reliant institutional set-up, by giving it more autonomy and democratizing the movement. It also spoke of enhancing the capability of cooperatives for improving economic activity and creating employment opportunities for small farmers, labourers, artisans, scheduled castes, scheduled tribes and women and emphasized development and training of cooperative functionaries in professional management.

The Ninth Five Year Plan (1997-2002):

The Multi-State Cooperative Societies (MSCS) Act, enacted in 1984, was modified in 2002, in keeping with the spirit of the Model Cooperatives Act. The Ninth Plan put a targeted annual growth rate of 4.7 percent, in order to achieve the objective of removing the incidence of poverty and unemployment and ensuring food and nutritional security. The targeted growth rate of agricultural output was expected to reach at 3.82 percent per annum and that of agriculture at 4.5 percent and cooperatives expected to contribute optimum level in sustaining economy. In 2002, the Government of India enunciated a National Cooperative Policy. The objective of the Policy is to facilitate an all round development of cooperatives in the country. The policy promises to provide cooperatives with the necessary support, encouragement and assistance, to ensure their functioning as autonomous, self-reliant and democratically managed institutions, accountable to their members, and making a significant contribution to the national economy.

The Tenth Five Year Plan (2002-2007):

to achieve high-targeted annual agricultural growth rate and export, massive expansion and up gradation of agricultural marketing, storage and distribution infrastructure are given priority. Facilities for packaging, grading, and certification of agricultural commodities and development of future agricultural markets would be given special attention with adequate funds. To nurse the rural cooperative credit system back to health, to ensure that the rural credit doubled over three years and that the coverage of small and marginal farmers by institutional lending was expanded substantially, the Government of India in August 2004 set up a Task Force to suggest an action plan for reviving rural cooperative credit institutions and legal measures necessary for facilitating this process. The Task Force, chaired by Prof. A. Vaidyanathan, recommended that any financial restructuring which did not address the root causes of the weaknesses of the system would not result in its sustained revival and would require legal measures.

The Eleventh Five Year Plan (2007-2012):

During the Eleventh Five Year Plan many important schemes, especially in cooperative credit sector, computerization, human resource development and public awareness were formulated and implemented to facilitate the public in general, especially the farmers.

The Twelfth Five Year Plan (2012-2017) –

Revitalization of PACS/LAMPS and ensuring their viability and profitability with a view to making them financially strong to provide greater assistance of rural credit to the farmers by increasing their loan business and increasing the resource base through mobilization of rural small savings. Encourage micro credit groups and women cooperatives to inculcate the habit of small savings in the rural areas as a sub system of cooperatives. The cooperative credit institutions are required to function as facilitators for linking these small groups and women cooperatives with credit institutions.

Conclusion:

Cooperation occupies an important place in the economy of the nation. Today, the cooperative movement has made its presence felt in almost all sectors such as credit, production, marketing, development of scheduled castes and scheduled tribes etc. Cooperative societies have been getting a lot of encouragement from the people and the cooperatives have grown big and played a unique role. The rural cooperatives have played a significant role in areas of credit and agricultural production. The cooperative movement brought overall improvement in the economic condition of its members. More than 60 percent of the credit needs of the farmers are met by the cooperative societies. The cooperative movement is both a theory of life and a system of business. It provides as a substitute for material assets, honesty and sense of moral obligation and keeps in view the moral rather than the material sanction. Cooperation had contributed in the success of economic planning. Government policies are implemented with the help of cooperative societies in rural areas. Through the cooperative societies government seeks public support and awareness.

India Tourism Industry Inworld, Asia and Pacific Region

Mr. S. R. Gangawane

Assistant Professor,
Department of Business Economics,
D.G.College of Commerce, Satara,
Maharashtra- 415001
. Email: shrikant.gangawane@gmail.com.

Abstract:

The Indian tourism industry has emerged one of the key sectors in Indian Economy. Tourism in India has significant potential considering creating employment opportunities, foreign exchange and contribution to Indian GDP. It has rich cultural and historical heritage, variety in ecology, terrains and places of natural beauty spread across the country. The share of International Tourist Arrival is very small and it shows increasing trends but the pace of increase is slow. The share of India in international tourist receipt/ Foreign Exchange Earning is less than the tourist arrivals it is higher in the case of world share compare to Asia and Pacific Region it shows that instead of a major country in Asia it has lower share in tourism receipts. India has failed to extract benefits from tourism industry at a maximum level as it has large potential compare to many countries in the world. Present paper critically analyses and compares the present state of the tourism in India with world, Asia and pacific region on the basis of few selected parameters.

Key words: Tourism Receipts, Foreign Exchange Earning, International Tourist Arrival.

Introduction:

The service sector has the largest share in GDP of India. The tourism sector is one of the key sector contributing service sector. The Indian tourism industry has emerged one of the key sectors in Indian Economy. Tourism in India has significant potential considering creating employment opportunities, foreign exchange and contribution to Indian GDP. It has rich cultural and historical heritage, variety in ecology, terrains and places of natural beauty spread across the country. India has one of most viable player to promote tourism. India has failed to extract benefits from tourism industry at a maximum level as it has large potential compare to many countries in the world. Present paper critically analyses and compares the present state of the tourism in India with world, Asia and pacific region on the basis of few selected parameters.

Objectives of the Study

- To analyses share of Indian tourism sector with world and Asia pacific region.
- To study share of India's Foreign Exchange Receipt with world and Asia pacific region.
- To study share of India's Share in International Tourist Arrivals.
- To compare top 10 countries foreign exchange receipt with India.

Limitations of the study

- Present Study has considered only 2000-2016 data.
- Present study is purely based on Secondary data.

Research Design and Methodology

Data	Secondary
Data source	Ministry of tourism government of India , Government websites and reports
Period of Study	2010 to 2017
Type of Research:	Combination of descriptive and explorative research
Sample size:	Five major indicators considered to compare India Asia and pacific region.
Parameters:	Share of India in international tourist arrival, India's share of foreign exchange receipts, Major countries receiving foreign exchange and India.

Analysis:

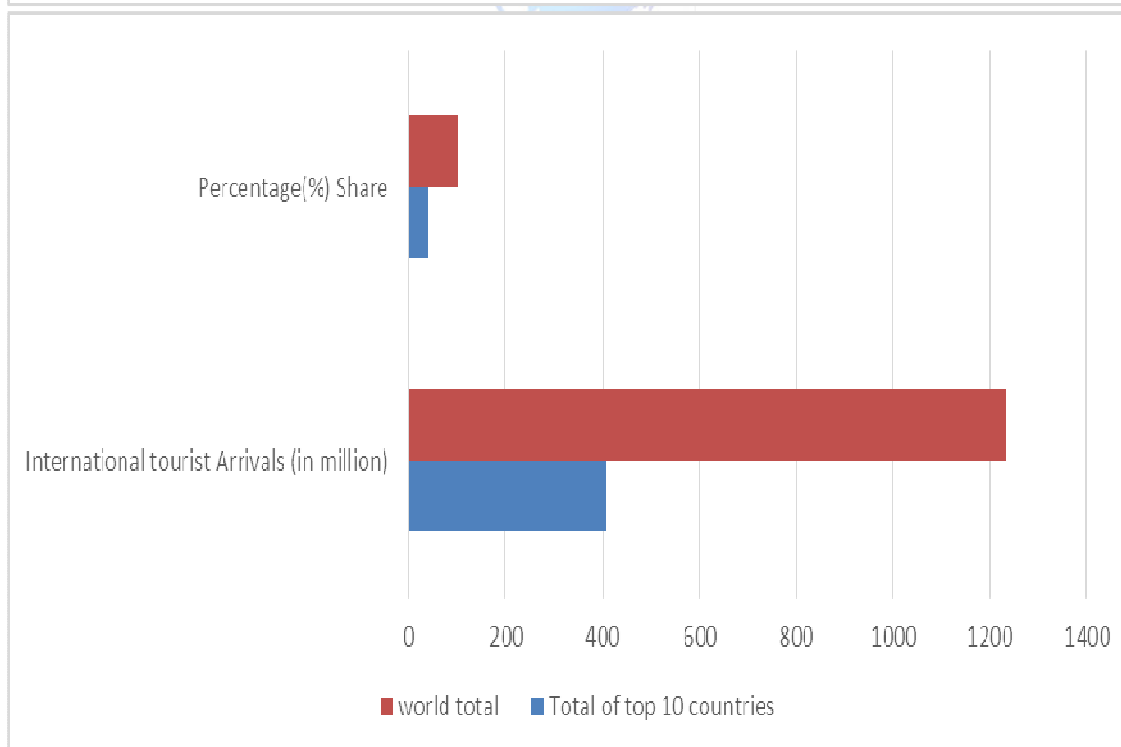
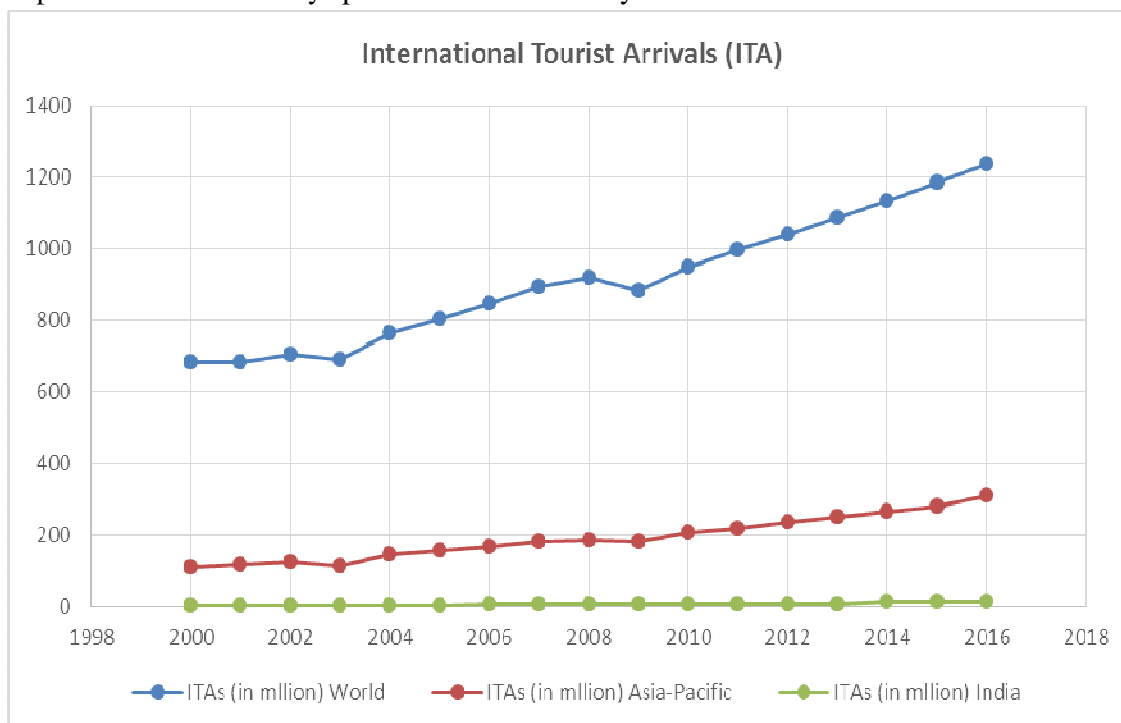
Table -1

Share of India in International Tourist Arrivals (ITAs) in World and Asia & the Pacific Region, 2000 - 2016

Year	ITAs (in million)			Percentage (%) share and rank of India in World		Percentage (%) share and rank of India in Asia and the Pacific	
	World	Asia and the Pacific	India	% Share	Rank	% Share	Rank
2000	683.3	109.3	2.65	0.39	50th	2.42	11th
2001	683.4	114.5	2.54	0.37	51st	2.22	12th
2002	703.2	123.4	2.38	0.34	54th	1.93	12th
2003	691.0	111.9	2.73	0.39	51st	2.44	11th
2004	762.0	143.4	3.46	0.45	44th	2.41	11th
2005	803.4	154.6	3.92	0.49	43rd	2.53	11th
2006	846.0	166.0	4.45	0.53	44th	2.68	11th
2007	894.0	182.0	5.08	0.57	41st	2.79	11th
2008	917.0	184.1	5.28	0.58	41st	2.87	11th
2009	883.0	181.1	5.17	0.59	41st	2.85	11th
2010	948.0	204.9	5.78	0.61	42nd	2.82	11th
2011	994.0	218.5	6.31	0.63	38th	2.89	9th
2012	1039.0	233.6	6.58	0.63	41st	2.82	11th
2013	1087.0	249.7	6.97	0.64	41st	2.79	11th
2014	1134.0	264.3	13.11	1.15	24th	4.86	8th
2015	1184.0	278.6	13.28	1.12	24th	4.67	7th
2016	1235.0	308.7	14.57	1.18	25th	4.72	8th

Source: UNWTO Barometers of June 2010, January 2011, April 2014, August 2015, May 2016 and July 2017 and Tourism Highlights 2011 and 2012.

Data shows that the rank of India in the ITA in 2000 was 50th it became 25th in 2016. In Asia and Pacific region the progress in the rank is slower than World it was 11th in the year 2000 became 8th in 2016. Data shows that India still is not a prominent destination for ITA in the world and Asia pacific instead of rich cultural and historical heritage, variety in ecology, terrains and places of natural beauty spread across the country.



Share of India in Foreign Exchange Earnings (FEE) in the world and Asia and pacific region

Table -2

Share of India in International Tourism Receipts (ITRs) in World and Asia & the Pacific Region, 2000 - 2016

Year	International Tourism Receipt (in US \$ billion)		FEEs in India (in US \$ million)	Percentage (%) share and rank of India in World		Percentage (%) share and rank of India in Asia and the Pacific	
	World	Asia and the Pacific		% Share	Rank	% Share	Rank
2000	475.3	85.3	3.460	0.73	36 th	4.06	10 th
2001	463.8	88.1	3.198	0.69	36 th	3.63	12 th
2002	481.9	96.5	3.103	0.64	37 th	3.22	13 th
2003	529.3	93.7	4.463	0.84	37 th	4.76	9 th
2004	633.2	124.1	6.170	0.97	26 th	4.97	8 th
2005	679.6	135.0	7.493	1.10	22 nd	5.55	7 th
2006	744.0	156.9	8.634	1.16	22 nd	5.50	7 th
2007	857.0	187.0	10.729	1.25	22 nd	5.74	6 th
2008	939.0	208.6	11.832	1.26	22 nd	5.67	6 th
2009	853.0	204.2	11.136	1.31	20 th	5.45	7 th
2010	931.0	255.3	14.193	1.52	17 th	5.56	7 th
2011	1042.0	289.4	16.564	1.59	18 th	5.72	8 th
2012	1117.0	329.4	17.737	1.59	16 th	5.38	7 th
2013	1198.0	360.2	18.445	1.54	16 th	5.12	8 th
2014	1252.0	359.0	20.236	1.62	15 th	5.64	7 th
2015	1196.0	349.5	21.071	1.76	14 th	6.03	7 th
2016	1220.0	366.7	22.923	1.88	13 th	6.25	7 th

Source: UNWTO Tourism Market Trends 2007, UNWTO Barometer June 2009, April 2014, August 2015, May 2016, July 2017 and UNWTO Tourism Highlights 2011, 2012.

After perusal of the data obtained from UNWTO and ministry of tourism Government of India 2000 to 2016, it is clear that share of India in 2000 was just US\$ 3.46 million out of US \$ 475 billion and US \$ 85.3 billion of world and Asia pacific region respectively which is increased to US \$ 22.92 million out of US\$ 1220 billion and US\$ 366.7 billion in 2016 the annual growth rate of FEE is 35.15 % annually.

Percentage share of India was just 0.76% in 2000 of total world receipts from tourism which is increased 1.88 % of world receipt in 2016. the annual growth rate in case of percentage is 9.21 % annually, data shows that in Asia and pacific region Indian tourist sector had 4.06% share which is increase to 6.25% in 2016 the annual growth rate is just 3.37% which is only around one third of annual growth rate of share increase in the world, share of India in world FFE is increasing faster than Asia and Pacific region. India's Rank in FEE was 36th in 2000 it became 13th in 2016 means annually India has 3.99 % rank progress. In the region of Asia and Pacific the India's rank was 10th in 2000 which is became 7th in 2016, which is slower than world rank improvement. The annual growth rate of rank improvement is 1.87% which is much slower than world rank improvement in Foreign Exchange Earning of the India.

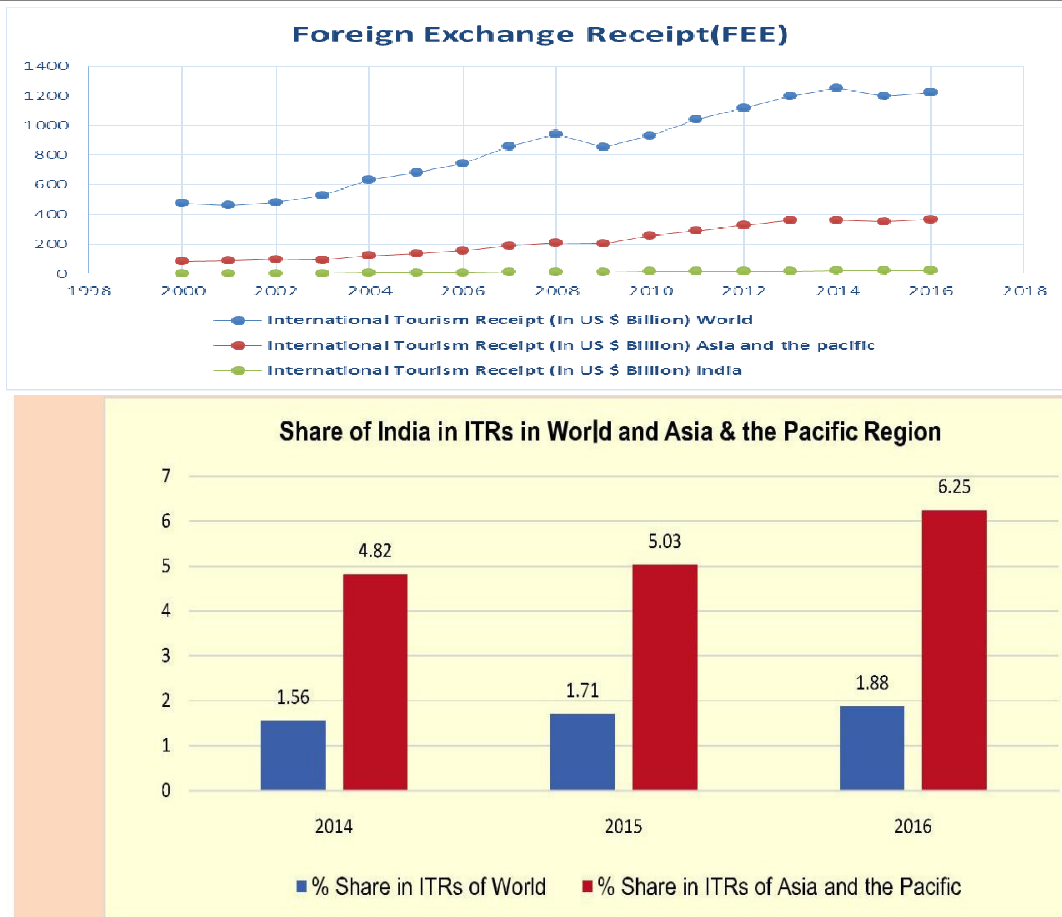


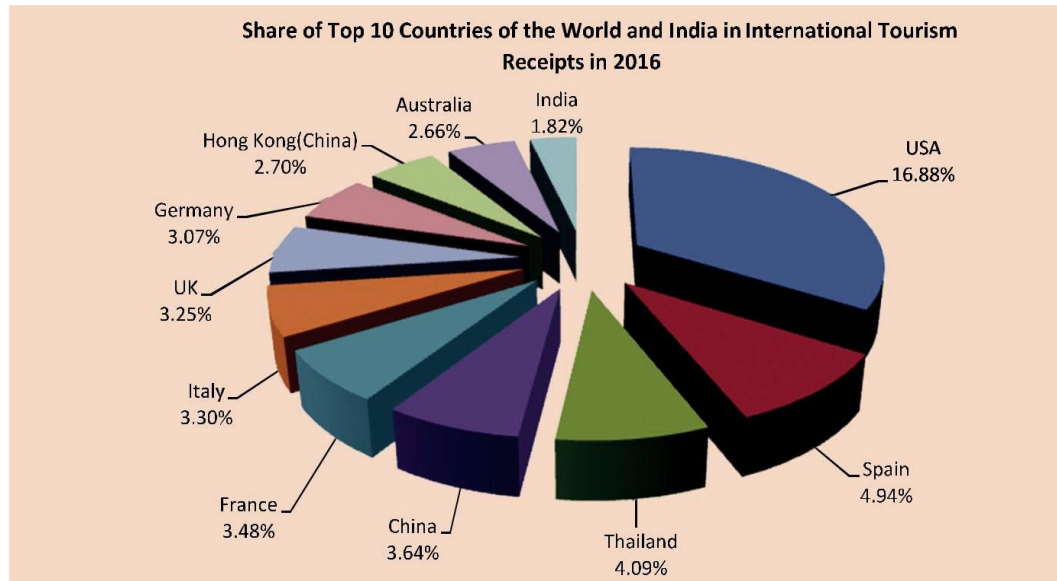
TABLE 14

Share of Top 10 Countries of the World and India in International Tourism Receipts in 2016

Rank	Country	International Tourism Receipts (in US\$ billion)	Percentage(%) Share
1	USA	205.9	16.88
2	Spain	60.3	4.94
3	Thailand	49.9	4.09
4	China	44.4	3.64
5	France	42.5	3.48
6	Italy	40.2	3.30
7	UK	39.6	3.25
8	Germany	37.4	3.07
9	Hong Kong (China)	32.9	2.70
10	Australia	32.4	2.66
	Total of Top 10 countries	585.5	47.99
	India (PR)	22.2	1.82
	Others	612.3	50.19
	Total	1220.0	100

PR: Provisionally revised,

Source: UNWTO Barometer June 2017 for countries other than India, Ministry of Tourism for India



Major Findings:

- ITA shows increasing trend but the growth rate is very slower, in case of Asia and pacific region the growth is slightly higher than world.
- Growth rate of ITA is higher in the Asia and pacific region but share in Foreign exchange earnings is slower than the share in world receipts from tourism.
- India's rank improvement in this period is higher than rank improvement in the case of Asia and Pacific region.
- Data shows that India still is not a prominent destination for ITA in the world and Asia pacific instead of rich cultural and historical heritage, variety in ecology, terrains and places of natural beauty spread across the country.
- Percentage share of India in foreign exchange earnings increased annually 9.21 % but in Asia and Pacific region percentage share of India grown annually by 3.37 % only , it means the FEE sharing of India is slower in the Asia and pacific region even ITA are more from this region.
- India's rank improvement in FEE share of world is 3.99 % annually which is only 1.87% which is much slower than World. It means the share of FEE earning increasing faster than Asia and Pacific region.

Conclusion:

India has failed to extract benefits from tourism industry at a maximum level as it has large potential compare to many countries in the world. The share of International Tourist Arrival is very small and it shows increasing trends but the pace of increase is slow .The share of India in international tourist receipt/ Foreign Exchange Earning is less than the tourist arrivals it is higher in the case of world share compare to Asia and Pacific Region it shows that instead of a major country in Asia it has lower share in tourism receipts. There is much potential to India for increasing international Tourist Arrivals and International Tourist Receipts.

References:

1. Archana Bhatia (2013). SWOT Analysis of Indian tourism Industry, International Journal of Application or Innovation in Engineering & Management (IJAIEEM), Volume 2, Issue 12, December 2013
2. Ministry of Tourism (2017) India Tourism Statistics at a glance– 2017.
3. MudasirMajid Malik (A Review of Tourism Development in India, International Multidisciplinary Research Journal, Vol 3 Issue 11 May 2014.
4. K.Raguraman (1998) Troubled passage to India, Tourism Management
5. Volume 19, Issue 6, December 1998, Pages 533-543
6. <http://www.wto.org>
7. <http://www.ministry of tourism.gov.in>



Analysis of Financial Inclusion through RRBs and Commercial Banks

Prin. Dr. Mrs. P. S. Gaikwad

Author is Principal at
D.G.College of Commerce,
Satara.Maharashtra, India

Abstract:

The present paper examines the progress of financial inclusion in India during the Financial Inclusion Plans 2009-10 to 2016-17 through banking sector and through scheduled commercial banks and RRBs considered. last six years 2009-10 to 2016-17 different parameters shows the tremendous growth rate in the amount transacted. The growth rate of other parameters without amount transacted also shows the very high growth rate. in the case of last one year 2015-16 to 2016-17, the growth rate in amount transacted and other parameters without amount transacted shows the lower growth rate in fact few of them such as Overdraft (OD) facility availed in Basic Savings bank deposit accounts and Total Kisan Credit Cards shows the highest negative growth have negative growth rate during this period.

Key words: Financial Inclusion, Banking Services, Kisan Card, Bank Correspondent.

Introduction:

The process of Economic Growth must take the care of participation of all the sections of the society especially when economy at high Growthline. The exclusion can happen in the society on the basis of different criteria. When it is on the basis of lack of access of financial services to the small and marginal farmers, and weaker sections of society it is called financial exclusion, when it exist in the society it creates serious threat to the economic progress of the economy especially in developing countries.

Many of surveys and research reports clearly show that large numbers of population does not have an access to basic banking and financial services not only in India but also whole world. Government of India and Reserve Bank of India has undertaken many plans to increase the financial inclusion. The present paper examines the progress of financial inclusion during the Financial Inclusion Plans 2009-10 to 2016-17.

Concept of Financial Exclusion

To have a better insight in to financial inclusion we must have better understanding of the financial exclusion. The term financial exclusion indicates lack of access to financial services, payment system and products. It is the process by which a certain section of the population or certain group of individual is denied the access to basic financial services.

According to European Commission a process where by people encounter difficulties accessing or using financial services and products . In India The report of the committee on financial inclusion by C. Rangarajan is defined as “Restricted access to financial services to certain segment of the society”

Extend of Financial Exclusion in the world

According to the World Bank Report In 2014, an estimated 2 billion adults lacked access to a transaction account (Global Findex 2014) and were excluded from the formal financial system. 55% borrowers in the developing countries use only informal source of finance and in

survey of 148 economies approximately 2.5 million people do not have Bank account and excluded from mainstream of financial services and products.

Extend of Financial Exclusion in India

According to Report of the Committee on Financial Inclusion by C.Rangarajan and NSSO data 45.9 million farmer households in the country (51.4%), out of a total of 89.3 million households do not access credit, either from institutional or non-institutional sources. Further, despite the vast network of bank branches, only 27% of total farm households are indebted to formal sources (of which one-third also borrow from informal sources).

Objectives of the Study

- To study the progress made under financial inclusion plan.
- To analyses the progress of financial inclusion through Scheduled Commercial Banks including RRBs.

Limitations of study

- The scope of study is limited to financial inclusion through banking sector.
- Only financial inclusion through scheduled commercial banks and RRBs considered.

Research Design and Methodology

Data	Secondary
Data source	Reserve Bank of India database
Period of Study	2015-16 to 2016-17
Type of Research:	Combination of descriptive and explorative research
Sample :	Only Scheduled Commercial Banks and RRBs have examined
Parameters:	Total 18 parameters of Scheduled Commercial Banks including RRBs

Analysis

Sr.No.	Particulars	2009-10	2015-16	2016-17	Growth rate Annually 2009-10 to 2016-17	Growth rate Annually 2015-16 to 2016-17
1	Banking outlets in rural locations- Branches	33378	51830	50860	8.72	-1.87
2	Banking outlets in rural locations- Branchless mode	34316	534477	547233	249.11	2.38
3	Banking outlets in rural locations- Total	67694	586307	598093	130.58	2.01
4	Urban Locations covered through Business Correspondents	447	102552	102865	3818.71	0.30
5	Basic Savings bank deposit accounts-Through branches (No. in million)	60	238	254	53.88	6.72
	Basic Savings bank deposit	44	474	691	245.07	45.78

6	accounts-Through branches(Amt. in Rs. billion)					
7	Basic Savings bank deposit accounts-Through Business Correspondents (No. in million)	13	231	280	342.30	21.21
8	Basic Savings bank depositaccounts-Through BusinessCorrespondents` (Amt. in Rs.billion)	11	164	285	415.15	73.78
9	Basic Savings bank deposit accounts-Total (No. in million)	73	469	533	105.02	13.64
10	Basic Savings bank deposit accounts Total (Amt. in Rs. billion)	55	638	977	279.39	53.13
11	Overdraft(OD) facility availed in Basic Savings bank deposit accounts (No. in million)	0.2	9	9	733.33	0
12	Overdraft (OD) facility availed in Basic Savings bank deposit accounts (Amt. in Rs. billion)	0.1	29	17	2816.66	-41.37
13	Total Kisan Credit Cards (No. in million)	24	47	46	15.27	-2.12
14	Total Kisan Credit Cards (Amt. in Rs. billion)	1240	5131	5805	61.35	13.13
15	Total General Credit Cards (No. in million)	1	11	13	200	18.18
16	Total General Credit Cards (Amt. in Rs. billion)	35	1493	2117	991.42	41.79
17	ICT-A/Cs- BCs - Total number of transactions (in million)*	27	827	1159	698.76	40.14
18	ICT-A/Cs- BCs - Total amount of transactions(in Rs. billion)*	7	1687	2652	6297.61	57.20

Source: Reserve Bank of India Database

Interpretation

After perusal of the data obtained from RBI database it is clear that the Urban Locations covered through Business Correspondents has highest growth rate during the 2009-10 to 2016-17 followed by Overdraft(OD) facility availed in Basic Savings bank deposit accounts whereas Banking outlets in rural locations- Branches have lower growth rate annually followed by Total

Kisan Credit Cards during the same period. Data shows that ICT-A/Cs- BCs - Total number of transactions has the highest growth rate during the 2015-16 to 2016-17 followed by Total General Credit Cards. In the same period Total Kisan Credit Cards shows the highest negative growth rate followed by Banking outlets in rural locations- Branches whereas Overdraft (OD) facility availed in Basic Savings bank deposit accounts remained constant.

It is clear that ICT-A/Cs- BCs - Total amount of transactions has highest growth rate during 2009-10 to 2016-17 followed by Overdraft (OD) facility availed in Basic Savings bank deposit accounts Total amount of transactions. Total Kisan Credit Cards - Total amount of transactions has lowest growth during this period followed by Basic Savings bank deposit accounts-Through branches, After perusal of the data of last year 2015-16 to 2016-17 Total amount of transactions Basic Savings bank deposit accounts -Through Business Correspondents shows the highest increase and Total Kisan Credit Cards Total amount of transactions has the lowest growth rate during the same period whereas Overdraft (OD) facility availed in Basic Savings bank deposit accounts shows the highest decrease annually -41.37 %.

Findings

- Banking outlets in rural locations- Branches shows decrease during this period.
- Total Kisan Credit Cards (No. in million) shows 15% annual growth but same has negative trend during the last year.
- ICT-A/Cs- BCs - Total amount of transactions has highest growth rate during 2009-10 to 2016-17.
- Total Kisan Credit Cards Total amount of transactions has the lowest growth rate during the same period.
- Overdraft (OD) facility availed in Basic Savings bank deposit accounts shows the highest decrease annually -41.37 %.

Conclusion

During the last six years 2009-10 to 2016-17 different parameters shows the tremendous growth rate in the amount transacted. The growth rate of other parameters without amount transacted also shows the very high growth rate. In the case of last one year 2015-16 to 2016-17, the growth rate in amount transacted and other parameters without amount transacted shows the lower growth rate in fact few of them such as Overdraft (OD) facility availed in Basic Savings bank deposit accounts and Total Kisan Credit Cards shows the highest negative growth have negative growth rate during this period.

References

1. Rangaraj C. (2008) "Report of the Committee on Financial Inclusion" Government of India"
2. Financial Inclusion in India – An
3. Assessment <https://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/MFI101213FS.pdf>
4. WWW.RBI.org.in
5. www.globalindex.worldbank.org

W.T.O. and Agriculture in India

Dr. V. H. Patil

Department of Economics,
C. T. Bora College Shirur (Ghodnadi) Shirur,
Tq- Shirur, Dist-Pune.

Introduction :

Trade is an engine of economic development. The establishment of W.T.O. is an important landmark in the history of international trade. When developing countries were liberalising their economics, they felt the need for better export opportunities. The W.T.O. provides opportunities for countries to grow and realize their export potentials, with appropriate domestic policies in place. The issue of globalization in the Indian context has occurred in the pattern of trade and capital flow in recent years; unfortunately, so far we have not made much use of it. At one time a country's trade pattern was determined by its natural resources and the productivity of its land. Leaving aside global political and institutional factors, a country's level of income was also largely determined by the global demand for its natural resources and its relative efficiency in exploiting them. The importance of land as a source of comparative advantages, however, changed dramatically after the industrial revolution. Today, it is almost insignificant. After the industrial revolution, the availability of "capital" became the most dominant source of comparative advantage.

India will be able to expand its export of agricultural product in which it has tremendous comparative advantage. The provisions of W.T.O. offered ample opportunities to India to expand its export market. Contrary to this, the price situation changed dramatically after 1996, which was the first year after implementation of Uruguay Round Agreement and formation of W.T.O. International price of agricultural commodities have since then plummeted, because of which domestic price turned higher than international price, which made India an attractive market for import of most agricultural commodities. This situation resulted in a wide spread decline in agricultural export and has also pressure on domestic prices. The impact of W.T.O. on agricultural was severely felt by India as cheap imports have frequently hit the Indian market, causing shock waves among the agriculture products. The changes in agricultural export reveal that during pre W.T.O. period the increase was significantly remarkable than post W.T.O. period and the rising export trend could not be sustained in the post W.T.O. period whereas imports rose steadily. The agricultural products from India can be made competitive in international market and the price of agricultural goods in the domestic market can be improved by tacking serious step of reform. "Globalize or Perish" is now the buzzword synonymous to "Do or Die" which conveys that there is no alternative to globalization and everybody should learn to live with it. India being the signatory to the agreement that led to W.T.O. can no way step backwards. This is not the time to curse the darkness but to work for making India emerge as a global market leader.

Agricultural Marketing :

Agricultural marketing includes the movement of agricultural produce from farms where it is produced to the consumers or manufacturers. This covers physical handling and transport, initial processing and packing to simplify handling and reduce wastage, grading and quality control to simplify sales transactions and meet different consumers' requirements. Agricultural marketing also includes the marketing of production inputs and services to the farmers. Some of

these include fertilizers, pesticides and other agricultural chemicals; livestock feed; and farm machinery, tools and equipment.

The natural communication on Agriculture defined agricultural marketing as a process which starts with a decision to produce a saleable farm commodity and it involves all aspects of market structure of system, both functional and institutional, based on technical and economic considerations and includes pre and post- harvest operations, assembling, grading, storage, transportation and distribution. The Indian council of Agricultural Research defined involvement of three important functions, namely (a) assembling (concentration) (b) preparation for consumption (processing) and (c) distribution.

Importance and Objectives of Agriculture Marketing :

The farmer has realized the importance of adopting new techniques of production and is making efforts for more income and higher standards of living. As a consequence, cropping pattern is no longer dictated by what he needs for his own personal consumption but what is responsive to the market in terms of prices received by him. While the trade is very organized the farmers and not farmer is not conversant with the complexities of the marketing system which is becoming more and more complicated. The cultivator is handicapped by several disabilities as a seller. He sells his produce at an unfavourable place, time and price.

The objectives of an efficient marketing system are :

1. To make available all products of farm origin to consumer at reasonable price without impairing on the quality of the produce
2. To reduce the price difference between the primary producer and ultimate consumer.
3. To provide facilities for lifting all produce, the farmers are willing, to sell at an incentive price
4. To enable the primary producers to get the best possible returns,
5. To provide facilities for lifting all produce, the farmers are willing, to sell at an incentive price

Indian Agriculture and WTO :

World Trade Organization was established on January 1, 1995. It replaced GATT. WTO is much wider in scope and coverage.

WTO member countries are subject to following obligations on domestic support to their agriculture. However, there many issues under the AOA which are considered against the interests of developing countries like India. Firstly, the minimum access for import of primary goods flouts the basic rule of promoting free trade under WTO agreement. Secondly, distortions emerge from inequity in domestic subsidy discipline due to different base positions. The developed countries are heavily subsidized countries and are allowed to retain up to 80 per cent of their subsidies but developing countries can subsidize their farmers not more than 10 per cent of the total value of agricultural production. Hence, the domestic support by developed countries needs to be reduced substantially in absolute terms. Thirdly, India has argues that for low income countries, market access and domestic support discipline should be such that their food requirements are met from domestic sources. The volatile international market can get transmitted to the domestic economy and can affect the prices of food grains and food entitlement of the poor.

Fourthly, developing countries face highest tariff rates which include the mayor agricultural staple foods, cereals, meat, sugar, milk, butter, cheese as well as tobacco products and cotton. The Indian proposals have, by and been well received and endorsed by most of the developing countries as well as some of developing countries. However, it is important that steps are taken to reap benefits of a liberalized trade regime through increased efficiency arising from sanitary and phytosanitary measures. Efficiency would be greatly enhanced with increased investment and land reforms. Also, diversification of agricultural production into agro-foods, horticulture and floriculture products and farm products with international quality standards could help to increase exports from this sector.

Conclusion :

The finally, Indian agricultural products by seeking a reduction in the high traffic and subsidies prevent in developed countries. A higher growth in agriculture, thus, needs a comprehensive revamp of agricultural policy with reorientation towards rapid diversification of this sector. A progressive correction is required in the incentive structure for agriculture so that the excessively high minimum supports prices do not continue to distort resource allocation in agriculture. After come across out result Technology mission and the market intervention operations by the public agencies. A heartening backward areas of states. This suggest that there exists some scope for raising agricultural output through improvements in technical efficiency, without resort to new improved technologies. This will ensure that farmers diversification towards high value added segments of agriculture in response to the new demand structure.

References :

1. Acharya S. S., - Agriculture Marketing in India.
2. Kekane Maruti Arjun - Indian Agriculture status
3. Bhalla G. S., - Globalization and Agricultural policy in India.
4. Prakash B. A., - The Indian Economy Science-1991
5. Gite T. G., - Indian Economy problems & prospects
6. Economic survey Government of India
7. <http://www.agricoop.nic.in>.
8. <http://www.governmentofindia.gov.in>.
9. www.google.com

Agriculture Crops Pattern and Marketing in Maharashtra

Prof. Sachin Govind Bibave
Agasti Arts, Commerce and Dadasheb
Rupawate Science College Akole.

Major Crops In Maharashtra:

Wheat, Maize, Rice, Cotton, Grapes, Sweet lime, Orange, Sugar Cane, Coconut, fruits, Vegetable these are the major crops in Maharashtra.

Hurdles in Agriculture Sector Of Maharashtra:

1. Lack of water management:

In Maharashtra rainfall is average but due to lack of water management most water of rainfall flows down to sea. Most of the land in Maharashtra is non-irrigated. If in future focus on river joining project, which will increase irrigated area and it will surely be beneficial to farmer also use of drip technology and research on drip irrigation.

2. Natural Calamities:

Agriculture in Maharashtra is depend on monsoon. Rainfall is not equal in Maharashtra, rainfall is different in different area, sometime rainfall is so much, sometime moderate, sometime rainfall is too low. Which is major barrier in agriculture sector of Maharashtra.

3. Need to improve Government agriculture Plan:

Many times farmer not get profit from their crops. Sometimes farmers are in loss due to rate fluctuation. So many time Government change export import rates, which cause crop rate fluctuation and farmers are in loss.

e.g. Onion.

Lack of storage facility is also hurdles in agriculture sector of Maharashtra. Promote Maharashtra Farmers to do organic farming. Many officers from agriculture department not giving proper guidance of subsidy, agricultural schemes new technology. There are so many good schemes, subsidies and other facility which is not reach to most of the Maharashtra Farmers.

4. Improper knowledge of use of Fertilizer, Pesticides for Farming:

Most of the Farmers from Maharashtra are not literate and they don't know the side effect of the various fertilizers, pesticides and herbicides etc. They just use it to improve the crop yields, but due to use of these toxic chemicals human lifespan decreases day by day and it is also introduce so many non-curable diseases such as cancer, decrease disease resistance capacity, respiratory tract disorder and much more disease. Hence organic farming is the need of all human beings.

Hurdles In Agriculture Sector Marketing in Maharashtra:

1. Lack of knowledge of marketing in farmers:

Farmers produce the crops but most of them don't know about which chemical fertilizer pesticides, herbicides use to crops and their disadvantage on human beings. Lack of knowledge of sorting, grading, transportation facility, high transport cost, sell in different markets,

Government of Maharashtra introduce resolution of producer to direct consumer but it also have some criteria.

2. Brokers/Traders:

So many traders buy agri products in low rate and sell it in high rate by creating artificial deficiency in market for various agricultural products. e.g. onion, dal etc. Farmer take loan, create crop, agriculture is the only way of earning but due loss in agriculture they become frustrate, they cannot manage family expense such as children's education, day today life expense etc and this is the Main reason of suicide of farmers.

3. e-commerce plat form:

e-commerce sector in agriculture is not well developed as compared to other sectors. It is need to develop ecommerce platform for selling agriculture products which will try to improve farmers profit.

4. Market rate variation:

Area to area market rates are variable. Farmers don't know the highest rates for their crops from all different Markets from Maharashtra, India and Out of country. This all commodities rates facility will improve farmers profit, because they will sell their crops in proper way.

5. Storage facility, road ways, transportation, Internet Facility:

Farmers from rural area unable to sell their crops in Big market due non availability of storage facility, road ways, transportation and internet. If farmers will get this facility they will get good profit.



महाराष्ट्रातील कृषी समस्या आणि उपाययोजना

डॉ. एस. के. ढगे

अर्थशास्त्र विभाग,

बाबूरावजी घोलप महाविद्यालय सांगवी पुणे

महाराष्ट्र देशातील तिसरे सर्वात मोठे राज्य आहे. महाराष्ट्राचे क्षेत्रफळ 308000 चौरस किमीचे भौगोलिक क्षेत्र व्यापलेले आहे. महाराष्ट्र भारतातील सर्वात मोठी अर्थव्यवस्था आहे. संपूर्ण लोकसंख्येच्या 45% लोक शहरी शहरी भागात आहे. महाराष्ट्र सरकार अर्थसंकल्पात औद्योगिक तरतूद करत आहे, तरीसुद्धा राज्यातील कृषी ही मुख्य व्यवसाय आहे. बहुतेक लागवडी योग्य जमीन अद्याप पावसावर अवलंबून आहे, म्हणून जून आणि सप्टेंबर दरम्यानचे दक्षिण-पश्चिम मान्सून हंगामात अन्नधान्य आणि इतर पिकांसाठी महत्वाची आहे. म्हणून, महाराष्ट्र आणि भारताच्या इतर भागांच्या कृषी दिनदर्शिकेस मान्सूनद्वारे शासित केले जाते. वेळेचे वितरण, स्थानिक वितरण किंवा मान्सूनच्या पावसाच्या प्रमाणात होणारी चढ-उतार यामुळे पूर किंवा दुष्काळ होण्याची शक्यता उद्भवू शकते. पुणे आणि अहमदनगर आणि मराठवाडा प्रदेशासारख्या दख्खन पठारांवर पश्चिम महाराष्ट्रातील जिल्हे दुष्काळग्रस्त आहेत. सुविधा वाढवल्या जात आहेत ज्यायोगे शेतीस पावसाच्या पाण्यावर कमी अवलंबून राहू शकेल. महाराष्ट्रात आतापर्यंत भारतात सर्वाधिक संख्येने धरणे आहेत. तरीही, निव्वळ सिंचन क्षेत्रास फक्त 33,500 चौरस किलोमीटर किंवा लागवडीच्या 16% जमीन एवढी आहे.

मुख्य मान्सून पिकांमध्ये तांदूळ, ज्वारी आणि बाजरी यांचा समावेश आहे. इतर पिकांमध्ये गहू, डाळी, भाज्या आणि कांदा यांचा समावेश आहे. मुख्य व्यापारी पिकांमध्ये कापूस, ऊस, हळद आणि भुईमुग, सूर्यफूल आणि सोयाबीनसह अनेक तेल बिया समाविष्ट आहेत. राज्यातील फळांच्या लागवडीखाली प्रचंड क्षेत्रे आहेत, ज्यात अंबा, केळी, द्राक्षे आणि संत्रा मुख्य आहेत. स्वातंत्र्यानंतर महाराष्ट्र कृषी सहकारी संस्थांच्या विकासामध्ये अग्रगण्य होता. खरं तर, ते तत्कालीन गव्हर्निंग काँग्रेस पार्टीच्या 'स्थानिक पुढाकाराने ग्रामीण विकास'च्या दृष्टीकोनांचे अविभाज्य अंग होते. साखर संस्थांना विशेष दर्जा देण्यात आला आणि सरकारने हितधारक, खात्रीशीर आणि नियामक म्हणून कार्य करून एक सल्लागार म्हणून भूमिका घेतली. साखर वगळता, सहकारी संस्था दुग्धशाळेत महत्त्वपूर्ण भूमिका बजावतात. गेल्या पन्नास वर्षात, स्थानिक साखर कारखाने आणि इतर सहकारी संस्थांनी राजकीय सहभागास उत्तेजन देण्यासाठी आणि राजकीय नेत्यांसाठी एक मैलाचा दगड म्हणून महत्त्वपूर्ण भूमिका बजावली आहे. वाढत्या लोकसंख्येला अन्नधान्याचा पुरवठा करण्यासाठी शेतीच्या उत्पादनवाढीची गरज १९ व्या शतकात जाणवायला लागली. सन १८८१ च्या फ्रेमिन कमीशनने शिफारस केल्यानुसार जुलै १८८३ मध्ये कृषि खात्याची स्थापना करण्यात आली. शेती क्षेत्राशी निगडित सर्व विभागांचा त्यात समावेश करून ग्रामीण भागात शेतीमध्ये उत्पादनवाढीसाठी शासनस्तरावरून आवश्यक ती मदत करण्याच्या उद्देशाने कामाला सुरुवात झाली. सन १९०७ पर्यंत कृषि व भूमी अभिलेख ही खाती एकत्रितरित्या कार्यरत होती. सन १९१५-१६ मध्ये तत्कालीन कृषि संचालक श्रीयुत किटींग यांनी जमिनीची धूप थांबवण्यासाठी केलेल्या प्रयोगाचे आशादायक निष्कर्ष आल्यानंतर सन १९२२ पासून मृद संधारणाची कामे सुरु केली. सन १९४२ मध्ये संमत झालेला जमीन सुधारणा कायदा १९४३ मध्ये अंमलात आल्यापासून जमीन सुधारणांची विविध कामे कृषि खात्यामार्फत राबविण्यांत येवू लागली. सन १९४३ मध्ये तत्कालीन सरकारने कृषि व इतर पूरक क्षेत्रातील समस्यांचा विचार करून शेतीकरता प्रथमच सर्वकृष कृषि धोरण आखले. या धोरणानुसार कृषि उत्पादनासाठी पाण्याचा सिंचन म्हणून उपयोग करण्यास सुरुवात झाली.

स्वातंत्र्योत्तर काळातील हरीतक्रांती पूर्वकाळ म्हणजे सन १९५० ते १९६५. या टप्प्यात शेतीच्या विकासाला चालना देण्यासाठी अनेक योजना आखल्या गेल्या. सन १९५७ पासून तालुका बिजगुणन केंद्रामार्फत

दर्जेदार बियाणे उत्पादनास सुरुवात झाली. याकाळात लागवडीखालील क्षेत्राच्या विस्ताराबरोबरच सिंचनाखालील क्षेत्र वाढवण्यावर भर दिला गेला. सन १९६१-६२ मध्ये रासायनिक खतांच्या वापरासाठी विशेष मोहीम हाती घेण्यांत आली. सन १९६५-६६ पासून विविध पिकांच्या संकरीत वाण निर्मितीमुळे देशांत हरितक्रांतीचा पाया घातला गेला. यानंतरच्या काळातील पंचवार्षिक योजनांद्वारे शेती विकासावर विशेष भर देण्यांत आला. सन १९७४ पासून भुसुधारणेच्या कामाबरोबरच नाला बांधबंदिस्तीची कामे खात्यामार्फत सुरु झाल्याने विहिरी व भुगर्भातील पाण्याच्या पातळीत वाढ होण्यास मदत झाली. कृषि उत्पादन वाढीसाठी सधन शेती पध्दतीद्वारे बियाणे, खते, किटकनाशके व उपलब्ध पाण्याचा वापर मोठ्या प्रमाणावर सुरु झाला त्यामुळे कृषि उत्पादन वाढीस मदत झाली नंतर या गोष्टींचा शास्त्रोक्त पध्दतीने वापर व्हावा यासाठी शेतकऱ्यांना अधिक मार्गदर्शनाची निकड लक्षात घेवून सन १९८१-८२ पासून प्रशिक्षण व भेट योजना सुरु करण्यांत आली. कृषि विद्यापीठातील सुधारीत तंत्रज्ञान सर्वसामान्य शेतकऱ्यांपर्यंत पोचवण्यासाठी आखलेल्या पीक प्रात्यक्षिके, क्षेत्र भेटी, प्रचारसभा, चर्चासत्रे, मेळावे, प्रदर्शने इत्यादी कार्यक्रमांच्या परिणामकारक अंमलबजावणीमुळे कृषि उत्पादनवाढीमध्ये मोलाची भर पडली.

उद्दिष्टे:

अभ्यासाची पुढील उद्दिष्टे आहेत,

- १) महाराष्ट्रातील कृषीचा आढावा घेणे
- २) कृषीच्या समस्या शोधणे
- ३) कृषीसाठी योग्य धोरण सुचविणे

सध्या महाराष्ट्रात पुढील बाबी दिसून येतात स्थूल उत्पादन 27.96 लाख कोटी (390 अब्ज अमेरिकन डॉलर्स)(2018-19), जीडीपी रँक 1, जीडीपी वाढ 12% (2017-18), प्रति व्यक्ति जीडीपी 180,596(2017-18) शेतीक्षेत्रातील जीडीपी शेती 11.9%, उद्योग 33.6%, सेवा 54.5% (2016-17) शेती व्यवसायात असलेली लोकसंख्या 51%, उद्योग 9% सेवा 40%(2015)

कृषिविषयक समस्या: -

महाराष्ट्रातील कृषीच्या काही समस्या पुढील प्रमाणे आहेत, महाराष्ट्रातील कृषी एक असंगठित क्षेत्र आहे, बहुतेक शेतकरी लहान आणि आर्थिकदृष्ट्या मागसलेले आहेत, सरकारी धोरणे शेतकऱ्यांपर्यंत पोहचत नाहीत, शेतकऱ्यांची उच्च कर्जदारीपणा, हवामान बदल, जागतिक तापमानात वाढ, बर्फ वितळणे हे पिकांवर परिणाम करते. 2012 मध्ये महाराष्ट्रात 3,786 शेतकऱ्यांच्या आत्महत्यांनी संपूर्ण भारतातील शेतकरी आत्महत्यांपैकी एक चतुर्थांश (13,754) आत्महत्या केल्या. 1995 ते 2013 पर्यंत एकूण 296438 भारतीय शेतकऱ्यांनी आत्महत्या केल्या. शेताचे आकारमान आणि सरासरी शेतीचे उत्पन्न यांच्यात एक मजबूत संबंध आहे. शेताची संरचना आणि प्रकार देखील. उद्योजक शेतांवर वेगळ्या प्रकारे प्रतिकूल परिणाम करते.

उपयोजना:-

1. भारतत मोठ्या व्यापार्यांना गुंतवणूकीस प्रोत्साहित केले पाहिजे. वास्तविक बाजारातील मागण्यांच्या आधारे आणि इच्छित शेतातील आदान आधारावर शेतीच्या उत्पादनाची एकत्रित आणि मुबलक प्रमाणात विक्री करण्यासाठी आवश्यक संरचना आणि संस्था प्रदान करणे आवश्यक आहे.
2. सरकारने कृषीसाठी आवश्यक असणारे अवजारे भाडे तत्वावर दिली पाहिजे.
3. सरकारने कृषीसाठी आवश्यक असणारे अवजारे अल्प किमतीत दिली पाहिजे.
4. व्यापारी बँकांनी कृषीसाठी कमी दराने कर्ज पुरवठा करावा.

समारोप:

शेतकऱ्यांच्या अशा दयनीय अवस्थेचे कारण सरासरी पाऊस, लोड शेडिंग, लहान सिंचन प्रकल्पाचा अभाव, गरिबी, खाजगी सावकारांचा व बँकांचा दबाव, उत्पन्न वाढविण्यासाठी पूरक व्यवसायाबद्दलचे अज्ञान, शेतकऱ्यांच्या मुलांच्या रोजगाराची समस्या, कृषीवरील अतिरिक्त लोकसंख्येचा भार यासारख्या समस्या कृषीच्या आहेत.

संदर्भ-

- १) महाराष्ट्र सरकार अहवाल
- २) magov.com
- ३) महाराष्ट्रतील जिल्हा सांख्यिकी
- ४) भारतीय अर्थशास्त्र २०१७-१८



२००१ नंतरची महाराष्ट्रातील पिक पद्धत

प्रा. व्ही.जी. कोटकर

अगस्ति कला, वाणिज्य व दादासाहेब रुपवते
विज्ञान महाविद्यालय अकोले, ता-अकोले,
जि- अहमदनगर ४२२६०१

प्रस्तावना:

महाराष्ट्राच्या किनारपट्टीवर असलेल्या सह्याद्री पर्वतरांगांसह भौगोलिकदृष्ट्या दोन भागांत विभागला गेला आहे; कोकण पट्टीय मैदान जे भातशेती आणि नारळचे बाग आहेत आणि पाश्चिम घाट (सह्याद्री) पासून वाहणारा नद्यांमधून बनवलेले मोठ्या नद्यांचे खोरे आहेत. महाराष्ट्र राज्याचे मुख्य केंद्र आहे. शेती हा लोकांचा मुख्य व्यवसाय आहे. ग्रामीण भागातील सुमारे 82% लोक उपजीविकेसाठी शेतीवर अवलंबून असतात. राज्यात अन्नधान्य आणि व्यापारी पिके दोन्ही पीके घेतली जातात. महाराष्ट्रातील मुख्य अन्नधान्य म्हणजे आंबे, द्राक्षे, केळी, संत्री, गहू, तांदूळ, ज्वारी, बाजरी डाळी इ. रोख पिकांमध्ये भुईमूग, कापूस, ऊस, हळद आणि तंबाखू यांचा समावेश आहे.

महाराष्ट्रात पावसाचा असा अनुभव आहे की जवळजवळ एक-तृतीयांश क्षेत्रात कमी पाऊस पडतो, नेहमीच पाणी कमतरता आणि दुष्काळग्रस्त असतो. महाराष्ट्र राज्यात देशातील 24 टक्के दुष्काळग्रस्त क्षेत्र आहे. राज्यातील निम्न्या तालुक्यांमध्ये जास्त प्रमाणात दुष्काळग्रस्त क्षेत्र आहे. पीक लागवडीसाठी वापरल्या जाणाऱ्या एकूण सिंचनाचे क्षेत्र 33500 चैरस किलोमीटर आहे; ज्यामुळे केवळ 18% एकूण पिकाचे क्षेत्र बनते. त्याच्या शक्तीवर पैसे कमविणे हा उद्देश आहे. महाराष्ट्र राज्य मुख्य पिकांच्या ऐवजी उच्च-किमतीच्या बागकामांवर लक्ष केंद्रित करित आहे. राज्यात मोठ्या प्रमाणात फळे आणि भाजीपाला लागवडीखाली आणले गेले आहे जे मोठ्या प्रमाणावर निर्यात संभाव्यतेची आणि राज्याच्या खजिन्यात जोडले गेले आहे. उत्पादनांची विक्री करण्यासाठी कृषी निर्यात क्षेत्र विकसित केले गेले आहेत. अलिकडच्या वर्षात महाराष्ट्रात सर्वात मोठा प्रमाणात ओनियन्स (63%), केळी (75%), संतरे (75%), टोमॅटो (42%), डाळिंबे, आंबे (9 0%) आणि द्राक्षे (78%) इ पिके घेतली जातात . सुमारे 150 उत्पादक सहकारी साखर कारखाने असलेले राज्य साखर उद्योग क्षेत्राचे नेतृत्व करत आहे.

उद्दिष्टे

महाराष्ट्रातील २००१ नंतरची पिक पद्धती पाहणे:

जुलै सप्टेंबरचा समावेश असलेल्या पावसाळी हंगामाच्या तीन विशिष्ट हंगामांसह राज्याचे मुख्य भाग अर्ध शुष्क आहे. राज्यात वेगवेगळ्या भागांत पावसाच्या प्रमाणात मोठ्या प्रमाणात फरक आहे. घाट आणि तटीय जिल्हे वार्षिक 2000 मि.मी. पाऊस पडतो परंतु घाटच्या पर्जन्येच्या द्यायेत 600 ते 700 मि.मी. पाऊस पडतो. 500 ते 3000 मि.मी. मधील पावसाचे प्रमाण 60-70 दिवसांपेक्षा 1000 मिमी वितरणाच्या सरासरीने नोंदवले गेले आहे. 1999-2000 मध्ये निव्वळ सिंचन क्षेत्र 25.7 लाख हेक्टर (एकूण 33.7 लाख हेक्टर) होते. राज्यात पिकलेले मूलभूत पिके म्हणजे तांदूळ, ज्वारी, बाजरी, गहू, मटर, मूंग, हरभरा आणि इतर डाळी. हे तेल बियाण्यांचे प्रमुख उत्पादक राज्य आहे. भुईमूग, सूर्यफूल, सोयाबीन हे प्रमुख तेलबिया आहेत. कापूस, ऊस, हळद आणि भाज्या यासारख्या महत्वाच्या रोखांची लागवड आहे. राज्यात फळांचे पीक, आंबा, केळी, नारंगी, द्राक्षाचे काजू आणि इतर फळांच्या पिकाखालील 10.91 लाख हेक्टर क्षेत्र आहे.

प्रमुख पीक आणि पिक पद्धत:

पावसाळी पिके (खरिफ)

भात, नागली, खरीफ ज्वारी, भुईमूग, बाजरी, उडीद.

एकल पिकपद्धत

गहू, ग्राम, दालचिनी, वाटाणे.

दुबार पिक (खरीफ-रबी)

भात-ग्राम / दालचिनी / मटार, भात-मिश्रित डाळी, दालचिनी, भात-गहू.

वार्षिक पीक (पाणथळ परिस्थिती):

ऊस, केळी, बारमाही, आम, काजू

सन 2001 मध्ये महाराष्ट्र राज्यात एकूण वीज उपलब्धता 0.70 किलोवॅट / हेक्टर होती, जी त्याच वर्षी 1.35 किलोवॅट / हेक्टरच्या राष्ट्रीय सरासरीपेक्षा कमी होती. देशाची अन्नधान्य उत्पादन राष्ट्रीय सरासरीपेक्षा कमी आहे. राज्यात यांत्रिकीकरण आणि विशेषतः बागवानी पिकांसाठी उत्तम संधी आहे. ऊस कापणीसाठी ऊस गट्टा तयार करण्यासाठी प्रयत्न चालू आहेत कारण कापणीसाठी मजूर उपलब्ध नाहीत. द्राक्षे निर्यात केली जात आहे. लागवड, बायोगॅस स्लरी, प्रजनन, सिंचन, फवारणी आणि कापणीसाठी यंत्रे सादर करून द्राक्ष उत्पादन तयार करण्याची गरज आहे. मोठ्या प्रमाणात आणि त्याची आवश्यकता यांत्रिकीकरण वर लिंबूवर्गीय पीक घेतले जाते. कापूस उत्पादनांचा विकास करण्यासाठी कापूस व्यापारात मोठ्या प्रमाणात प्रयत्न केले जात आहेत. सोयाबीनखालील क्षेत्र जास्त आहे आणि त्याला यांत्रिकीकरण देखील आवश्यक आहे. गेल्या काही वर्षांपासून महाराष्ट्रात ट्रॅक्टरची विक्री झाली आहे

पिक	२०००-२००१	२०११-१२	२०१७-१८
तांदूळ	१५.१२	१५.४४	१४.७२
गहू	७.५४	८.७८	९.१९
ज्वरी	५०.९४	३२.२९	२१.६९
बाजरी	१८.००	८.३८	६.८०
रागी	१.५५	१.३०	८.६
एकूण तृणधान्य	९८.२४	७५.६४	६५.५०
तूर	१०.९६	१२.३३	१२.२८
मुग	७.१४	४.३३	४.५३
उडीद	५.७४	३.६४	४.८४
एकूण मसाले	३५.५७	३२.९७	४३.५१
एकूण तेलबिया	२५.५९	३७.०२	४२.२२
ऊस	५.९५	१०.२२	९.०२
कापूस	३०.७७	४१.६७	४२.०६

२०००-२००१ ते २०१७-२०१८ या कलावधीतील महाराष्ट्रातील पिकांचा कल (Area "Lakh" ha)

संदर्भ: कृषी विभाग महाराष्ट्र शासन २०१८

वरील टेबल मध्ये २०००-२००१ नंतर तांदूळ, ज्वरी, बाजरी, तृणधान्य, मुग, ई. पिकांच्या क्षेत्रात घट झालेली दिसते. तर कापूस, ऊस, तेलबिया, मसाले, तूर, रागी, गहू ई. पिकांच्या क्षेत्रात वाढ झालेली दिसते.

समारोप:

२००१ नंतरची महाराष्ट्रातील पिक पद्धतीत काही पिकांच्या क्षेत्रात वाढ तर काहींच्या क्षेत्रात घट झालेली दिसते. शेतकरी नगदी पाकांकडे वळलेले दिसतात. शासनाचे कृषी धोरण आणि निसर्ग यामुळे शेतकरी आपल्या पीकामध्ये सतत बदल करताना दिसतात.

संदर्भ:

- १) कृषी विभाग महाराष्ट्र शासन २०१८
- २) www.govinmh.
- ३) economics surva of maharashtra 2018

कृषीनिविष्ठा खरेदीतील शेतकऱ्यांच्या समस्या

विलास काशिनाथ भांगरे

अगस्ति कला, वाणिज्य व दादासाहेब रुपवते
विज्ञान महाविद्यालय अकोले,
ता. अकोले, जि. अहमदनगर पिन- ४२२६०१
मोबा. ९७६७१३०६६४
e-mail id - bhangarevilas@gmail.com

डॉ. बैरागी व्ही. बी.

एस.एम.बी.टी.महाविद्यालय संगमनेर

प्रास्ताविक :

मानवाच्या विविध विकासात्मक अवस्थांमध्ये सद्यस्थितीत जगातील 2/3 लोकसंख्येचा प्रमुख व्यवसाय शेती असल्याचे दिसून येते. शेतीमध्ये सातत्याने सुधारणात्मक स्वरूपात प्रयत्न झाले भारतामध्ये १९६६-६७ नंतर म्हणजेच हरितक्रांती नंतर शेती उत्पादन वाढीच्या दृष्टीकोनातून जे प्रयत्न केले गेले, त्यानंतर शेतीत संशोधित बियाणे, रासायनिक व जैविक औषधे, सिंचनाची साधने, कृषी यांत्रिकीकरण यांचा वापर मोठ्या प्रमाणात वाढला. अनेक राष्ट्रीय आंतरराष्ट्रीय उद्योजकांनी कृषिनिविष्ठा उद्योगात प्रवेश केला. शेती व्यवसायाला भांडवलदारीकडे घेऊन जाण्यासाठी हरितक्रांती कारणीभूत ठरली. सरकारने कृषिनिविष्ठा उद्योग व वितरण प्रणालीसाठी नियमावली तयार केली. परंतु या नियमावलीत अनेक त्रुटी दिसून येतात, यातूनच विपणन विषयक समस्या निर्माण होतात. विपणन प्रणालीतील वितरण व्यवस्था कृषिनिविष्ठा वितरीत करताना ठरवून दिलेले मापदंड पाळत नसल्याचे दिसून येते. याचाच परिणाम प्रत्यक्ष ग्राहकावर होतो. ग्राहकांची अज्ञानपणामुळे फसवणूक होते, २०१७ मध्ये यवतमाळ जिल्ह्यात कीडनाशके फवारणी करताना एक हजार शेतकऱ्यांचा मृत्यू झाला. महाराष्ट्रात मोठ्या प्रमाणावर शेतकरी आत्महत्या होतात, तसेच बीटी बियाणे वापरल्यामुळे बोंड अळीचा कापूस पिकावरील प्रादुर्भाव या अनेक कारणांपैकी एक कारण म्हणजे महागड्या कृषिनिविष्ठांच्या वापरातून योग्य परतावा न मिळणे व कर्ज बाजारीपणातून आत्महत्या करणे हे दिसून येते. यातूनच ग्राहकांचे समाधान कृषिनिविष्ठा वितरण प्रणालीकडून केले जाते का हा मोठा प्रश्न आहे. तसेच रासायनिक खते व औषधे रासायनिक घटकापासून तयार केली जातात या घटकांचे कार्य वितरण प्रणालीतील विविध घटकांना पुरेशा ज्ञानाअभावी माहित नसल्याने ते ग्राहकांना माहिती देऊ शकत नाही. आणि शेतकरी ग्राहकांना ही रासायनिक खते व औषधे वापरण्याचे तांत्रिक ज्ञान नसल्याने त्यांची फसवणूक होते. या फसवणुकीची जबाबदारी घेण्यासाठी कोणीही तयार नसल्याचे दिसून येते.

कृषीनिविष्ठा व्याख्या :

“कृषी निविष्ठा म्हणजे शेतीमध्ये वापरासाठी परवानगी असणारी उत्पादने होय. यामध्ये पिक संरक्षक व संवर्धक उत्पादने, संशोधित बी-बियाणे, यंत्र सामग्री व सिंचन साधने या शेती उत्पादनातील घटकांचा समावेश होतो.”

अभ्यासाची उद्दिष्टे

१. कृषिनिविष्ठांची खरेदी व वापर या बाबतीत शेतकऱ्यांच्या समस्यांचा अभ्यास करणे.

२. शेतकऱ्यांच्या समस्यांवर उपाययोजना सुचविणे.

कृषिनिविष्टा खरेदी व वापर यातील शेतकऱ्यांच्या समस्या :

सुधारित बियाणे व पारंपारिक बियाणे तसेच रासायनिक पिक संरक्षके व पारंपारिक खते वापरातून उत्पन्नात वाढ दिसून आली. रासायनिक पिक संरक्षके व सुधारित बियाणे यांमुळे उत्पादन वाढले परंतु सातत्याने बदलते हवामान व मोठ्या प्रमाणावर वाढलेल्या किडी व रोग यांमुळे पिकांचे नुकसान होते व परिणामी उत्पादनात घट होते. यासाठी रासायनिक औषधांचा वापर वाढला परंतु रासायनिक औषधे व पिक संवर्धके यांच्या वापरातील ग्राहकांच्या अज्ञानामुळे सुद्धा उत्पादनात मोठी घट होत असल्याचे दिसून येते, कीड नियंत्रणासाठी कृषिनिविष्टांचा वापर आवश्यक झाला आहे. तथापि कृषिनिविष्टांची खरेदी, वापर, परिणाम अशा विविध बाबतीत पुढील महत्वाच्या समस्या निदर्शनास येतात,

संशोधित बियाणे -

शेती उत्पादन वाढीच्या दृष्टीकोनातून शेतीमध्ये कापूस, टोमॅटो, कोबी, फ्लॉवर, झेंडू, कांदा, सोयाबीन, भुईमुग, गहू, मका या पिकांसाठी संशोधित बियाणे वापरले जातील. संशोधित बी-बियाण्यांच्या वापरामुळे उत्पादनात मोठी वाढ होत असल्याचा दावा बी-बियाणे उत्पादक कंपन्यांकडून केला जातो. तसेच संशोधित बियाण्यांमध्ये विविध किडी व रोगांबाबत प्रतिकार क्षमता असल्याचाही दावा बियाणे उत्पादक कंपन्या करतात. कापूस पिकासाठी बीटी बियाणे झेंडू व टोमॅटो पिकांमध्ये एक पिढी बियाणे (fF1), विषाणू प्रतिबंधक बियाणे मोनसॅन्टो, इस्टवेस्ट, सेमिनिस, सिजेन्टा या आंतरराष्ट्रीय कंपन्यांनी बाजारपेठेत आणले. उत्पादन वाढीच्या दृष्टीकोनातून भारतीय शेतकऱ्यांनी संशोधित बियाण्यांचा वापर मोठ्या प्रमाणावर शेतीमध्ये केला. परंतु बी-बियाणे कंपन्यांकडून केले जाणारे दावे काही कालावधीनंतर चुकीचे ठरू लागले, याचाच परिणाम म्हणून कापूस बीटी बियाण्यांमुळे बोंड अळीचा प्रादुर्भाव, टोमॅटो पिकावर विषाणूजन्य रोग या समस्यांवर उपाय प्रभावी ठरत नसल्याने शेतकऱ्यांची फसवणूक होते.

पिक संरक्षके व संवर्धके -

संशोधित बियाण्यांचा वापर वाढल्यानंतर शेतीमध्ये मोठ्या प्रमाणावर उत्पादन वाढ दिसू लागली, परंतु रोग व किडींचे प्रमाणही वाढले. या रोग व किडींपासून पिकांचे संरक्षण करण्यासाठी सिजेन्टा, बायर, ड्यूपॉन्ट, बीएएसएफ, सुमिटोमो, अदामा, केमिनोव्हा, केमचुरा, एफएमसी या कंपन्यांनी विविध पिक संरक्षके व संवर्धके बाजार पेठेत आणली शेतकऱ्यांनी रोग व किडींच्या निवारणासाठी हि उत्पादने शेतीमध्ये वापरणे सुरू केले. त्यांचे चांगले परिणामही दिसून आले, प्रांती शेतकऱ्यांना ही उत्पादने वापरण्याचे तांत्रिक ज्ञान नसल्याने ते पूर्णपणे कृषिनिविष्टा विक्रेत्यांवर अवलंबून असलेले दिसून येते. पिक संरक्षकांचा परिणामकारक वापर व रोग व किडीबाबत माहिती या बाबतीत शेतकऱ्यांच्या अज्ञानाबरोबरच पिक संरक्षकांच्या परिणामकारकतेच्या बाबतीत अनिश्चितता दिसून येतात. किमतीमध्येही समानता दिसून येत नाही.

रासायनिक खते -

हरितक्रांती नंतर रासायनिक खतांच्या वापरातून शेतीच्या उत्पादन वाढीचा दावा केला गेला. तो काही अंशी खरा ठरला परंतु नंतरच्या काळात मात्र रासायनिक खतांचे दुष्परिणाम दिसू लागले. रासायनिक खतांच्या किमतीही वाढल्या शेतकऱ्यांना रासायनिक खते वापराचे तांत्रिक ज्ञान नसल्याने, जमिनीमध्ये रासायनिक खतांच्या वापरातून नापिकीचे प्रमाण वाढावयास लागले. रासायनिक खते खरेदी करताना पिकांसाठी कोणता

घटक किती प्रमाणात पाहिजे याचे ज्ञान शेतकऱ्यांना नसल्याने शेतीतील रासायनिक खते खरेदी करताना पिकांवरील खर्च व रासायनिक खतांच्या वापरातून मिळणारे उत्पन्न या बाबतीत प्रतिकूलता निर्माण झाली. शेतकऱ्यांचा खर्च वाढून शेती व्यवसाय तोट्यात जाऊ लागला.

सिंचनाची साधने व कृषी यांत्रिकीकरण :

शेतीतील सुधारणांमध्ये सिंचन व्यवस्थेतील इलेक्ट्रॉनिक पंप, ठिबक सिंचन, तुषार सिंचन, हि आधुनिक साधने तसेच शेतीच्या मशागतीसाठी ट्रॅक्टर चलित नांगर, रोटो व्हीटर, कल्टी व्हीटर, पेरणी यंत्र, हार्व्हेस्टिंग यंत्र या साधनांचा वापर शेतीत वाढला. त्यासाठी सरकारने अनुदानेही दिली परंतु शेतकरी पूर्णपणे भांडवलदारी व्यवस्थेत अडकून शेतीचा भांडवली खर्च मोठ्या प्रमाणावर वाढला. ही साधने खरेदी करतानाही शेतकऱ्याला फारसे तांत्रिक ज्ञान नसल्याने विक्रेत्यांच्या भरवशावरच त्याची क्रयशक्ती अवलंबून असते. तसेच छोट्या शेतकऱ्यांना कृषी यांत्रिकीकरणाचा खर्च झेपत नाही. परिणामी उत्पन्न आणि खर्च याचा ताळमेळ बसत नाही.

शेतकऱ्यांच्या समस्यांवर उपाययोजना :

संशोधित बियाणे, पिक संरक्षके व संवर्धके, रासायनिक खते, सिंचनाची साधने व कृषी यंत्रे या कृषीनिविष्टा खरेदी करताना शेतकऱ्यांना आर्थिक व तांत्रिक स्वरूपाच्या समस्या येतात. यासाठी पुढील काही उपाययोजना करणे गरजेचे आहे.

- १) संशोधित बियाणे विक्री करणाऱ्या कंपन्या बियाणे विक्री करताना गुणवत्ता व बियाण्याचे तंत्र याबाबत जे दावे करतात. त्याचे योग्य परिणाम शेतकऱ्यांना मिळाले पाहिजे.
- २) संशोधित बियाणे योग्य किमतीत उपलब्ध करून दिले पाहिजेत.
- ३) बियाणे विक्री करताना त्यातील तांत्रिक बाबी व बियाण्याचा वापर या बाबतीत शेतकऱ्यांना पूर्णपणे माहिती दिली पाहिजे.
- ४) पिक संरक्षके व संवर्धके खरेदी करताना शेतकऱ्यांना रोग व किडी बद्दल माहिती देऊन योग्य ती कीटनाशके योग्य किमतीत उपलब्ध करून दिली पाहिजेत.
- ५) कीड नाशके विक्री करताना विक्रेत्याने कीड नाशकाच्या वापराबद्दल सविस्तर माहिती देऊन शेतकऱ्यांच्या सुरक्षेची काळजी घेतली पाहिजे.
- ६) कीड नाशकांमधील रासायनिक घटकांची परिभाषा शेतकऱ्यांना समजेल अशी असली पाहिजे.
- ७) एकच घटक असलेल्या कीडनाशकांच्या वेगवेगळ्या उत्पादकांच्या उत्पादनाच्या किमतीतील तफावत कमी असली पाहिजे.
- ८) रासायनिक खते वापरण्याचे प्रमाण व रासायनिक खतांच्या किमती तसेच रासायनिक खतांवर मिळणाऱ्या अनुदानाबद्दल परिपूर्ण व खरी माहिती विक्रेत्याने शेतकऱ्यांना दिली पाहिजे.
- ९) सिंचनाच्या नवनवीन साधनांचे तांत्रिकज्ञान शेतकऱ्यांना प्रत्यक्ष शेतावर जावून दिले पाहिजे.
- १०) कृषी यांत्रिकीकरणात येणारा खर्च छोट्या शेतकऱ्यांना परवडणारा नसतो. त्यामुळे छोट्या शेतकऱ्यांसाठी समूह शेती हा चांगला पर्याय आहे.

सारांश :

भारतामध्ये हरितक्रांती नंतर कृषी क्षेत्रात सुधारणा झाल्या. सुधारित बियाणे, पिक संरक्षके व पिक संवर्धके आधुनिक यंत्रे सिंचनाची साधने यांना सरकारने प्रोत्साहनपर अनुदान दिल्याने. या कृषी निविष्टांचा वापर मोठ्या प्रमाणावर वाढला. व त्याचा परिणाम म्हणून शेती उत्पादनात प्रचंड वाढ दिसून आली. सुधारित बियाण्यांमध्ये रोग व किडींना प्रतिकार क्षमता विकसित करण्यात आली. परंतु नंतरच्या काळात कापसाच्या बीटी बियाण्यामुळे बोंडअळीचा प्रादुर्भाव दिसून आला. बियाणे कंपन्यांकडून बियाण्यांमध्ये विविध किडी व रोगांवर प्रतिकार क्षमता असल्याचा दावा केला जातो. परंतु काही काळानंतर बियाण्यांच्या परिणामांबाबत अनिश्चितता दिसून येते. तशीच परिस्थिती पिक संरक्षके संवर्धके तसेच सिंचनाची साधने यांच्या बाबतीत दिसून येते. कृषीनिविष्टा उत्पादकांनी केलेले दावे आणि परिणाम यामध्ये मोठी तफावत दिसून येते.

पिक संरक्षके व सुधारित बियाणे यांचाही पिक उत्पादनात सहसंबंध दिसून येतो. कारण बियाणे संशोधित करतांना त्यांची कीड व रोगांविषयीची प्रतिकार क्षमता प्रमाणित केली जाते. त्यानुसार पिक संरक्षके तयार केली जातात तसेच सिंचन साधने व कृषी यांत्रिकीकरण यांच्याबाबतीतही सातत्याने नवनिर्मिती होत असली तरी या कृषीनिविष्टांच्या विपणनाच्या बाबतीत अनेक समस्या दिसून येतात. या समस्यांवर वरील उपाययोजना करता येतील.

संदर्भसूची :

- Research in commerce -Dr.Rajesh Kumar
- संशोधन पद्धतीशास्त्र व तंत्रे – डॉ.प्रदीप आगलावे
- कृषी अर्थशास्त्र - डॉ. वसुधा पुरोहित
- Agriculture marketing –K.Nirmal Ravi Kumar
- Agri input marketing in india-Pingali venugopal Ram kaundinya
- Rural marketing –pradip kashyap
- Marketing management –philip kotlar Kevin lane Keller
- Agriculture marketing in India—S.S.Acharya N.L. Agarwal
- w.w.w.Rural marketing
- w.w.w.Agritech tnau.ac.in

भारतीय अर्थव्यवस्थेतील क्रांती आणि शेती

डॉ. शोभा रहाणे

एस.एम.बी.एस.टी. कॉलेज, संगमनेर.

email Id - shobharahane61@gmail.com

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डॉ. प्रमोदिनी कदम

एस.एम.बी.एस.टी. कॉलेज, संगमनेर.

प्रस्तावना :-

शेती हा भारतातील सर्वात जुना आणि परंपरागत व्यवसाय आहे. आजही देशातील ५७% लोकसंख्या शेतीवर अवलंबून आहे. आर्थिक विकासाच्या दृष्टीकोनातून भारतीय शेतीचे स्थान वरचे आहे. शेती विकासावरच देशातील उद्योगधंदे, वाहतूक, दळवळण, बँका, विदेशी व्यापार अवलंबून आहे. कृषी ही मानवाची पोषक आहे. शेती हा भारतातील ग्रामीण भागातील लोकांचा केवळ व्यवसायच नाही तर एक जीवन शैली आहे. शतकानुशतके चालत आलेला हा परंपरागत व्यवसाय आज अनेक आव्हाने पेलत आहे. या व्यवसायाच्या विकासासाठी शासनाने वेळोवेळी अनेक योजना व कार्यक्रम सुरु केले आहेत. त्यामुळे शेती क्षेत्राची अपेक्षित प्रगती साध्य करण्यात चांगले यश आले आहे. म्हणून भारताच्या औद्योगिक विकासाचा दर वाढला आहे. त्यात शेतीचा वाटा १०% च्या वर आहे.

नवीन कृषी डावपेच :-

कृषी उत्पादनात वाढ करण्यासाठी आणि कृषी विकासासाठी ६० च्या दशकात सरकारने विविध प्रयत्न केले. १९६७-६८ मध्ये कृषी विकासासाठी एक आराखडा तयार करण्यात आला. या आराखड्यालाच नवीन कृषी डावपेच म्हटले गेले.

नवीन कृषी डावपेचाचे घटक :-

१. पिकांची घनता
२. कृषी तंत्रज्ञान
३. कृषी आदानांचा पुरवठा
४. सार्वजनिक संस्थांचा सहभाग
५. किमान आधार किंमत
६. जलसिंचन सुविधांचा पुरवठा
७. रासायनिक खतांचा पुरवठा

हरितक्रांती :-

हरितक्रांती म्हणजे अल्पकाळात कृषी उत्पादनात जलदगतीने वाढ होणे होय. डॉ. एस. स्वामिनाथन यांना भारतीय हरितक्रांतीचे जनक मानले जाते. १९६० च्या दशकात हा प्रयोग यशस्वी झाला. "सधन कृषी जिल्हा कार्यक्रम" आखून त्या मार्फत शेतकऱ्यांना बियाणे, खते, अवजारे, कीटकनाशके, आणि कर्ज पुरवठा उपलब्ध करून देऊन संपूर्ण देशात वेगवेगळ्या भागात लागू करण्यात आला. तसेच, संकरीत बियाणांचा कार्यक्रम, बहुपीक कार्यक्रम राबविण्यात आला आणि शेती उत्पादनात वाढ घडून आली.

भारतातील श्वेतक्रांती :-

१९६१ ते १९७० च्या हरितक्रांती बरोबरच श्वेतक्रांतीचे बीजे रोवली गेली. भारतात प्रचंड पशुधन आहे. शेती बरोबरच पशूंचे व्यवस्थापन केले तर पशुधनापासून उत्पन्न मिळेल. १९६४-६५ मध्ये देशात "सधन पशुविकास कार्यक्रम" राबविण्यात आला. या अंतर्गत श्वेतक्रांतीसाठी पशुधन मालकांना पशुपालनाचे आधुनिक व सुधारित माहिती देण्यात आली. त्या नंतर श्वेतक्रांतीची गती वाढविण्यासाठी "ऑपरेशन फ्लड" सुरु केले.

डॉ. वर्गिस कुरियन हे श्वेतक्रांतीचे जनक आहेत. १९७० मध्ये "ऑपरेशन फ्लड कार्यक्रम" हा जगातील सर्वात मोठा एकात्मिक डेअरी विकास कार्यक्रम आहे. तो राष्ट्रीय डेअरी विकास बोर्डने सुरु केला. हा कार्यक्रम पूर्णतः सहकारी तत्वावर चालविला जातो. दुग्ध उत्पादनाबाबत गाई, म्हशी आणि बकऱ्या या प्राण्यांवर लक्ष केंद्रित करण्यात आले. कृत्रिम रेतनाचा देशी जनावरांशी संकर करून दुग्ध उत्पादनात वाढ करण्यात आली. यालाच श्वेतक्रांती म्हटले गेले.

भारतातील दुग्ध उत्पादन आणि दुधाची दरडोई उपलब्धता

वर्ष	दुग्ध उत्पादन(टन)	दरडोई उपलब्धता (प्रति दिवस/gram)
१९९०-९१	५३.९	१७६
२०००-०१	८०.६	२२०
२००३-०४	८८.९	२३१
२००४-०५	९२.५	२३३
२००५-०६	९७.१	२४१
२००६-०७	१००.१	२४६
२००७-०८	१०२.०	२४६
२०१२-१३	१३२.४३	२५२

आर्थिक सर्वेक्षण - २००७-०८ व २०१३-१४

भारतातील श्वेतक्रांती आणि ऑपरेशन फ्लड यांच्या यशाचे गमक योजनाबद्ध वितरण प्रणालीच आहे. आज ग्रामीण भागातील दारिद्र्याचे प्रमाण कमी करण्यास श्वेतक्रांती वरदान ठरली आहे.

भारतातील निळी क्रांती :- ही प्राथमिक क्षेत्रातील तिसरी क्रांती होय. समुद्र उत्पादनातील (मासे) प्रचंड वाढीला निळी क्रांती म्हटले जाते. आज देशाच्या आर्थिक आणि सामाजिक क्षेत्रातील विकासात मासेमारी क्षेत्र महत्वपूर्ण भूमिका निभावत आहे. देशाच्या समुद्र किनारपट्टीलागत राहणाऱ्या लोकांना या व्यवसायामुळे मोठ्या प्रमाणात रोजगार उपलब्ध झाला. आज देशातील १४ दशलक्ष लोकांना या व्यवसायातून रोजगार उपलब्ध झाला आहे.

वर्ष	मासे उत्पादन			समुद्र उत्पादनाची निर्यात	
	समुद्र	समुद्रतेर	एकूण	हजार टन	निर्यात मूल्य(कोटी)
१९९०-९१	२.३	१.५	३.८	१४०	८९३
२०००-०१	२.८	२.८	५.६	५०३	६२८८
२००३-०४	३.०	३.४	६.४	४१२	६०८७
२००४-०५	२.८	८.५	६.३	४८२	६४६०
२००५-०६	२.८	३.८	६.६	५५१	७०१९

२००६-०७	३.०	३.८	६.९	५६३	७२९६
२०१३-१४	३.३५	६.१०	९.४५	९९९.२	३०६१७

आर्थिक सर्वेक्षण - २००७-०८ व २०१३-१४

जागतिक समुद्र उत्पादनात भारताचा क्रमांक तिसरा आहे. माशांच्या उत्पादनातील प्रचंड आणि सातत्याने होणाऱ्या वाढीला निळी क्रांतीच म्हणावे लागेल. या उद्योगाच्या विकासासाठी सरकारने हैदराबाद येथे राष्ट्रीय मत्स्य विकास बोर्डाची स्थापना केली आहे.

भारतातील पिवळी क्रांती:-

या क्रांतीत तेलबियांच्या उत्पादनाबाबत देशाला स्वयंपूर्ण करणे आणि देशाला खाद्यतेलाबाबत स्वयंपूर्ण करणे हा उद्देश समोर ठेऊन या कार्यक्रमाची आखणी करण्यात आली. तेलबिया उत्पादन कार्यक्रम भारतातील २३ घटक राज्यांमधील ३३७ जिल्ह्यांमध्ये राबविण्यात आला. तेलबियांमध्ये भुईमुग, तीळ, सोयाबीन, मोहरी, सुर्यफुल इ. कृषी उत्पादनांचा समावेश करण्यात आला. खाद्यतेलाचा रंग पिवळा असल्याने या क्रांतीला “पिवळी क्रांती” म्हटले गेले.

१९६०-६१ मध्ये सर्व तेलबियांचे उत्पादन १३.२ दशलक्ष टन झाले. १९८०-८१ मध्ये १६.७ दशलक्ष टन झाले. ही वाढ केवळ दर हेक्टरी सरासरीने ५७३ किलोग्रॅम होती. तर २०१३-१४ मध्ये ११४३ किलोग्रॅम झाले. ५३ वर्षांच्या काळात ५७० किलोग्रॅमने वाढ झाली. भारतात पिवळ्या क्रांतीला यश खूपच मर्यादित आले.

कडधान्ये, तेलबिया यांच्या उत्पादनाप्रमाणेच परिस्थिती व्यापारी पिकांची आहे. ऊस, कापूस या नगदी पिकांच्या उत्पादनात आणि उत्पादकतेत फारशी वाढ झाली नाही. पहिल्या हरितक्रांतीचा एकत्रित विचार केल्यास देश धान्याबाबत स्वयंपूर्ण झाला पण खाद्यतेल आणि डाळीबाबत परावलंबित्व वाढले आहे. या साठी भारताला दुसऱ्या हरितक्रांतीची नितांत गरज आहे. पहिल्या हरितक्रांतीच्या वेळेस भारतात फारशा सुविधा उपलब्ध नसून देखील काही प्रमाणात यश आले. आज पायाभूत सुविधा मजबूत आहे. नवीन बदल स्वीकारण्याची शेतकऱ्यांची मानसिकता आहे. गरज आहे ती मोठ्या धक्क्याची.....!

संदर्भग्रंथ :-

- १) दांगट निलेश आणि गौतम भोंग (२०१३):- “कृषी अर्थशास्त्र”, सक्सेस प्रकाशन, पुणे.
- २) डॉ. एन. एल. चव्हाण (२०१५):- “भारतीय अर्थव्यवस्था-१”, प्रशांत प्रकाशन, जळगाव.
- ३) देसाई आणि भालेराव (२०१७):- “भारतीय अर्थव्यवस्था” निराली प्रकाशन, पुणे,

भारतीय शेती आणि स्वामीनाथन आयोग

प्रा.पाटील शितल

अर्थशास्त्र विभाग,
कस्तुरी महाविद्यालय, शिक्रापूर,
ता. शिरूर, जि. पुणे.

[चंजपसे १००९/हउपसणववउ](mailto:chjps1009/hupsonbav3)

प्रस्तावना:

शेती हा भारतीय अर्थव्यवस्थेचा कणा असून प्राचीन काळापासूनच शेती हे भारतीयांच्या उपजिविकेचे प्रमुख साधन आहे. त्यामुळे भारतीय अर्थव्यवस्था अदयापही कृषी क्षेत्रावर अवलंबून आहे. म्हणजेच भारतातील उदरनिर्वाहासाठी ग्रामीण भागातील ६५ ते ७० टक्के लोकसंख्या शेतीवर अवलंबून आहे. एकूण राष्ट्रीय उत्पन्नात शेती क्षेत्राचा वाटा दिवसेंदिवस घटत आहे. दिवसेंदिवस एकूण उत्पन्नात वाढझाली असली तरी रोजगार निर्मिती, दारिद्र्य, बेकारी यासारखे प्रश्न गंभीर बनत चालले आहे. भारतीय शेती निसर्गावर अवलंबून असल्यामुळे चांगलापाऊस पडलात्यावर्षी शेतीतून चांगल्या प्रकारचे उत्पादन मिळते ज्या वर्षी पाऊसपडला नाहीतेंव्हाशेतकरी हतबल होऊन दुष्काळी बनतो खाजगी सावकार व इतर वित्तीय संस्थांच्या कर्जाला कंटाळून आत्महत्याही करतो शेतकऱ्यांची अशी दयनीय अवस्था थांबवण्यासाठी शेतीचे पावसावरील अवलंबित्व कमी करून शेतकऱ्याला खाजगी सावकारांच्या बंधनातून मुक्त करण्यासाठी स्वातंत्र्यानंतर शेती विकास करण्याचा प्रयत्न केला त्याचा एक भाग म्हणजे स्वामीनाथन आयोग होय.

स्वातंत्र्योत्तर काळात शेतीचा फारसा विकास झालेला नव्हता आणि स्वातंत्र्य मिळाले तेंव्हा देशापुढे अन्नधान्याची समस्या होती. त्यात दुष्काळानेही भर घातली होती. भारताने आर्थिक नियोजनाचा अवलंब करून विविध पंचवार्षिक योजनेद्वारे कृषी विकास साध्य करण्याचा प्रयत्न केला. यामध्ये १९६६ च्या हरीतक्रांतीने शेतीचे तंत्र बदलले यामध्ये रासायनिक खतांचा वापर वाढला. अधिक उत्पादन देणारे बि-बियाणे शोधले आणि उत्पादनात वाढ होऊन निर्यात वाढली. हेच हरित क्रांतीचे यश होते. पण आज जमीन तर वाढत नाही मात्र लागवडीखालील जमीनीचे प्रमाणही घटले आहे. यातच सरकारने शेतकऱ्यांचे उत्पन्न दुप्पट करून देण्याची घोषणाही सरकारने केलेली आहे. पण आजचा शेतकरी हा आधुनिक शेतीचा गुलाम आहे. देशापुढे आज कुपोषणाचा प्रश्न आ वासून उभा आहे. सुधारित तंत्रज्ञानामुळे जमीनीत पोषक द्रव्यांची कमतरता निर्माण झाली आहे. सेंद्रीयखतांच्या अल्प वापरामुळे जमीनीचे आरोग्यही धोक्यात आलेले आहे. शेतीत उत्पादन वाढले नाही परंतु भांडवली खर्चात दिवसेंदिवस वाढ होत आहे. शेतमालाला किंमती मिळत नाहीत व शेतकऱ्यांचा नफा कमी झाला आहे. परिणामी शेतकरी कर्जबाजारी झाला आहे.

पारंपारिक शेतीपासून ते आधुनिक शेतीपर्यंत कृषी क्षेत्रात अनेक बदल झाले कृषीक्षेत्राकडे आता उदरनिर्वाहाचे साधन म्हणून न पाहता फक्त उत्पन्नाचे साधन म्हणून पाहिले जात आहे. त्यामुळे शासनाने विविध अभ्यासगट व कमिटीद्वारे शेतीचा विकास करण्याचा प्रयत्न केला असला तरी कृषी या क्षेत्राचा महत्वाचा घटक कृषक किंवा शेतकरी आहे. त्यामुळे सदयस्थितीत शासन स्तरावर विशेष लक्ष देण्याची गरज आहे विकासाची पातळी गाठण्यासाठी स्वामीनाथन आयोगाचा अहवाल हा शेती पिकाला प्रोत्साहन व गती देणारा असून शेतकऱ्यांच्या व कृषीविषयक समस्या निराकरणासाठी हा प्रभावी उपाय आहे. राजर्षी शाहू, डॉ. बाबासाहेब आंबेडकर, यशवंतराव चव्हाण, वसंतदादा पाटील, शरद पवार यांनी सुध्दा शेती धोरणाच्या विविध पैलूंचा

अभ्यास केला आहे. स्वामीनाथन आयोगाच्या शिफारशीही त्याचाच एक भाग आहेत. केंद्रसरकारने वेळोवेळी समिती कठीत केल्या आणि त्या समित्या अधारे अहवालाचा विचार करुन शेतीविषयक धोरणात वेळोवेळी बदल घडले पण शेतकऱ्यांसाठी सुचविलेल्या स्वामीनाथन आयोगाच्या अनेक शिफारशी मात्र पूर्णत्वास येण्यासाठी आणखी किती काळ वाट पाहावी लागणार यावर संपूर्णतः शेतकऱ्यांचे भवितव्य अवलंबून आहे. कारण २००६ सालीच सरकारने जर स्वामीनाथन आयोगाच्या शिफारशी लागू केल्या असत्यातर आज एवढी गंभीर परिस्थिती कृषी क्षेत्राला दिसली नसती आणि परत शिफारशी लागू करण्याची मागणी करावी लागली नसती.

स्वामीनाथन आयोग व कृषी विकास :

हरित क्रांतीचे प्रणेते डॉ. एम. एस. स्वामीनाथन यांच्या अध्यक्षतेखाली १८ नोव्हेंबर २००४ रोजी राष्ट्रीय कृषक आयोगाची स्थापना करण्यात आली. स्वामीनाथन आयोगाने शेती व शेतकऱ्यांच्या विविध प्रश्नांवर तोडगा काढण्यासाठी व त्यांच्या विकासासाठी समग्र दृष्टिकोनातून मूलभूत विचार मांडले. शेतमालाचे केवळ उत्पादन वाढवणे म्हणजे विकास नाही तर शेतीपासून निव्वळ नफा किती मिळाला या भाषेत विकास मोजला गेला पाहिजे अशी मूलभूत मांडणी स्वामीनाथन कृषक आयोगाने केली म्हणजेच शेतीसाठी धोरण ठरवत असताना शेतीमध्ये राबवणाऱ्यांचे निव्वळ उत्पन्न वाढले पाहिजे अशा कृतींना गती दिली पाहिजे असे स्वामीनाथन आयोगाचे मत आहे. शेतीवर उपजिविका करणाऱ्या सर्व घटकांचा व्यापक दृष्टिकोन समोर ठेवून खऱ्या अर्थाने कृषी क्षेत्रात शाश्वत विकासाचे धोरण ठरविणे शक्य आहे. असे स्वामीनाथन आयोगाचे मत आहे.

या आयोगाने २००६ पर्यंत एकूण ०६ अहवाल सादर केले असून शेवटचा अहवाल ०४ ऑक्टोबर २००६ रोजी सादर केला या अहवालात आयोगाने शेतकऱ्यांच्या दुरावस्थेची कारणे व उद्दिष्टे त्यावरील उपाय, सुधारणा व शिफारशी सुचविल्या आहेत.

स्वामीनाथन आयोगाची उद्दिष्टे:

१. अन्नसुरक्षा आणि पोषण याबाबत नियोजन करणे व शेतकऱ्याला प्रोत्साहन देणे
२. उत्पादन व नफ्याचे प्रमाण या निकषावर शेतीची व्यवस्था करणे.
३. कोरडवाहू आणि डोंगराळ भागातील शेतीसाठी उपाय योजना करणे.
४. ग्रामीण भागाला आणि शेतीला होणारा कर्ज पुरवठा म्हणजेच पतपुरवठा प्रणालीचा विस्तार करणे.
५. शेतमालाची गुणवत्ता व किंमत यांची जागतिक बाजाराशी सांगड घालणे.

स्वामीनाथन आयोगाच्या शिफारशी:

१. आंतरराष्ट्रीय बाजारातील स्पर्धापासून कृषी उत्पादनाला सुरक्षा प्रदान करणे व इतर देशातून येणाऱ्या शेतमालाला आयात कर लावणे.
२. स्थानिक स्वराज्य संस्थांचा कृषी क्षेत्रामध्ये प्रत्यक्ष सहभाग वाढविणे.
३. पर्यावरण व जीवसंस्थांचे जतन व संवर्धन करुन किंमतीतील चढउताराचा शेतीवर कमीत कमी परिणाम होईल अशी यंत्रणा उभी करणे.
४. महिलांना किसान क्रेडिटकार्ड वाटप करणे.
५. शेतकऱ्यांचे खर्च वजा जाता शिल्लक राहिलेले उत्पन्न हे सरकारी कर्मचाऱ्याप्रमाणे असावे.
६. उत्पादन खर्च कमी करण्यासाठी शेतीला प्रोत्साहन देणे ज्यामुळे शेती उत्पादन खर्च कमी होऊन शेतकऱ्यांची आर्थिक स्थिती सुधारेल.

७. शेतमालाला हमीभाव उत्पादन खर्च वगळता ५० टक्के असावा.
८. शेतमालाची आधारभूत किंमत लागू करण्याची पध्दत सुधारून गहु व इतर खाद्यान्न वगळता इतर पिकांना आधारभूत किंमत मिळण्याची व्यवस्था करावी.
९. शेतीपूरक व्यवसायांना प्राधान्य देण्यात यावे.
१०. बाजारातील चढउतारापासून शेतकऱ्यांचे संरक्षण होण्यासाठी मूल्य स्थिरता निधीची स्थापना करावी.
११. वृद्ध शेतकऱ्यांना स्वास्थ्य विम्याची तरतूद करणे.
१२. दुष्काळ, आवर्षण व इतर आपत्तीपासून बचावासाठी कृषी आपत्काल निधीची स्थापना करावी.
१३. सामाजिक सुरक्षेचे जाळे निर्माण करावे.
१४. पिकांच्या नुकसानीचे मूल्यमापन करत असताना ब्लॉकच्या ऐवजी गाव हा घटक वापरून विमा संरक्षण देण्यात यावे.
१५. कमी किंमतीत म्हणजेचपरवडणाऱ्या दरामध्ये यंत्रसामग्री व बि—बियाणे उपलब्ध करून दयावीत.
१६. पणन व्यवस्थेत सुधारणा करावी.
१७. देशामध्ये प्रगत शेती व माती परीक्षण प्रयोग शाळेचे संचालन करावे.
१८. शेतीसाठी कायम स्वरूपी आणि सम प्रमाणात जलसिंचन व वीजपुरवठा व्यवस्थेत अमुलाग्र सुधारणा घडवाव्यात.
१९. देशामध्ये सर्व पिकांना कमी हप्त्यावर विमा संरक्षण मिळण्यासाठी पिक विमा योजनेचा विस्तार आणि ग्रामीण विमा विकास निधीची स्थापना करण्यात यावी.
२०. काही बँका शेतकऱ्याला कर्ज देतात व काही बँका देत नाहीत म्हणून नाबार्डच्या माध्यमातून राज्य सहकारी बँकेमार्फत ४ टक्के व्याजदराने कर्ज पुरवठा देण्यात यावा.
- अशा वरील प्रमाणे कृषी आयोगाच्या शिफारशी दिसून येतात.

स्वामीनाथन आयोगाच्या सुधारणा:

स्वामीनाथन आयोगाने केलेल्या सुधारणा यामध्ये अतिरिक्त आणि उपजावू नसलेल्या जमिनीचे फेरवाटप करणे, बागायती व वनक्षेत्राचा वापर उदयोगासाठी करण्यास प्रतिबंध करणे, गवताळ जमिनीवर चराई अधिकार व वनसंपत्ती पशुपालक व आदिवासींना देणे, पर्यावरण व खनिज संपत्तीसाठी केंद्रीय समिती निर्माण करणे, शेती खरेदीसाठी यंत्रणा उभारणे इ.

स्वामीनाथन आयोगाने सुचविलेल्या उपाययोजना:

स्वामीनाथन आयोगाच्या उपाययोजना यामध्ये जलसिंचनात वाढ करणे म्हणजेच पुरेशा आणि कायमस्वरूपी पाण्याची व्यवस्था करणे, सूक्ष्म वित्तपुरवठ्याच्या योजना सक्षम करणे, बाजारपेठ वाढविणे, ग्रामीण रस्ते आणि पायाभूत सुविधा यामध्ये सुधारणा करणे, उच्च प्रतिये बि—बियाणे यांचा पुरवठा करणे, मातीपरीक्षण करणे, पुर्नभरणाची सक्ती करणे, सिंचनासाठी भूजल पातळीत वाढ करण्यासाठी जास्तीत जास्त निधीची तरतूद करणे, शेतकऱ्यांला माफक दरात आरोग्य विमा उपलब्ध करणे, प्राथमिक आरोग्य केंद्र सक्षम करणे, शेतीबाबत आवश्यक माहिती शेतकऱ्याला होण्यासाठी गावागावात माहिती केंद्र उभारणे, आत्महत्या रोखण्यासाठी जनजागृती मोहिम राबविणे, पाण्याचा निचरा, भूजपातळीत वाढ, जलस्रोत रक्षण आणि संशोधनात वाढ करणे इत्यादी.

सारांश:

शेतकऱ्यांच्या जीवनाचा दर्जा उंचावण्यासाठी व कृषी क्षेत्राचा शाश्वत विकास करण्यासाठी स्वामीनाथन आयोग लागू केल्यास कृषी क्षेत्राचा विकास झाला तर प्रकर्षाने देशाचा व सर्वच क्षेत्राचा सर्वांगीण विकास होईल. स्वामीनाथन आयोगाच्या शिफारशी शेती व शेतकऱ्यांच्या फायद्याच्या असल्यामुळे या शिफारशी जर सरकारने अंमलात आणल्या तर शेतकऱ्यांची आर्थिक स्थिती सुधारण्यास मदत होईल. शेतकरी हा जगाचा पोशिंदा असून शेती देशाच्या विकासाचा आत्मा आहे. देशात उद्योग व सेवा क्षेत्र हे जेवढे महत्त्वपूर्ण आहेत तेवढेच पूरक व महत्त्वपूर्ण कृषी क्षेत्र सुद्धा आहे कारण दोन्ही क्षेत्राचा विकास कृषी क्षेत्रावर अवलंबून आहे. त्यामुळे स्वामीनाथन आयोगाच्या शिफारशी या शेतीसाठी वरदान ठरणार्या आहेत.

संदर्भ ग्रंथ :

१. गंगाधर गाडगीळ —नियोजन आणि समृद्धी
२. विजय कवीमंडन—भारताचा आर्थिक विकास
३. दत्त व सुंदरम — भारतीय अर्थव्यवस्था
४. स्वामीनाथन आयोग अहवाल २००४
- 5- <http://mr.m.wikipedia.org/wiki>
- 6- www.Indianagriculture.com
- 7- www.chec.gov.in



महाराष्ट्रातील कृषी क्षेत्राची अवस्था

प्रा.एस.बी.अस्वले

कला व वाणिज्य महाविद्यालय समशेरपूर

मराठी भाषिकांचे स्वतंत्र राज्य असावे म्हणून 1 मे 1960 रोजी महाराष्ट्र राज्य अस्तित्वात आले. स्थापनेच्या वेळी मध्य प्रांतातून विदर्भ, हैद्राबाद प्रांतातून मराठवाडा व मुंबई प्रांतातील मराठी भाषिक विभाग एकत्रित करून महाराष्ट्र राज्याची स्थापना करण्यात आली. मात्र महाराष्ट्रातील मराठी भाषा बोलणारे वेळगाव, धारवाड, कारवाड, कानडा हे जिल्हे कर्नाटक राज्यास जोडण्यात आले. सध्याच्या महाराष्ट्रात पश्चिम कोकण किनारपट्टी मध्य महाराष्ट्र मराठवाडा आणि विदर्भ असे चार विभाग आहे. महाराष्ट्राचे एकुण भौगोलिक क्षेत्रफळ सुमारे 3,07,690 चौ.कि.मी. असून महाराष्ट्राचा क्षेत्रफळाच्या बाबतीत देशात दुसरा क्रमांक लागतो. महाराष्ट्राला पश्चिमेस सुमारे 720 कि.मी. लांबीचा समुद्र किनारा लाभलेला आहेत. महाराष्ट्राचा लोकसंख्येच्या बाबतीत देशात तिसरा क्रमांक लागतो.

भारतीय अर्थव्यवस्थे प्रमाणेच महाराष्ट्राची अर्थव्यवस्था देखील कृषिप्रधान अर्थव्यवस्था म्हणून ओळखली जाते कृषी मात्र महाराष्ट्र राज्यातील शेती व्यवसाय पंजाब, हरियाणा, मध्यप्रदेश, उत्तरप्रदेश या राज्यातील शेती व्यवसायापेक्षा अत्यंत मागासलेली आहे. राज्यास लाभलेले भौगोलिक क्षेत्र शेती व्यवसायासाठी फारसे अनुकूल नाही आणि म्हणूनच महाराष्ट्रातील कृषी क्षेत्राचा विकास होण्यामध्ये महाराष्ट्रातील कृषी विषयक समस्यांच मोठ्या प्रमाणात दिसून येतात. या समस्या सोडविण्यात सरकार कुचकामी पडल्याचे देखील आढळते. त्याच बरोबर निसर्गाचा असमतोल उदा.दुष्काळ हा देखील यात भर घालताना दिसतो. म्हणूनच महाराष्ट्रातील शेतकरी आज मोठ्या प्रमाणावर आत्महत्या करताना दिसतो आजही महाराष्ट्रातील शेतकऱ्यावर कर्जाचे वाढते प्रमाण शासकीय ध्येय धोरणे हे सुद्धा शेतकरी विरोधी असल्याचे दिसते.

महाराष्ट्रातील कृषी प्रधान अर्थव्यवस्थेचा आढावा घेतल्यास राज्यात कोरडवाहू शेतीचे मोठे प्रमाण, राज्याच्या उत्पन्नात शेती क्षेत्राचा घटता वाटा, कृषी विकासात प्रादेशिक असमतोल, अन्नधान्याच्या उत्पादनात तुट, औद्योगिक विकासात प्रादेशिक असमतोल, लोकसंख्येचे प्रचंड वाढते प्रमाण, वाढते शहरीकरण, कृषी क्षेत्रासाठी अपुरा वित्त पुरवठा, बेकारीचे वाढते प्रमाण, भांडवल निर्मितीचा अल्प दर, तांत्रिक मागासलेपणा, संपत्ती वाटपात विषमता, लोकांच्या राहणीमानाचा निकृष्ट दर्जा, निरक्षरता, नैसर्गिक व मानवी साधनसंपत्तीचा मोठ्या प्रमाणात होणारा अपव्यय, सदोष आर्थिक संघटन, शेती क्षेत्रावर लोकसंख्येचा वाढता भार, पाणी, वीज, रस्ते, बाजारपेठे विषयीची अपुरी माहिती, रासायनिक खतांचा अतिरिक्त वापर, व्यापारी वर्गाकडून होणारी फसवणूक अशा विविध समस्या ह्या महाराष्ट्रातील कृषी क्षेत्रासमोर उभ्या आहेत.

देशाच्या आर्थिक विकासात शेतीची भूमिका महत्त्वाची असते. विशेषतः विकसनशील देशांमध्ये शेतीची कामगिरी मोलाची ठरते. अन्नधान्याचा पुरवठा, कच्चा मालाचा पुरवठा, किंमत स्थैर्य, कृषीमालाची निर्यात, सरकारी उत्पन्नाचे स्रोत यासारख्या अनेक दृष्टिकोनातून शेतीचे योगदान महत्त्वाचे ठरते. अर्थव्यवस्थेतील शेती, उद्योग व सेवा क्षेत्रांमध्ये आंतरसंबंध असतो. या आंतरसंबंधात शेतीचे स्थान निर्णायक असते. आर्थिक विकासात शेतीची भूमिका तसेच शेती, उद्योग व सेवा क्षेत्रांतील आंतरसंबंध आहे.

कृषीप्रधान अर्थव्यवस्था असो की उद्योगप्रधान अर्थव्यवस्था असो, प्रत्येक अर्थव्यवस्थेत शेती महत्त्वाची मानली जाते. मानवाला दैनंदिन गरजा भागविण्यासाठी आवश्यक असणारे डाळी, अन्नधान्य, भाजीपाला, फळे इ. पुरविण्याची जबाबदारी शेतीक्षेत्रामार्फत समर्थपणे सांभाळली जाते. इतकेच नव्हे तर बहुतेक उद्योगधंद्यांना लागणारा कच्चा माल शेतीतून प्राप्त होतो. म्हणजेच एका बाजूला जीवनावश्यक गरजांची पूर्तता करणे व

दुसऱ्या बाजूला देशाच्या औद्योगिकीकरणास सहाय्य करणे अशी दुहेरी भूमिका 'शेती' वठविते. म्हणूनच प्रत्येक देशाच्या अर्थव्यवस्थेत शेतीक्षेत्र महत्वाचे मानले जाते.

महाराष्ट्रातील शेती क्षेत्रात आजवर अनेक समस्या दिसून येतात, तरी देखील महाराष्ट्र राज्याच्या उत्पन्नात शेती क्षेत्राचा वाटा वाढलेला दिसतो त्याचे प्रमुख कारण म्हणजे या समस्या सोडविण्यासाठी महाराष्ट्र शासनाने अनेक उपाययोजना योजल्या आहेत. त्यामध्ये जलयुक्त शिवार, सुधारीत बी - बियाणे, खते, सिंचन, शेतीचे यांत्रिकीकरण, पत व बाजारपेठेच्या सोईची तरतूद, उत्पादकांना प्रेरणा, शेती संशोधन, शेतीसाठी कर्ज पुरवठा, शेती विकासासाठी अनुदान, शेती पूरक व्यवसायात वाढ, रोजगार निर्मिती, प्रादेशिक विषमता कमी करणे, श्रीमंत व गरीब यातील आर्थिक विषमता कमी करणे, साक्षरता, भांडवल निर्मितीत वाढ, नियोजन, पंचवार्षिक योजनेत शेती क्षेत्राला अधिक महत्त्व, खुली अर्थव्यवस्था, बाजारपेठ, शेती क्षेत्रातील पीक रचना, किमतीयंत्रणा, शेती क्षेत्रासाठी नवीन डावपेच, लघुउद्योग क्षेत्राचा विकास, परकीय भांडवल, वाहतूक व्यवस्था, दळणवळणाच्या साधनांचा विकास, वीज पुरवठा, या सारख्या अनेक उपाययोजना करून महाराष्ट्रातील शेती क्षेत्राचा विकास झालेला दिसून येतो.

महाराष्ट्र राज्य आज विकासाकडे वाटचाल करत आहे त्यामध्ये कृषी क्षेत्राचे योगदान सुरवातीस जास्त होते परंतु आजवर कृषी क्षेत्राचा हिस्सा कमी होताना दिसून येतो. याचे कारण म्हणजे शासनाचे शेती क्षेत्राकडे झालेले दुर्लक्ष आणि विविध योजनांच्या अंमलबजावणीतील दिरंगाई याचा मुख्य परिणाम म्हणजे शेतकऱ्याच्या वाढत्या आत्महत्या आणि त्यातून शेती क्षेत्राकडे बघण्याचा दृष्टीकोन बदलत आहे. शिवाय आत्महत्याचे सर्वात जास्त प्रमाण इतर राज्यांच्या तुलनेने महाराष्ट्रात जास्त असल्याचे आढळते. याचे मुख्य कारण म्हणजे कर्जमाफी, हमीभाव, शासनाचे धोरण मात्र कृषी पूरक नाही तसेच कर्जबाजारीपणा, दुष्काळ, आतिवृष्टि, गारपीट, अवकाळी पाऊस, पिकांवरील रोग, उत्पादन खर्चाइतकेही उत्पन्न शेतमालाच्या विक्रीतून न निघणे आणि व्यापाऱ्याकडून फसवणूक, आधारभूत किंमती दिल्या जात नाही. शिवाय आपल्याकडील अर्थव्यवस्था कृषी आधारित असूनही शेतीकडे दुर्लक्ष केले जाते. व विकसित देश मोठ्या प्रमाणात शेतीला अनुदानही देतात. आपल्याकडे आजही बहुतेक शेतमाल उत्पादन खर्चापेक्षा कमी किमतीने विकावा लागतो. आपली बाजारपेठ जागतिक असल्याचे सांगून जागतिक व्यापाराचे निकष लागू केले जातात. मग प्रगत देशातील कृषी क्षेत्राचे निकष आपल्याकडे का लागू केले जात नाही? आपल्याकडे 5 लाख रुपये गरजेचे असतानाही 70 ते 80 हजार रुपयाचे कर्ज दिले जाते. त्यामुळे उर्वरित रकमेसाठी शेतकरी खाजगी सावकारांच्या दारात जातात. बहुतेकदा हे सावकार राजकारण्यांनी पोसलेले असतात. एकीकडे खुली अर्थव्यवस्था स्वीकारल्याचे सांगायचे आणि दुसरीकडे शेतमालाच्या किमती नियंत्रित करायच्या हा कुठला न्याय आहे ?

आता शेतकऱ्यांनी केवळ उत्पादन खर्चाच्या दीडपट हमीभाव, कर्जमाफी आणि स्वामिनाथन आयोगाच्या शिफारसी लागू करण्यासाठी रस्त्यावर उतरून चालणार नाही तर शेतकऱ्यांना पत्नीसह निवृत्ती वेतन आणि शेती उत्पादनातील जोखमीचे व्यवस्थापन कायदा लागू करणे या मागण्यांसाठी आवाज उठवायला हवा.

**" भीक नको हक्क हवा,
दान नको मान हवा. "**

संदर्भ

१. महाजन, प्रवीण – जलसंपदा काल, आज, उद्या.
२. भिसे, रामेश्वर – कृषी विकासाचे अर्थशास्त्र
३. देसाई आणि भालेराव (२०१७):- "भारतीय अर्थव्यवस्था"
४. निराली प्रकाशन, पुणे,

काजू उत्पादन : एक किफायतशीर पर्याय

दिपाली चिंचवडे

बाबूरावजी घोलेप महाविद्यालय, सांगवी, पुणे

प्रस्तावना :

भारत हा कृषिप्रधान देश आहे. या कृषिप्रधान देशात लोक प्रत्यक्ष अथवा अप्रत्यक्षरित्या शेतीवर अवलंबून आहेत. भारतात ६५ टक्के शेती ही पावसाच्या पाण्यावर अवलंबून असल्याने शेतकऱ्यांना शेतीतून पाहिजे ते पीक घेता येत नाही. पाण्याच्या अपुऱ्या सोयी असल्याने शेतकऱ्यांना पिके घेण्यासाठी समस्या निर्माण होतात. यामुळे शेतकऱ्यांच्या दृष्टीकोनात दिवसेंदिवस बदल होत असल्याचे दिसून येते.

भारताच्या अर्थकारणामध्ये सर्वाधिक उत्पन्न मिळवून देणारे पीक म्हणून काजू उत्पादनाची नोंद झाल्याचे दिसून येते. काजू हे एक फळझाड आहे. या फळाला विलायती मॅंगो म्हणून सुद्धा संबोधले जाते. हिज्जली बदाम (हिंदी), गेरू (कन्नड), कचुमाक (मल्याळम), जीडिमा मिडी (तेलुगू) अशा विविध नावांनी ओळखल्या जाणाऱ्या काजूच्या बोंडापासून कोकण मलबार, तामिळनाडू या प्रदेशांत विविध प्रकारचे मद्य तयार केले जाते. कोकण विभागात आंबा, काजू, नारळ, रागी तसेच सुपारी अशी अनेक पिके मोठ्या प्रमाणात घेतली जातात. आंब्याच्या उत्पादनावर येणाऱ्या विविध रोगांमुळे खर्चात वाढ होत आहे त्या तुलनेत काजू उत्पादनासाठी येणारा खर्च हा कमी प्रमाणात आहे. शिवाय वर्षभर सर्वाधिक उत्पादन देणारे हे पीक आहे.

काजू हे पीक प्रामुख्याने वनीकरण व जमिनीची धूप होऊ न देणारे एक पीक मानले जात होते. तसेच काजूवर प्रक्रिया केल्याने काजू उत्पादनातून मोठ्या प्रमाणात उत्पन्न मिळते तसेच देशाला परकिय चलन मिळवून देणाऱ्या काजू उत्पादनाचा वाटा हा अधिक आहे.

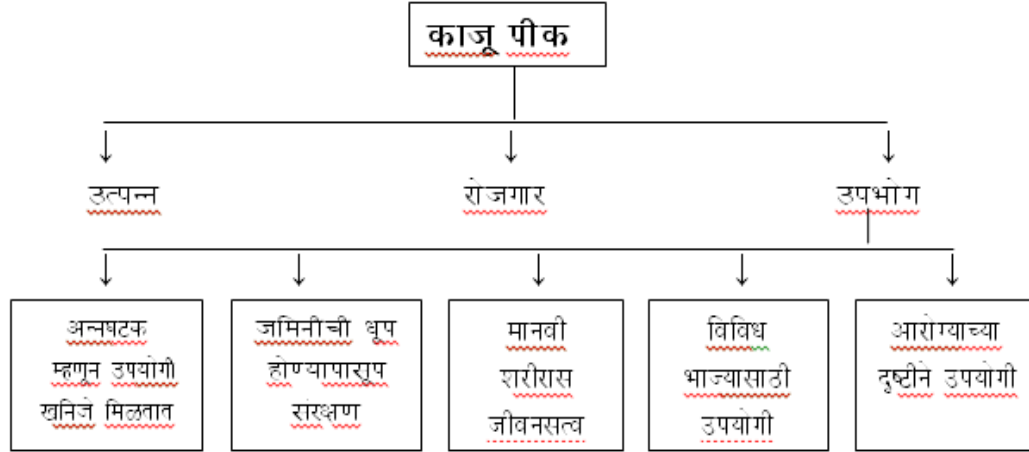
काजूचे उत्पादन :

भारतीय काजूने जगात स्वतःचे स्थान निर्माण केले आहे. जगात सर्वात मोठा उत्पादक, प्रक्रिया करणारा व काजू निर्यातदार देश बनला आहे. आज आपल्या देशाला ५००० कोटी रुपयांचे परकिय चलन मिळवून देणारे काजू सर्वात महत्त्वाचे पीक आहे. भारतीय फळशेती उत्पादनात मोठ्या प्रमाणात कायम स्वरूपी महिलांना रोजगाच्या संधी उपलब्ध मिळवून देणारे काजू उत्पादन हे एक पीक आहे.

भारताच्या अर्थकारणामध्ये काजूला अत्यंत महत्त्वाचे स्थान आहे. पश्चिम महाराष्ट्रातील कर्नाटक, गोवा, केरळ इत्यादी तसेच पूर्व किनारपट्टीतल्या तामिळनाडू, पश्चिम बंगाल, आंध्रप्रदेश आणि ओरिसा राज्यातून काजू उत्पादन मोठ्या प्रमाणात घेतले जाते. महाराष्ट्र काजू लागवडीखालील क्षेत्र, उत्पादन व उत्पादकता यामध्ये देशात प्रथम क्रमांकावर आहे. महाराष्ट्रातील कोकण विभागातील अनेक जिल्ह्यामध्ये काजूचे उत्पादन दिवसेंदिवस वाढत आहे. एकूण उत्पादनाच्या ९५७३ टक्के उत्पादन कोकणात होते तसेच रत्नागिरी व सिंधुदुर्ग जिल्ह्यांचा विचार करता काजूचे उत्पादन ९१७९१ टक्के झालेले दिसून येते. कोकण विभागात सिंधुदुर्ग, रत्नागिरी, रायगड इत्यादी जिल्ह्यात मोठ्या प्रमाणात काजू उत्पादन घेतले जाते. सर्वाधिक उत्पादन रत्नागिरी व सिंधुदुर्ग या दोन जिल्ह्यात घेतले जाते.

महाराष्ट्रात २०१७ मध्ये काजू उत्पादन १७८३ मे.टन होते, एकट्या सिंधुदुर्ग जिल्ह्यात ६१६३०० हेक्टर क्षेत्रात काजूची लागवड करण्यात आली आहे. प्रति हेक्टर ११०० किलो काजू उत्पादन घेतले जाते. जिल्ह्याचे काजू बियांचे एकूण उत्पादन ४७६३०० मे.टन असून या उत्पादनापैकी स्थानिक बाजारपेठेत ६० टक्के म्हणजेच

२८ए४०० मे.टन काजू बीची विक्री होते. जिल्ह्यातील एकूण उत्पादनापैकी आवघ्या २० टक्के उत्पादनाची निर्यात केली जाते तर खाण्यासाठी ४ हजार मे.टन काजूचा वापर केला जातो. व्यवसायिक दृष्टिने विचार केल्यास हे काजू उत्पादन खऱ्या अर्थाने येथील शेतकऱ्यांना स्वयंपूर्ण बनवू शकेल. तसेच या जिल्ह्यांमध्ये उत्पादित होणाऱ्या काजूवर प्रक्रिया उद्योग सुरू करण्याला देखील वाव आहे. या प्रक्रिया उद्योगातून काजूच्या उपयोगिता मूल्यात वाढ होऊन त्याचा अधिक फायदा या भागातील शेतकऱ्यांना होऊ शकतो. त्यादृष्टिने काजू उत्पादनासाठी महाराष्ट्र शासन तसेच जिल्हा ग्रामोद्योग आणि खादी महामंडळ तसेच राष्ट्रीय कृषी विकास व ग्रामिण विकास बँक(नाबार्ड)येथील शेतकऱ्यांना मार्गदर्शन करत आहे. काजू पिक फायदेशीर आहे.



काजू उत्पादनास चालना देण्यासाठी संबंधीत क्षेत्रप्रमाणे विविध काजू विकास कार्यक्रम गेल्या तीन वर्षात आणि चालू वर्षासाठी छद्म च्या अंतर्गत राबविण्यात येत आहेत.

1. शेतकऱ्यांना शेतात आणि संस्थात्मक शेतात तंत्रज्ञान प्रात्यक्षिक.
2. उत्पादन आणि मॉडेल काजू नर्सरी आणि त्याच्या प्रमाणात लागवड साहित्य वितरण
3. पिकाचा प्रचार आणि तंत्रज्ञान प्रसार प्रसिद्धी.
4. नवीन तंत्रज्ञान शेतकऱ्यांना आणि विस्तार, कामगार प्रशिक्षण कार्यक्रम
5. काजू नवीन वृक्षारोपण विकास उच्च उत्पादन घेणारा वाण.
6. उच्च उत्पादन घेणारे वाण, महामंडळ मालकीचे जुन्या आणि अधिक जुने वाण यांची पुर्नलागवड.
7. सुधारित शेती पद्धतींचा स्विकार करून विद्यमान काजू लागवड पुनरुज्जीवन.

भारतात काजू उत्पादकता वाढविण्यासाठी संशोधन राज्य कृषी विद्यापिठे येथे आय.सी.ए.आर. आणि काजू संशोधन केंद्र अंतर्गत काजू संशोधन, पर्यावरण यांची माहिती घेण्यात आली. काजू बोर्डाची स्थापना करण्यात आली आहे.

मानवी अहारात काजूचे स्थान :

काजू मध्ये ५ टक्के आर्द्रता, १७ टक्के प्रथिने, ४६ टक्के स्निग्ध पदार्थ आणि २९ टक्के कार्बोहायड्रेट्स असतात. याशिवाय तांबे, मॅग्नेशियम, लोह ,कॅल्शियम, अ,ड,क,इ इत्यादी जीवनासत्वाचे प्रमाण असते. लोक कमी अधिक प्रमाणात काजूचा आस्वाद घेत असतात. ओल्या काजूची साल काढून खाण्याचा आनंद घेताना दिसतात. काजूबर्फा, काजू घातलेली मिष्टाने आणि खारे काजू लोकप्रिय आहेत. महाराष्ट्रात

मोजवाणीसाठी नारळीभात, शाहीपुलाव, शिरा तयार केला जातो, या पदार्थातही काजूचा वापर केलेला दिसतो. काजू मुबलक प्रमाणात असल्याचे विविध भाज्यांमध्ये काजू घालण्याची पद्धत आहे. काजू बर्फी, काजू कतली, काजू चिककी असे प्रसिद्ध गोड पदार्थाही अत्यंत लोकप्रिय आहेत.

काजूमध्ये फार मोठ्या प्रमाणावर उष्मांक व स्निग्धांश उपलब्ध असल्याने त्याचे सेवन मनुष्याच्या आरोग्याच्या दृष्टिने फायदेशिर आहे. त्याच्या सेवनाने हृदयावर कोणतेही विपरीत परिणाम होत नसल्याचे आधुनिक वैद्यक शास्त्राने मान्य केले आहे. कारण त्यामधील कोलेस्ट्रॉलचे प्रमाण नगण्य आहे तसेच काजू हा मॅग्नेशियमचा स्रोत असल्याने त्याच्या सेवनाने मानवाची हाडे मजबुत होतात तसेच मेंदूच्या विकासातही काजूची भूमिका महत्त्वाची आहे. काजूमध्ये सोडियमचे प्रमाण कमी असल्याने व पोटॅशियमचे प्रमाण अधिक असल्याने रक्तदाब नियंत्रित ठेवण्यास मदत होते. काजूमध्ये अँटीऑक्सिडन्ट्स व 'ई' जीवनसत्व मोठ्या प्रमाणावर असल्याने ते रोगप्रतिकारक शक्ती वाढविते व कॅन्सर सारख्या आजारास काही प्रमाणात प्रतिबंध करू शकते त्यामुळे आधुनिक वैद्यक शास्त्राने दररोज काजू खाणे आरोग्यासाठी फायदेशिर असल्याचे मान्य केले आहे.

संदर्भ :

१. महाराष्ट्रराज्य कृषी पणन मंडळ, पुणे
२. काजू फळविकास वृत्त.
३. कृषीजल — आधुनिक हायटेक शेती नवी दिशा
४. चौगुले डी.ए. (२००७) पश्चिम महाराष्ट्रातील औषधी वनस्पतीचे उत्पादन आणि विपणन
५. महाराष्ट्र शासन सांख्यिकी विभाग (कृषी विभाग) पुणे.—४११ ००५

महाराष्ट्रातील निवडक शेतकरी उत्पादक कंपन्यांच्या कृषिक्षेत्रातील योगदानाचा चिकित्सक अभ्यास

प्रा.भांगरे गणेश शिवनाथ

वाणिज्य विभाग ,
अगस्ति कला,वाणिज्य व दादासाहेब
रुपवते विज्ञान महाविद्यालय,अकोले

प्रस्तावना -

सामान्यतः शेतकरी उत्पादक संस्था हि एक संघटना ,संस्था ,सहकारी संस्था ,संघ असू शकते.जी शेतकरी संस्था हितास प्रोत्साहन देण्याच्या उद्देशाने स्थापन झालेली असेल. शेतकरी उत्पादक संस्थेचे मुख्य उद्दिष्ट उत्पादक किंवा शेतकऱ्यांना त्यांच्या उत्पादन कार्यामध्ये किंवा काढणीनंतर कार्यामध्ये मदत करण्यासाठी पूरक सेवा देणे हे होय.छोट्या व अल्पभूधारक उत्पादकांना बाजाराशी जोडणे ही बाब यात महत्वाची आहे.संख्यात्मक अर्थशास्त्रानुसार शेतीमाल उत्पादनामध्ये तसेच शेतीतील यांत्रिकीकरण आणि कृषी नीविष्टांच्या पुरवठा सुलभ होण्यासाठी उत्पादन आणि उत्पादकांना संघटीत करण्याची गरज आहे.तसेच काढणीनंतर,साठवणूक,प्रक्रिया,बांधणी आणि वाहतूक या सुविधांचा लाभ देण्यासाठी,आणि पर्याप्त प्रमाणात शेतीमाल थेट बाजारात पाठवण्यासाठीही संकलनाची गरज आहे.

अशा शेतकरी उत्पादक संस्था किंवा समूह हे छोट्या व अल्पभूधारक शेतकऱ्यांना स्थानिक,राष्ट्रीय तसेच जागतिक पुरवठा साखळ्यांमध्ये यशस्वीपणे सहभागी होण्यासाठी सक्षम बनवण्याचे साधन असल्याचा मतप्रवाह वाढीस लागला आहे.उत्पादक संस्था या ग्रामीण जनतेमध्ये सामुहिक भांडवल निर्मितीसाठी आणि विकेंद्रित प्रशासकीय यंत्रणेचा विकास करण्यासाठी साह्यभूत ठरतात.

उद्दिष्ट -

भारतातील शेतकरी उत्पादन कंपन्यांचे स्वरूप,शेतीक्षेत्रातील योगदानाचा अभ्यास करणे.

राष्ट्रीय कृषी विस्तार आणि तंत्रज्ञान अभियानाद्वारे प्रोत्साहनप्राप्त शेतकरी उत्पादक कंपन्या-

शेतकरी उत्पादक कंपनीबाबत भारतातील वास्तव आणि अनुभव -भारतामध्ये स्थापन झालेल्या शेतकरी उत्पादक कंपनीची नेमकी संख्या किती याबाबत मतांतरे आहेत. मात्र २०११ च्या मध्यापर्यंत भारतात १५६ शेतकरी उत्पादक कंपनी होत्या आणि २०१५ साली हि संख्या ८७९ पर्यंत वाढली. आजमितीस भारतात २००० हून अधिक शेतकरी उत्पादक कंपनी आहेत. इतर कायदेशीर प्रकार पाहता भारतात अनेक हजार शेतकरी उत्पादक कंपनी कार्यरत आहेत.

सुरवातीचा काळ-

भारतामध्ये २००५ पासून जागतिक बँकेच्या गरिबी निर्मुलन प्रकल्पांतर्गत सामान्यतः शेतकरी उत्पादक कंपनीला प्रोत्साहन दिले गेले. त्यानंतर २०११ पासून महाराष्ट्रासारख्या राज्यामध्ये अशा प्रकल्पांना सातत्याने प्रोत्साहन मिळत आले आहे.असेच उपक्रम तामिळनाडू,राजस्थान आणि हिमाचलप्रदेश यांसारख्या राज्यातही राबवले आहेत.भारतात शेतकरी उत्पादक कंपनीच्या सदस्यांमध्ये वैयक्तिक उत्पादकापासून बिगर-नोंदणीकृत स्वयंसाह्यता गट केवळ संस्थापक सदस्यापर्यंत समावेश होतो.सदस्य संख्ये मध्ये सामान्यतः

महाराष्ट्रात ३५० ते ४५०, गुजरातमध्ये २५ ते ६०००, राजस्थानमध्ये ३५० ते १२००, आणि मध्यप्रदेशात १० ते ६५०० असे वैविध्य आढळते. बहुतांश शेतकरी उत्पादक कंपन्यांचे अधिकृत भांडवल २ ते २५ लाख रुपयांदरम्यान असले तरी, जमा भांडवल १ ते ५ लाख रुपयांदरम्यान, तर काही शेतकरी उत्पादक कंपन्यांचे १० लाख रुपये आणि खूपच कमी शेतकरी उत्पादक कंपन्यांचे ५० लाख व त्याहून अधिक आहे.

शेतकरी उत्पादक कंपन्यांची वैशिष्ट्ये-

१. शेतकरी सदस्य सहभाग - शेतकरी सदस्य आपल्या शेतकरी उत्पादक कंपनीमध्ये समानतेच्या तत्वावर आपला भागवाटा देतात आणि लोकशाही मूल्यांच्या आधारे या भांडवलाचे व्यवस्थापन करतात.
२. खुले सदस्यत्व - शेतकरी उत्पादक कंपनी ही लोकशाही तत्वावर चालणारी संस्था असून संस्थेची ध्येयधोरणे तयार करणे आणि लोकशाही मूल्यांच्या आधारे या भांडवलाचे विनियोजन करतात.
३. लोकशाही तत्वावर व्यवस्थापन - शेतकरी उत्पादक कंपनी ही लोकशाही तत्वावर चालणारी संस्था असून संस्थेची ध्येयधोरणे तयार करणे आणि निर्णय घेणे या कामी समान मताधिकार तत्वाने शेतकरी सदस्य क्रियाशील सहभाग नोंदवत संस्थेवर नियंत्रण ठेवतात.
४. स्वायत्तता - शेतकरी उत्पादक कंपनी या शेतकरी सदस्याद्वारे नियंत्रित केलेल्या स्वायत्त, स्वयंसेवी संस्था आहेत.
५. शिक्षण, प्रशिक्षण आणि माहिती - शेतकरी उत्पादक कंपनीचे चालक आपल्या सदस्य शेतकरी, निवडलेले प्रतिनिधी, व्यवस्थापक आणि कर्मचारी वर्गास कंपनीच्या यशासाठी शिक्षण व प्रशिक्षण देतात.

शेतकरी उत्पादक कंपनीच्या विविध सेवा -

१. निविष्ठा पुरवठा - कमी किंमतीत दर्जेदार निविष्ठांचा पुरवठा तसेच भाडे तत्वावर औजारे उपकरणांची सेवा सदस्य शेतकऱ्यांना कंपनी उपलब्ध करून देते. याद्वारे जेथे शक्य आहे तेथे खते, कीटनाशके, बियाणे, पंपसंच, स्प्रे पाईप व तत्सम भागांचा पुरवठा शेतकरी उत्पादक कंपनी करून देते.
२. संकलन, खरेदी व बांधणी सेवा - सदस्य शेतकऱ्यांकडून शेतीमालाची खरेदी कंपनी करून देते, साठवणूक मूल्यवर्धन आणि बांधणी करून देते.
३. विक्री सेवा - शेतीमालाची खरेदी केल्यानंतर शेतकरी उत्पादक कंपनी या शेतीमालाची साठवणूक आणि थेट विक्री करून देते.
४. विमा सेवा - पिक विमा इलेक्ट्रिक मोटार विमा आदी सेवा शेतकरी उत्पादक कंपनी उपलब्ध करून देते.
५. तांत्रिक सेवा - शेतीतील आदर्श पद्धतींचा प्रसार, बाजार माहिती प्रणालीचे व्यवस्थापन, कृषी उत्पादनाशी संबंधित ज्ञान आणि कौशल्याचा विकास करणे, उत्पादनाचे मूल्य वाढवणाऱ्या काढणीनंतर प्रक्रिया यांना प्रोत्साहन शेतकरी उत्पादक कंपनी देते.
६. प्रक्रिया सेवा - शेतकऱ्यांनी विक्री केलेल्या शेतमालाची सेवा तत्वावर सफाई व प्रतवारी करण्याचे कामही शेतकरी उत्पादक कंपनी करते.

७. .नेटवर्किंग सेवा –उत्पादकांना विविध सेवा –बाजार दर आणि सेवा पुरवठादारांची उपलब्धता करणे,वित्तसंस्थासमवेत संपर्क साधण्यास मदत करणे,उत्पादक,प्रक्रियादार,व्यापारी आणि ग्राहक यांच्यात संपर्क दुवा बनणे आणि शासनाच्या विविध उपक्रमांशी जोडणी करणे अशी कामे शेतकरी उत्पादक कंपनी करून देते.
८. वाहतूक सुविधा – फलोत्पादन पिकांवर आधारित शेतकरी उत्पादक कंपनीद्वारे वाहतूक साधन सेवा ही उपलब्ध केली जाते.

महाराष्ट्रातील शेतकरी उत्पादक कंपन्या-

१. **स्वरूप शेतकरी उत्पादक कंपनी लिमिटेड,औरंगाबाद**—महाराष्ट्र राज्यातील औरंगाबाद जिल्ह्यामधील खुलताबाद तालुक्यातील सुलतानपूर या गावात मे २०१५ मध्ये या कंपनीची स्थापना करण्यात आली.पहिल्यावर्षी या कंपनीकडे केवळ २५० सदस्य जोडले गेले.या कंपनीचे भाग भांडवल ५ लाख रुपये आणि वसूल भागभांडवल ४ लाख ५० हजार रुपये होते.सध्या ४३० इतके सदस्य कंपनीचे आहेत.२०१५-१६ मध्ये १० लाख रुपये इतक्या वार्षिक उलाढालीवरून कंपनीने २०१७-१८ मध्ये १.५२ कोटी रुपयावर उडी घेतली. जानेवारी २०१७ मध्ये कंपनीने ३०० मे. टन तूर बाजारात ३७०० रुपये बाजारभाव असताना ५०५० या भावाने खरेदी केली.

२. **जय सिद्धेश्वर कृषी उत्पादक कंपनी लिमिटेड,औरंगाबाद**— कांद्याचे दर्जेदार बियाणे उत्पादन करून चांगले उत्पन्न आणि बाजार सेवा मिळवण्याच्या हेतूने ऑगस्ट २०१४ मध्ये हि कंपनी स्थापन झाली.दर्जेदार फौंडेशन बियाणाचे उत्पादन आणि विक्री केवळ मोठ्या कॉर्पोरेट कंपनीद्वारे यशस्वीपणे करता येते हा लोकप्रिय असलेला समज गत तीन वर्षात या कंपनीने खोटा ठरविला आहे.औरंगाबाद जिल्ह्यातील सिल्लोड तालुक्यातील १०० छोठ्या शेतकऱ्यांना एकत्र आणत कंपनी स्थापन करत राष्ट्रीय मानकानुसार दर्जेदार बियाणाची यशस्वीपणे निर्मिती करण्याचे काम करत आहे.

३. **साई प्रवरा उत्पादक कंपनी लिमिटेड अहमदनगर**—महाराष्ट्रातील अहमदनगर जिल्ह्यामधील दुर्गम गावामध्ये तृणधान्य आणि कडधान्य उत्पादनाची खरेदी,संकलन,सफाई,प्रतवारी आणि बांधणी या सेवांचा प्रसार ही कंपनी प्रभावीपणे करत आहे.या कंपनीने २०१५-१६ मध्ये २५० शेतकरी सदस्यासमवेत आपले काम सुरु केले होते.ही कंपनी आज ७००० शेतकऱ्यांसमवेत काम करते यामध्ये ५०० सदस्य शेतकरी असून त्यापैकी १७५ महिला सदस्य आहेत.सातत्यपूर्ण प्रयत्नांमुळे कंपनीने २०१६-१७ मध्ये १.२५ कोटी रु.ची तर २०१७-१८ मध्ये १.५ कोटी रु.ची उलाढाल केली.

४. **विकास अग्रो शेतकरी उत्पादक कंपनी लिमिटेड,लातूर**— छोठ्या व अल्पभूधारक शेतकऱ्याकडून बाजारभावाने शेतीमाल खरेदी करून त्यावर प्रक्रिया करून या उत्पादनाची विक्री करण्यासाठी ग्रामीण वितरण साखळी विकसित करण्याच्या हेतूने ऑगस्ट २०१५ मध्ये या कंपनीची स्थापना करण्यात आली.कंपनीच्या व्यवसायामध्ये वेगाने प्रगती झाल्याने सुरवातीस ३०० असलेली सदस्य संख्या आता जवळपास ५०० हून अधिक झाली आहे.

५. **भोसे अग्रो उत्पादक कंपनी लिमिटेड,सोलापूर**—५०८ शेतकरी सदस्यांचे जाळे २०१५ मध्ये स्थापित झाले आहे.सुरवातीला कंपनीने चार जातींची संयुक्त विक्री करण्याचे काम केले.तसेच शेतकरी सदस्य आणि बिगर

शेतकरी सदस्यांना भाडेत्वावर शेतीऔजारे पुरवठा करण्याची सेवा या कंपनीने दिली आहे.यातून २०१६-१७ मध्ये कंपनीला ३ लाख रु.चे भाडेउत्पन्न मिळाले.

६.कृषिजीवन अग्री शेतकरी उत्पादक कंपनी लिमिटेड,पुणे-या कंपनीची स्थापना २०१४ मध्ये झाली.सुरवातीस केवळ ५० सदस्य या कंपनीचे होते.व आज ५०० इतके सदस्य आहेत.यात स्वयंसहाय्यता गट किंवा २० सदस्यांचे छोटे उत्पादक गट यांचाही समावेश होतो.हे सदस्य प्रामुख्याने बटाटा,कांदा या पिकांचे उत्पादन घेतात.खर्च कमी करणे,कार्यक्षमता वाढविणे आणि पाण्याच्या ताण,मजूर,टंचाई,काढणीपश्चात नुकसान आणि बाजार उपलब्धता अश्या समस्यावर मात करण्याच्या उद्देशाने या पद्धतीचा अवलंब या कंपनीने केला आहे.

७.अमरसिंह अग्री उत्पादक कंपनी लि.अहमदनगर-अहमदनगर जिल्ह्यामधील २६९ शेतकरी सदस्य असलेल्या या शेतकरी उत्पादक कंपनीची नोंदणी २०१३ साली झाली.या समूहाद्वारे हाती घेण्यात आलेले उपक्रम निविष्टा पुरवठा,कांदा व डाळिंबाची प्रतवारी,विभागणी आणि बांधणी,आणि हरभरा विजोत्पादन हे आहेत.सदस्य शेतकरी पूर्वी प्रमाणित बियाणे वापरत होते. आणि आता फौंडेशन बियाणे वापरू लागल्याने त्यांच्या हरभरा उत्पादनात वाढ दिसून येत आहे. या सदस्यांनी उत्पादनासाठी एकरी १००० रुपयांची गुंतवणूक केली आणि त्याद्वारे एकरी ६००० रुपये मिळवले.सदस्य शेतकरी आपल्या कांदा आणि डाळिंब उत्पादनाचे सफाई,प्रतवारी आणि विभागणीच्या माध्यमातून मूल्यवर्धन करण्यासाठी कंपनीमध्ये घेवून येतात.शेतकऱ्यांचे हे प्रक्रियायुक्त शेतीमाल व्यापारी आणि स्थानिक बाजारात विक्री केली जाते.

८.गर्भगिरी शेतकरी उत्पादक कंपनी अहमदनगर- २०१४ साली अहमदनगर जिल्ह्यात या कंपनीची स्थापना झाली.या कंपनीचे एकूण ४१८ भागधारक सदस्य आहेत.शेतकरी उत्पादक कंपनीच्या कार्यक्षेत्रात कांदा,गहू,मका,ज्वारी या प्रमुख पिकांचे उत्पादन घेतले जाते.या कंपनीद्वारे राबविण्यात येत असलेल्या शेतीमाल सफाई आणि प्रतवारी सुविधेचे माध्यमातून वार्षिक १० लाख रु.ची उलाढाल केली जात आहे.२०१७ साली तूर खरेदी आणि प्रक्रियाबरोबर एकूण उलाढाल २.७५ कोटी रु.इतकी होती.याद्वारे कंपनीला निव्वळ ७ लाखांचा नफा झाला.या कंपनीने अहमदनगर जिल्ह्यात प्रक्रियायुक्त धान्य उत्पादनाची दोन विक्री दालने हि उभारली आहेत.या कंपनीचा प्राथमिक उद्देश हा कृषी निविष्टा खरेदी,प्राथमिक प्रक्रिया आणि संकलित शेतीमालाची विक्री करण्यासाठी उत्पादकांना एकत्र आणून एकसमूह विकसित करणे हा आहे.या कंपनीद्वारे थेट ग्राहक किंवा द्विस्तरीय प्रक्रियादाराना शेतमाल पुरवठा करण्यासाठी आवश्यक वाहतूक सेवेचाही विकास करण्याचा विचार आहे.

निष्कर्ष-

आपल्या देशाच्या लोकजीवनामध्ये शेतीला अनन्यसाधारण महत्त्व अनादिकाळापासून देण्यात आलेले आहे .शेती करण्याच्या पारंपारिक पद्धतीवर अवलंबून राहिल्याने उत्पादकता कमी राहून शेती फक्त उदरनिर्वाहाचे साधन बनून राहिली.मात्र आजच्या आधुनिककाळात शेतीधोरणातील सकारात्मक बदलामुळे शेती व्यावसायिक बनत चालली आहे.याचाच परिणाम म्हणजे शेतकरी कंपन्यांची स्थापना होय.शेती प्रक्रियायुक्त मालाची निर्मिती यामुळे मोठ्याप्रमाणावर वाढत आहे.खते,कीटकनाशके ,सामग्री पुरवठा ,औजार पुरवठा याबाबींची उपलब्धता या कंपन्यांच्या स्थापनेमुळे शक्य होत आहे. शाश्वत बाजारपेठ या शेतकरी उत्पादक कंपन्यांनी शेतकऱ्यांना उपलब्ध करून दिली आहे.जागतिकीकरणाचे जसे फायदे औद्योगिक क्षेत्राला

मिळतात तसेच बदल शेती क्षेत्रात या शेतकरी उत्पादक कंपन्यांमुळे होत आहे.असंघटीत क्षेत्रातील शेतीला नवसंजीवनी देण्याचे काम या कंपनी प्रकारामुळे निर्माण होईल अशी आशा वाटते.

कृषीक्रांतीचे जनक डॉ.एम.एस.स्वामिनाथन यांनी आजच्या शेतीला हरितक्रांती असे जरी नाव दिले असले तरी भविष्यातील शेती सदाहरित क्रांती अशी राहिल असे मत प्रदर्शित केलेले आहे.कालची शेती पारंपारिक,आजची शेती आधुनिक व उद्याची शेती शाश्वत असे समीकरण असून उद्याची शेती करताना आधुनिक शेती तंत्रज्ञान,एकात्मिक शेती तसेच शेतकरी उत्पादक कंपनी नक्कीच स्वागतार्ह ठरेल.

संदर्भ :

1. <http://macp.gov.in/Maharashtra-शेतकरी उत्पादक कंपन्यांची यादी>
2. दैनिक अग्रोवन ,
3. एसएफ एसी,डिसेंबर २०१७ अहवाल
4. www.wikipedia.org
5. www.vikaspedia.in



महाराष्ट्रातील शेती सिंचन : समस्या आणि उपाय

डॉ. सुनिल सखाहरी मोहटे

अगस्ति कला, वाणिज्य व दादासाहेब रुपवते विज्ञान
महाविद्यालय, अकोले, जि. अहमदनगर.

प्रास्ताविक -

भारतीय अर्थव्यवस्थेप्रमाणेच महाराष्ट्राच्या अर्थव्यवस्था देखील कृषिप्रधान अर्थव्यवस्था आहे. भारतातील एक विकाशित राज्य म्हणून महाराष्ट्राची ओळख आहे. १ मे १९६० रोजी महाराष्ट्र राज्याची स्थापना झाली. सद्यस्थितीत राज्यात ३५ जिल्हे असून मराठवाडा, मध्य महाराष्ट्र, पश्चिम महाराष्ट्रातील बहुतांश जिल्हे दुष्काळी टापूत समाविष्ट आहेत. त्यामुळे पिण्याच्या पाण्यासह शेतीसिंचनासाठीच्या पाण्याची टंचाई मोठ्या प्रमाणात निर्माण होते. महाराष्ट्राचे हवामान उष्णकटिबंधीय मान्सून प्रकारचे आहे. त्यामुळे राज्यात पावसाचे प्रमाण वेगवेगळ्या भागात वेगवेगळे आहे. महाराष्ट्रात सरासरी ९२० मि.मी. पाऊस पडतो. मात्र त्याचे वितरण असमान आहे. त्यामुळे राज्यात शेतीच्या विकासात असमानता दिसून येते. शेतीक्षेत्राच्या विकासात अनेक घटक महत्त्वपूर्ण भूमिका पार पाडतात. परंतु पाणी हा घटक सर्वाधिक महत्त्वाचा मानला जातो. एकवेळ माती शिवाय शेती करता येईल, परंतु पाण्याशिवाय शेती करता येत नाही. या दृष्टीने पाण्याचा शेतीशी अतिशय घनिष्ठ संबंध आहे.

महाराष्ट्रात नद्या, विहिरी, कालवे, तलाव, ओढे, धरणे, कुपनलिका, शेततळी इत्यादी मार्गांनी शेती सिंचनासाठी पाणी पुरवठा होतो, मात्र या सर्वांचा अंतिम स्रोत पाऊस हाच आहे. म्हणून पाणी ही नैसर्गिक साधन संपत्ती असून तिचा काटकसरीने वापर करण्याची आवश्यकता आहे. महाराष्ट्रात लहान-मोठ्या मिळून एकूण ४०० नद्या वाहतात. या सर्व प्रकारच्या नद्यांची मिळून एकूण लांबी सुमारे २०००० कि.मी. आहे. पाणी वापराच्या नियोजनासाठी या सर्व नद्यांची विभागणी खोरे निहाय गोदावरी, तापी, नर्मदा, कृष्णा, कोकणातील पश्चिम वाहिनी नद्या आशी करण्यात आली आहे. या सर्व नद्यांचा शेती सिंचनासाठी वापर केला जातो. महाराष्ट्रात जास्तीत-जास्त सिंचन क्षमता निर्माण करण्याच्या दृष्टीने राज्य सरकारने अनेक मोठे, मध्यम व लघु सिंचन प्रकल्प बांधले आहेत तर काही प्रगतीपथावर आहेत. मात्र असे असले तरी महाराष्ट्रातील एकूण शेतीक्षेत्रपैकी केवळ १८ % शेतीक्षेत्राला कृत्रिमरीत्या पाणी पुरवठ्याच्या सुविधा उपलब्ध आहेत. तर अद्यापही सुमारे ८० - ८२ % शेतीक्षेत्र मान्सूनच्या पावसावर अवलंबून आहे. त्यामुळे महाराष्ट्रात शेती व शेतकऱ्यांपुढे अनेक समस्या निर्माण होत आहेत. स्वातंत्र्योत्तर काळात देशाप्रमाणे राज्यातही सिंचन सुविधा उपलब्ध करण्यासाठी राज्य सरकारकडून अनेक उपाययोजना करण्यात आल्या आहेत. तरीही महाराष्ट्रातील सिंचनाच्या क्षेत्रात वाढ झालेली नाही. कारण महाराष्ट्रातील शेती सिंचनाच्या विकासात पुढील प्रकारचे अडथळे व समस्या दिसून येतात. या समस्या सोडविण्यासाठी प्रयत्न होणे अपेक्षित आहेत.

महाराष्ट्रातील शेती सिंचनाच्या विकासातील अडथळे व समस्या :-

१. पावसाचे असमान वितरण -

भारतात सरासरी १००० मि.मी. पाऊस पडतो तर महाराष्ट्रात पर्जन्याचे प्रमाण सरासरी ९२० मि.मी. आहे. त्यातही सह्याद्रीच्या पर्वतराजीत आणि कोकण व विदर्भात तुलनेने जास्त पाऊस पडतो. तर मध्य महाराष्ट्र, मराठवाडा पश्चिम महाराष्ट्रात सरासरीपेक्षा खूपच कमी पाऊस पडतो. त्यामुळे धरणे, नद्या, ओढे भूगर्भ

जल याद्वारे होणाऱ्या पाणीपुरवठ्यावर मर्यादा पडतात.परिणामी या भागातील शेतीक्षेत्राच्या विकासावर व एकूणच आर्थिक विकासावर त्याचा विपरीत परिणाम झाला आहे.

२. पाणी वाहून जाण्याचे प्रमाण जास्त –

महाराष्ट्रात सर्वसाधारणपणे जून ते ओक्टो. ह्या कालावधीत मोसमी पाऊस पडतो.कोकण विभाग आणि विदर्भात सर्वात जास्त पाऊस पडतो.कोकणातील विशिष्ट भूगर्भ रचनेमुळे जमिनीत पाणी मुरण्याचे प्रमाण अत्यल्प आहे.तसेच या भागात धरणे बांधून प्रकल्प निर्मिती करण्यावर मर्यादा पडतात,त्यामुळे कोकणातील नद्यांचे पाणी पावसाळ्यात समुद्राला जाऊन मिळते.या पाण्याचा शेतीसिंचनासाठी उपयोग होत नाही.महाराष्ट्राच्या इतर भागात पडणाऱ्या पाउसाच्या पाण्याबाबतही कमी अधिक प्रमाणात हिच स्थिती दिसून येते.

३. अनियंत्रित भूजल उपसा –

मान्सूनच्या लहरीपनावर मात करण्यासाठी,जास्तीत-जास्त शेतीक्षेत्र सिंचनाखाली आणण्यासाठी ,पिण्याचे पाणी मिळावे इत्यादी कारणांमुळे भूगर्भातील पाण्याचा मोठ्या प्रमाणात अनियंत्रित उपसा होत आहे.त्यामुळे दिवसेंदिवस भूगर्भातील पाण्याची पातळी कमालीची घटत आहे.यामुळे भूगर्भापासून मिळणाऱ्या जलसंपत्तीपासून होणाऱ्या सिंचनावर मर्यादा पडत आहेत.

४. वनाखालील क्षेत्रात घट –

महाराष्ट्रात आर्थिक विकासाच्या विविध प्रकल्पांच्या निर्मितीसाठी ,उद्योगांच्या उभारणीसाठी ,निवासासाठीच्या इमारतींच्या बांधकामासाठी व इतर अनेक कारणांसाठी जमीन उपलब्ध व्हावी म्हणून मोठ्या प्रमाणात जंगलतोड झाल्यामुळे वानंखालील क्षेत्रात मोठी घट झाली आहे.त्यामुळे पावसाचे पाणी जमिनीत न झिरपता वाहून जाते शिवाय त्याबरोबर जमिनीची मोठ्या प्रमाणात धूप होते.याचा परिणाम भूगर्भ जल पातळी सातत्याने घटण्यात होत आहे.त्याचही परिणाम सिंचनावर होत आहे.

५. नवीन जलसिंचन प्रकल्पांच्या उभारणीतील अडथळे –

महाराष्ट्रातील जास्तीत-जास्त कृषीक्षेत्राला सिंचनाच्या सुविधा उपलब्ध करण्यासाठी नवनवीन मोठे,मध्यम व लघु जलसिंचन प्रकल्प उभारण्याची गरज आहे.परंतु असे प्रकल्प उभारण्यासाठी आवश्यक असणारी जमीन संपादित करण्यासाठी शेतकऱ्यांचा होणारा विरोध,प्रकल्पासाठी योग्य जागा उपलब्ध करण्यातील अडथळे,पर्यावरणीय समस्या,पाण्याची उपलब्धता,प्रकल्पांचा वाढत जाणारा खर्च,प्रांतिकवाद इत्यादी सारख्या कारणांमुळे नवीन जलसिंचन प्रकल्प उभारणीमध्ये अनेक अडचणी येत असल्यामुळे राज्यातील सिंचनसुविधा कशाप्रकारे वाढवायच्या हाच मुख्य प्रश्न निर्माण होत आहे.

६. पारंपरिक सिंचन पद्धती -

महाराष्ट्राच्या जवळपास सर्वच भागात अद्यापही शेतीसिंचनासाठी पारंपरिक प्रवाही सिंचन पद्धतीचाच वापर केला जातो.या पद्धतीत पिकांना पाणी देण्याऐवजी जमिनीला पाणी दिले जाते. पिकांना शास्त्रशुद्ध पद्धतीने पाणी न दिल्यामुळे पिकांची उत्पादकता कमी होते,शिवाय जमिनी क्षारयुक्त होऊन कालांतराने नापीक बनतात.या पद्धतीमुळे पाण्याचा मोठ्या प्रमाणात अपव्यय होतो,जास्त पाण्यात खूपच कमी शेतीक्षेत्र ओलिताखाली येते.पिकांचा उत्पादन खर्च वाढतो.यामुळे शेतीसिंचनावर मर्यादा पडतात.

७. शेती सिंचनासाठीच्या पाण्यात घट -

वाढते शहरीकरण आणि नागरीकरण ,औद्योगिक विकास यामुळे उपलब्ध पाण्यापैकी बहुतांश पाणी शहरांसाठी व उद्योगांसाठी राखीव ठेवावे लागत आहे. वीजनिर्मिती, जल वाहतूक, मनोरंजन यासाठी देखील पाण्याचा वापर केला जातो. शहरांसाठी व उद्योगांसाठी वेगळ्या पाण्याची व्यवस्था न केल्याने शेतीसिंचनाचे पाणी कमी केले जात आहे. या कारणास्तव शेतीसिंचनावर मर्यादा पडल्या आहेत.

८. पाणी प्रदूषण -

वाढते शहरीकरण आणि नागरीकरण ,औद्योगिकीकरण शेतीत वापरली जाणारी रासायनिक खते व कीटकनाशक औषधे यामुळे भूपृष्ठीय व भूगर्भीय पाण्याचे मोठ्या प्रमाणात प्रदूषण होत आहे . आजच्या काळात नद्या पवित्र राहिलेल्या नाहीत शहरीभागातील सांडपाणी, उद्योगातील दुषित पाणी यावर शुद्धीकरणाची प्रक्रिया न करता सर्रास नद्यांमधून सोडले जात आहे. असे प्रदूषित पाणी शेतीसाठी वापरण्यास मर्यादा पडतात. दुषित पाणी शेतीसिंचनासाठी वापरल्यास शेतजमिनी लवकर क्षारयुक्त बनतात व कालांतराने नापीक बनतात. यामुळे शेती सिंचन व्यवस्थेत अडथळे निर्माण होतात.

९. अनियंत्रित वाळू उपसा -

वाढती लोकसंख्या, आर्थिक विकासाचे मोठ-मोठे प्रकल्प, शहरीकरण , लोकांच्या राहणीमानात झालेली सुधारणा इत्यादीसारख्या कारणांमुळे सार्वजनिक वापराच्या इमारती , निवासाच्या इमारती, धरणे, पूल, रस्ते व इतर बांधकामांसाठी वाळूची मागणी दिवसंदिवस वाढत असल्याने याक्षेत्रात मोठी उलाढाल होत आहे. लवकरात लवकर श्रीमंत होण्यासाठी महाराष्ट्रातील नद्यांमध्ये असणाऱ्या वाळू या खनिज संपत्तीची सर्रास तस्करी सुरु आहे. मात्र आशा अनियंत्रित वाळू उपस्यामुळे नद्यांची पाणीपातळी खोल गेली आहे, त्यांचा नैसर्गिक प्रवाह खंडित झाला आहे. नद्यांच कोरड्याठाक झाल्याने त्याचा शेतीसिंचनावर विपरीत परिणाम झाला आहे, शेतीसिंचनाचे पाणी कमी झाले आहे.

१०. इतर करणे -

वरील कारणांशिवाय ऐतिहासिक व पारंपारिक जलसाठ्यांचे संवर्धन व जतन करण्याची उदासीनता, पाण्याची मोठ्या प्रमाणातील उधळपट्टी, जलसाक्षरतेचा अभाव, स्वार्थी प्रवृत्ती, सरकारी धोरणांचे अपयश, पाण्याच्या उपलब्धतेपेक्षा जास्त असणारी मागणी यासारख्या अनेक कारणांमुळे शेतीसिंचनाचे पाणी सातत्याने घटत आहे.

वरील विविध कारणांचा विचार करून महाराष्ट्रातील शेतीसिंचनाचे पाणी कसे वाढवता येईल याचा गांभीर्याने विचार करण्याची वेळ आली आहे. यासाठी पुढील उपाययोजना करणे गरजेचे आहे.

उपाययोजना -

पाण्याचे संवर्धन -

भूगर्भीय व भूपृष्ठीय जलस्रोतांचा अंतिम स्तोत्र म्हणजे मान्सूनचा पाऊस होय. त्यामुळे पावसापासून मिळणारे पाणी जास्तीत-जास्त कसे साठवता येईल यासाठी वनतळी, गावतळी, शेततळी, वनराई बंधारे, सलग समपातळीचर, विहीर पुनर्भरण , नाल्यांचे रुंदीकरण व खोलीकरण, जुन्या जालासाठ्यातील गाळ काढणे यासारखी कामे हाती घेणे आवश्यक आहेत. या कामांसाठी ग्रामीण भागातील जनतेचा सहभाग वाढविण्याची गरज आहे. त्यासाठी प्रत्येक गावाने विशेष ग्रामसभांचे आयोजन करून लोकांना विश्वासात घेवून जलसंवर्धनाचे

महत्त्व पटवून देणे आवश्यक आहे.त्यासाठी 'आमचे गाव आमचे पाणी' ही चळवळ प्रत्येक गावाने राबविण्याची आवश्यकता आहे.

वृक्षारोपण –

मानवाने स्वतःच्या स्वार्थासाठी मोठ्या प्रमाणात सातत्याने जंगलतोड केली आहे.त्यामुळे भुपृष्ठावरील वनांचे आच्छादन कमी झाल्याने पर्जन्याचे प्रमाण दिवसंदिवस कमी होत आहे.शिवाय भूगर्भातील जलपातळी कमी होत असून जमिनीचीही मोठ्या प्रमाणात धूप होत आहे.यासाठी मोठ्या जागेवर वृक्षारोपणाचा कार्यक्रम हाती घेऊन या समस्यांपासून सुटका करता येऊ शकते.म्हणून सामाजिक वनीकरण,एक व्यक्ती एक झाड हा उपक्रम फायदेशीर ठरू शकतो.ग्रामीण भागातील युवक मंडळे,महिला मंडळे,भजनी मंडळे,स्वयंसेवी संस्था,विद्यार्थी यांच्या सहकार्याने मोठ्या प्रमाणात वृक्षलागवड करता येऊ शकते.याचबरोबर चराई बंदी, कुऱ्हाड बंदी याचाही विचार जनमानसात रुजवला पाहिजे.

भूजल उपश्यावर मर्यादा –

सद्यस्थितीत वाढती लोकसंख्या, शेतीसिंचनासाठी व इतर कारणाने मोठ्या प्रमाणात भूजलाचा उपसा होत आहे.त्यामुळे भूगर्भीय जलपातळी खोल गेली आहे.म्हणून भूजलाचा होणारा अति उपसा थांबविण्यासाठी कठोर उपाययोजना व कायद्यांची अंमलबजावणी करण्याची आवश्यकता आहे.

प्रकल्प निर्मितीतील अडथळे दूर करणे –

शेतीसिंचनासाठी लघु,मध्यम व मोठे प्रकल्प उभारणी करताना अनेक अडथळ्यांची शर्यत पार करावी लागते. महाराष्ट्रात प्रकल्प निर्मितीचा दीर्घकाळ व त्यामुळे वाढत जाणारा खर्च, राजकीय हस्तक्षेप यामुळे अनेक प्रकल्प रेंगाळले आहेत.म्हणून नवीन प्रकल्पांची उभारणी करताना प्रकल्पबाधित विस्थापितांना विश्वासात घेऊन,शास्त्र शुद्ध पायावर काटेकोर नियोजन करून,कमीत कमी वेळेत व कमीत कमी खर्चात प्रकल्पांची निर्मिती करणे गरजेचे आहे.

आधुनिक सिंचन पद्धतींचा अवलंब –

महाराष्ट्रात अद्यापही मोठ्या प्रमाणात शेती सिंचनासाठी प्रवाही सिंचन पद्धतीचा अवलंब केला जातो.या पद्धतीत पिकांना पाणी देण्या ऐवजी जमिनीला पाणी दिले जाते. यामुळे शेतीची प्रति हेक्टरी उत्पादकता घटते,शिवाय जमिनी क्षारयुक्त बनतात व शेवटी नापीक होतात.म्हणूनच उपलब्ध पाण्याचा काटकसरीने वापर करून कमीत-कमी पाण्यात अधिकाधिक शेतीक्षेत्र कसे सिंचनाखाली येईल यासाठी पाण्याची बचत करणाऱ्या ठिबक व तुषार सिंचन पद्धतींचा शेतकऱ्यांनी वापर करावा यासाठी शेतकऱ्यांचे प्रबोधन करून त्यांना पाण्याचे महत्त्व पटवून देणे आवश्यक आहे.तुषार व ठिबक सिंचन पद्धतींचे संच व सुटे साहित्य कमीत कमी किमतीत कसे उपलब्ध करता येईल याचा सरकारने विचार करून धोरण आखण्याची गरज आहे. सध्या सरकारकडून यासाठी अनुदान दिले जाते, मात्र ते वेळेवर दिले जात नसल्याने शेतकरी या आधुनिक सिंचन पद्धती पासून दूर राहणेच पसंत करतात.

पाणी प्रदूषणाला आळा घालणे –

महाराष्ट्रात असणाऱ्या बहुतांश नद्यांचे स्वरूप प्रदूषणामुळे गटार गंगा या सारखे झाले आहे.शहरी भागातील सांडपाणी,उद्योगांतील दुषित पाणी यावर प्रक्रिया न कारता थेट नद्या,ओढे,नाले यामध्ये

सोडल्यामुळे यातील पाणी पिण्यासाठी व शेती सिंचनासाठी उपयुक्त रहात नाही.तसेच शेतीमध्ये वापरल्या जाणाऱ्या अतिरिक्त रासायनिक खते व कीटकनाशकांमुळे भूगर्भातील पाणी दुषित होत आहे. म्हणून प्रदूषित पाणी थेट नैसर्गिक जलस्रोतांमध्ये सोडण्यापूर्वी त्याचे शुद्धीकरण करण्याची सक्ती केली जावी व त्यासंदर्भात अस्तित्वात असणाऱ्या कायद्यांची कठोर अमलबजावणी करण्यात यावी.शेतकरी वर्गानेही शास्त्रशुद्ध पद्धतीने पिकांना खते दिली पाहिजेत.रासायनिक खता ऐवजी कंपोस्ट व हिरवळीची खते वापरावीत .जेणेकरून जलप्रदुषणाला आळा बसून शेती सिंचनाचे पाणी वाढण्यास मदत होईल.

वाळू उपसा थांबविणे –

अमर्याद वाळू उपस्यामुळे नद्यांची पात्रे कोरडीठाक पडून भूगर्भ जल पातळी कमालीची खालवली आहे.म्हणून वाळू उपसा थांबविण्यासाठी कठोर उपाय योजना करण्याची आवश्यकता आहे. वाळू तस्करीच्या माध्यमातून महाराष्ट्रात गुंडगिरी,भ्रष्टाचार,काळाबाजार यासारखे अनेक गैरप्रकार वाढीस लागले आहेत.म्हणून वाळूचोरी थांबविल्यास भूगर्भ जल पातळी उंचविण्यास मदत होईल.

सारांश –

भारतातील एक प्रगत राज्य आशी आळोख असणाऱ्या महाराष्ट्रात अद्यापही शेतीक्षेत्रा पुढे अनेक समस्या आहेत.विशेषतः शेती सिंचनाबाबत खूप लांबचा पल्ला गाठणे बाकी आहे.त्यासाठी समाज्याच्या सर्वस्तरातून प्रयत्न करण्याची गरज आहे.ग्रामीण भागातील जनतेला एकत्रित करून पावसाचे पाणी अडविण्याचा व जमिनीत जिरविण्याचा उपक्रम येत्या काळात मोठ्याप्रमाणात राबविल्यास राज्याच्या बहुतांश भागातील दुष्काळ निवारण होऊन सिंचनाखालील क्षेत्रात वाढ होईल व शेतकऱ्यांना किमान दोन हंगामात पिके घेता येतील.मात्र यासाठी ग्रामीण भागातील जनतेला योग्य मार्गदर्शन करणारे नेतृत्व निर्माण होणे गरजेचे आहे.तरुण पिढीने सहकार्य,समाजसेवा,या भावनेतून पुढे येऊन अशी लोकपयोगी कामे हाती घेतल्यास आदर्श समाज निर्मिती होण्यास उशीर लागणार नाही,त्यासाठी गरज आहे फक्त प्रबळ इच्छाशक्तीची !

संदर्भसूची -

1. प्रा.डॉ.ढमढेरे,सुरेश – महाराष्ट्रातील सिंचन,पाणलोट आणि जलसंधारण .
2. महाजन,प्रवीण – जलसंपदा काल,आज,उद्या.
3. भिसे,रामेश्वर – कृषी विकासाचे अर्थशास्त्र .
4. सिंचन स्थितीदर्शक अहवाल – २००९-१० .

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प्रा. सोमनाथ वसंतराव पाटील

एम.ए.एम.फिल,सेट,पीएच.डी.

अर्थशास्त्र विभाग प्रमुख

एस. एस. ढमढेरे महाविद्यालय

तळेगावढमढेरे ता. शिरूर ,

Email-patileco@rediffmail.com

गोष्टवारा

भारत हा कृषीप्रधान देश आहे. भारतातील शेतीचे स्वरूप अभ्यासण्यासाठी भारतातील पीक पध्दती समजून घेणे आवश्यक आहे. पीक पध्दती म्हणजे देशातील प्रत्यक्षातील एकूण लागवडीखालील क्षेत्रामध्ये विविध पीकाखालील क्षेत्राचे प्रमाण होय. भारतातील पिकरचना सातत्याने बदलत आहे. विशेषतः जागतिकीकरणा नंतर भारतीय शेतीकडे व्यावसायिक दृष्टीकोणातून पाहिले जाऊ लागले. त्यामुळे अन्नधान्य पिकाखालील क्षेत्र घटत असून त्याची जागा अधिक नफा देणारी नगदी पिके घेत आहेत. शिवाय भारतीय शेतीतील पिकांची विविधता कमी होत असून गहू व तांदळासारख्या विशिष्ट पिकांचाच प्रभाव वाढल्याने शेतीचा एकांगी विकास होताना दिसतो.

कळीचे शब्द— पिकरचना, अन्नधान्य, उत्पादकता, जागतिकीकरण

प्रस्तावना

भारत हा कृषीप्रधान देश आहे. केवळ मोठ्या प्रमाणावर शेती केली जाते म्हणून भारत हा कृषीप्रधान देश ठरत नाही तर आपली भौगोलिक आणि प्राकृतिक स्थिती देखील शेतीला अनुकूल आहे. भारतास मिळालेल्या निसर्गदत्त देणग्यांचा विचार केल्यास उत्कृष्ट पध्दतीने शेती करण्यासाठी आवश्यक असणाऱ्या जमिन, पाणी आणि सूर्यप्रकाश या मुलभूत गोष्टी भारतास विपुल प्रमाणात लाभल्या आहेत. या मुलभूत गोष्टी उपलब्ध असूनही भारतीय शेतीचे निसर्गावरील अवलंबन आणि ब्रिटीशांची भारतीय शेती विकासास फारशी अनुकूल नसलेली धोरणे यामुळे स्वातंत्र्यपूर्वकाळात भारतीय शेतीचा फारसा विकास झाला नाही.

संशोधन पध्दती:— प्रस्तुत संशोधनासाठी वर्णनात्मक व विश्लेषणात्मक संशोधन पध्दतीचा अवलंब करण्यात आला असून हे संशोधन दुय्यम स्रोतांवर आधारीत आहे.

संशोधनाची उद्दिष्टे

१. भारतीय शेती क्षेत्रातील बदलांचे विविध टप्पे अभ्यासने
२. भारतीय पिकरचना व पिकरचनेतील बदलांचा अभ्यास करणे.
३. भारतीय शेती क्षेत्रापुढे जागतिकीकरणा नंतर निर्माण झालेली आव्हाने अभ्यासने

भारतीय शेती क्षेत्रातील बदलाचे साधारणपणे तीन टप्पे पाडता येतात

हरितक्रांती पूर्वकाळ

अप्रगत कृषी क्षेत्र, पारंपारिक उत्पादन पध्दती, शेतीमधील जुनाट उत्पादन तंत्र, शेतीक्षेत्रामध्ये व्यावसायिक दृष्टीकोनाचा आभाव, आणि अल्प उत्पादकता यामुळे हरितक्रांती पूर्वकाळात भारताला मोठ्या प्रमाणावर विदेशातून अन्नधान्याची आयात करावी लागत होती. भारतामधील १९६५ व १९६६ या लागोपाठच्या दोन

वर्षातील अवर्षणामुळे अन्नधान्य उत्पादनात लक्षणीय घट झाली त्यामुळे अन्नधान्य समस्या आणखी बिकट बनली. देशाने कितीही आर्थिक प्रगती केली तरी अन्नधान्यासारख्या अत्यावश्यक गोष्टीबाबत देश पूर्णता आत्मनिर्भर असणे आवश्यक असते. त्यामुळे स्वातंत्र्यप्राप्तीनंतर भारताने अन्नधान्य उत्पादनामध्ये स्वावलंबी बनण्यासाठी विशेष प्रयत्न सुरू केले.

हरितक्रांती नंतरचा काळ

१९७० च्या दशकात भारतामध्ये हरितक्रांतीचे नविन धोरण स्वीकारून ते अवलंबण्यात आले. डॉ. स्वामिनाथन हे भारतातील हरित क्रांतीचे प्रणेते मानले जातात. उत्पादनवर्धक बियाणे आणि बहुविध पीक पध्दती या दोन पैलूमुळे शेती क्षेत्रामध्ये अमुलाग्र बदल झाला. संकरित बियानांबरोबरच भारतात विविध पीकांच्या हायब्रिड जाती तयार झाल्या. रासायनिक खाते, औषधे, जलसिंचनाच्या विविध पध्दती यांचा अभ्यास, प्रचार, प्रसार, व वापर करण्यात आला. त्यामुळे कृषिक्षेत्रात झपाट्याने वाढ होवून अन्नधान्य उत्पादन ३० दशलक्ष टनांवरून २५७ दशलक्ष टनांवर पोहचले त्यामुळे प्रामुख्याने भारताला अनेक शतकांपासून भेडसावणारा अन्नधान्य तुटवड्याचा प्रश्न सोडविण्यात मोठ्या प्रमाणावर यश मिळाले आहे.

आज भारतीय शेती देशाच्या विकासामध्ये महत्वपूर्ण योगदान देत आहे. देशातील १२१ कोटी लोकसंख्येस अन्नधान्य उपलब्ध करून देण्याची जबाबदारी शेती क्षेत्रावर आहे. देशाच्या एकूण लोकसंख्येपैकी ६० टक्के लोकसंख्या रोजगारासाठी प्रत्यक्ष व अप्रत्यक्षरीत्या शेतीवर अवलंबून आहे. राष्ट्रीय उत्पन्नात शेतीचा वाटा महत्वपूर्ण आहे, देशाच्या औद्योगिक विकासामध्ये शेतीचे मोठे योगदान आहे. भारताच्या निर्यातीमध्ये कृषीप्रधान वस्तुचा समावेश असून त्यामुळे देशातला बहुमोल परकिय चलन उपलब्ध होत आहे.

जागतिकीकरण नंतरचा काळ

१९९१ मध्ये आर्थिक सुधारणांचा कार्यक्रम राष्ट्रीय पातळीवर राबविण्यास सुरवात झाली. देशामध्ये सर्वत्र जागतिकीकरण, खाजगीकरण व उदारीकरणाचे वारे वाहू लागले. जागतिकीकरणाचा प्रभाव देशाच्या व राज्याच्या शेती, उद्योग व सेवा क्षेत्राबरोबरच लोकांच्या आर्थिक सामाजिक जिवणावर झाला. मुक्त आयात निर्यात, वस्तुंची सहज उपलब्धता, जाहिरातबाजी यामुळे लोकांच्या आवडीनिवडी व जिवनशैली बदलली. मागणीची रचना व त्यास अनुसरून उत्पादनाची रचना बदलत आहे. त्यामुळे ख-या अर्थाने शेतीचे अतिशय वेगाने व्यापारीकरण सुरू झाले.

शेती मधून अल्पकाळात प्रचंड उत्पादन व नफा मिळवण्यासाठी निसर्ग नियमांना डावलले गेले. संकरित बियाणे, रासायनिक खाते, औषधे यांचा अतिरेकी वापर होवू लागला. भारतातील पीकरचना बदलून खाद्यान्न पिकांची जागा ऊसासारखी नगदी पीके घेत आहेत. शेतीची वाटचाल बहुपिक पध्दती कडून विशिष्ट पिक पध्दतीकडे होताना दिसत आहे. भुगर्भातील जलस्रोतांचा प्रचंड वापर व अपव्यय होण्याबरोबरच जमिनीचा पोत बिघडला आहे. आज शेतीचे शोषण करण्याच्या मानवाच्या या प्रवृत्तीमुळे शेती विकास प्रक्रियेमध्ये अनेक अडथळे व आव्हाने निर्माण होत आहेत. पुढील पिढ्यांच्या खाद्यान्न सुरक्षेच्या दृष्टीने यावर वेळीच गांभिर्याने विचार होणे आवश्यक आहे. या सर्व घटकांमुळे शेती क्षेत्रामध्ये जे अनेक बदल झाले ते खालील मुद्द्यांद्वारे स्पष्ट केले आहेत.

भारतातील अन्नधान्य पीकांखालील क्षेत्र उत्पादन आणि उत्पादकतेतील बदल

भारतामध्ये १९५०-५१ ते २०१३-१४ या कालावधीमध्ये अन्नधान्य पीकांखालील क्षेत्र, अन्नधान्य उत्पादन आणि उत्पादकतेमध्ये घडून आलेले बदल खालील तक्त्यामध्ये दर्शविले आहेत.

भारतातील अन्नधान्य पीकाखालील क्षेत्र उत्पादन आणि उत्पादकता

अ.न.	वर्ष	अन्नधान्य पीकाखालील क्षेत्र. (दशलक्ष हेक्टर)	उत्पादन (दशलक्ष टनामध्ये)	उत्पादकता (कि.ग्रॅम प्रति हेक्टरी)	जलसिंचना खालील क्षेत्र (टक्के)
१	१९५०-५१	९७.३२	५०.८०	५२२.००	१८.१
२	१९६०-६१	११५.५८	८२.००	७१०.००	१९.१
३	१९७०-७१	१२४.३२	१०८.४०	८७२.००	२४.१
४	१९८०-८१	१२६.६७	१२९.६०	१०२३.००	२९.७
५	१९९०-९१	१२७.८०	१७६.४०	१३८०.००	३५.१
६	२०००-२००१	१२१.००	१९६.८०	१६२६.००	४३.४
७	२०१०-२०११	१२६.७०	२४४.५०	१९३०.००	४७.८
८	२०११-२०१२	१२४.७५	२५९.२९	२०७८.००	४९.८
९	२०१२-२०१३	१२०.७८	२५७.१३	२०२९.००	—
१०	२०१३-२०१४	१२६.०४	२६४.७७	२१०१.००	—

संदर्भ—Agriculture Statistics at A Glance.2014- page no -68,69

वरील तक्त्या वरून असे दिसून येते की १९५०-५१ ते २०१३-१४ या ६४ वर्षांमध्ये भारतातील अन्नधान्य पीकाखालील क्षेत्रामध्ये अल्प प्रमाणामध्ये वाढ झाली आहे. १९५०-५१ मध्ये भारतातील अन्नधान्य पीकाखालील क्षेत्र ९७.३२ दशलक्ष हेक्टर होते ते २०१३-१४ मध्ये वाढून १२६.०४ दशलक्ष हेक्टर पर्यंत झाले. अर्थात भारतातील अन्नधान्य पीकाखालील क्षेत्र जरी संथ गतीने वाढत असले तरी भारताचे अन्नधान्य उत्पादन सातत्याने व अधिक वेगाने वाढत आहे.

विशेष म्हणजे जागतिकीकरणानंतर भारतातील अन्नधान्य पीकाखालील क्षेत्र घटत आहे.

१९५०-५१ मध्ये अन्नधान्य उत्पादन केवळ ५०.८० दशलक्ष टन होते. ते १९७०-७१ मध्ये १०८.४० दशलक्ष टन एवढे झाले. तर २०००-२००१ मध्ये ते १९६.८० दशलक्ष टनापर्यंत वाढले. २०११-१२ मध्ये भारताचे अन्नधान्य उत्पादन २५७.४० दशलक्ष टन एवढे प्रचंड वाढले आहे तर २०१३-१४ मध्ये भारताचे अन्नधान्य उत्पादन २६४.७७ दशलक्ष टन एवढे प्रचंड वाढले आहे एकंदरीत १९५० पासून भारतातील अन्नधान्य उत्पादनामध्ये भरीव वाढ झाली आहे.

प्रति हेक्टरी उत्पादकतेचा विचार करता १९५०-५१ मध्ये भारतातील अन्नधान्याची उत्पादकता ५२२ कि. ग्रॅ. प्रति हेक्टरी होती. १९७०-७१ मध्ये ८७२ कि.ग्रॅ., व या नंतर सातत्याने वाढून २०१३-१४ मध्ये प्रति हेक्टरी २१०१ कि.ग्रॅ. झाली. व हे भारतीय हरितक्रांतीचे भरीव यश आहे.

भारतीय पीकरचनेतील बदल रू

भारतातील शेतीचे स्वरूप अभ्यासण्यासाठी भारतातील पीक पद्धती समजून घेणे आवश्यक आहे. पीक पद्धती म्हणजे देशातील प्रत्यक्षातील एकूण लागवडीखालील क्षेत्रामध्ये विविध पीकाखालील क्षेत्राचे प्रमाण होय. तक्ता क्र. १.१ मध्ये १९५०-५१ पासून आजपर्यंत भारतातील पीक पद्धती मध्ये झालेला बदल दर्शविला आहे.

भारतातील पीक पध्दतीचा अभ्यास करता अन्नधान्य उत्पादन हे भारतीय पीक पध्दतीचे प्रमुख उद्दीष्ट आसल्याचे दिसून येते.

भारतीय पीकरचनेतील बदल

(क्षेत्र दशलक्ष हेक्टरमध्ये)

अ. क्र	पीक	लागवडी खालील एकूण क्षेत्राशी प्रमाण (टक्के) १९५०-५१	लागवडी खालील एकूण क्षेत्राशी प्रमाण(टक्के) २०११-१२
१	भात	२३.३६	२२.५४
२	गहू	७.२९	१५.२९
३	बाजरी	६.८४	४.५०
४	ज्वारी	११.८०	३.२०
५	मका	२.४०	४.५०
६	इतर भरडधान्य	७.५२	१.३४
७	एकूणभरडधान्य(३ ते ६)	२८.५६	१३.५३
८	एकूण तृणधान्य	५९.३१	५१.३६
९	एकूण कडधान्य	१४.४७	१२.५३
१०	एकूण अन्नधान्य	७३.७९	६३.८९
११	तेलबिया	८.१४	१३.४७
१२	कापूस	४.४६	६.२४
१३	ऊस	१.३०	२.५८
१४	तंबाखू	०.२७	०.२४

संदर्भ—Agriculture Statistics at A Glance.2014-page no -68 to 91.

- भारतातील अन्नधान्य पीकाखालील क्षेत्र वाढत असले तरी टक्केवारीचा विचार करता भारतातील एकूण लागवडीखालील क्षेत्रामध्ये अन्नधान्य पीका खालील क्षेत्राचे प्रमाण याच कालावधीत ७३.१९ टक्केवरून ६३.८९ टक्क्यांपर्यंत कमी झाले आहे.
- एकूण अन्नधान्य पीकांखालील क्षेत्रामध्ये तृणधान्य पीकांचा वाटा नेहमीच अधिक राहिला आहे. तृणधान्य पीकाखालील क्षेत्रवाढत असले तरी टक्केवारीचा विचार करता भारतातील एकूणलागवडीखालील क्षेत्रामध्ये तृणधान्य पीकाखालील क्षेत्राचे प्रमाण सातत्याने घटताना दिसत आहे. १९५०-५१ मध्ये एकूण पीकाखालील क्षेत्रापैकी ५९.३१ क्षेत्रावर तृणधान्य पीके घेतली जात होती हे प्रमाण २०११-१२ मध्ये ५१.३६ टक्क्यांपर्यंत कमी झाले आहे.
- पीकनिहाय विचार करता १९५०-५१ ते २०११-१२ या कालावधीमध्ये तृणधान्य पीकाखालील क्षेत्र वेगाने वाढत असून ही वाढ अनुक्रमे गहू(२०६.२५ टक्के) मका (१७७.८४) व भात (४२.८४ टक्के) आहे. तर ज्वारी बाजरी व इतर भरडधान्य या पीकाखालील क्षेत्र वेगाने घटत आहे. १९५०-५१ ते २०११-१२ या कालावधीमध्ये ज्वारी पीकाखालील क्षेत्रामध्ये सर्वाधिक (५९.६८ टक्के) घट झाली आसून एकूण अन्नधान्य

पीकाखालील क्षेत्रापैकी केवळ ३.२० टक्के क्षेत्र ज्वारी पीकाखालील राहिले आहे. ज्वारी बरोबरच इतर भरडधान्य पीकाखालील क्षेत्र अतिशय वेगाने घटत आहे.

थोडक्यात भारतीय शेतीची वाटचाल बहुपिक पध्दती कडून विशिष्ट पीक पध्दतीकडे होताना दिसत आहे. यामुळे शेती विकासाचा प्रादेशिक समतोल बिघडून पीकांचे वैविध्य नलट होण्याचा धोका निर्माण झाला आहे. गहू, तांदुळ या पीकांच्या तुलनेने ज्वारी व इतर भरडधान्यांसाठी पाण्याची कमी आवश्यकता असूनही बाजारव्यवस्थेमध्ये टिकाव धरू न शकल्यामुळे या पीकांखालील क्षेत्र अतिशय वेगाने घटत आहे.

४. १९५०-५१ ते २०११-१२ या कालावधी मध्ये भारतातील कडधान्य पीकाखालील क्षेत्र १९.०९ दशलक्ष हेक्टर वरून २४.४६ दशलक्ष हेक्टर पर्यंत वाढले आहे. क्षेत्र वाढत असले तरी टक्केवारीचा विचार करता भारतातील एकुललागवडीखालील क्षेत्रामध्ये कडधान्य पीकाखालील क्षेत्राचे प्रमाण १४.४७ टक्क्यांवरून १२.४३ टक्क्यांपर्यंत घटले आहे.

कडधान्याच्या मागणी पुरवठ्यातील असमतोलामुळे कडधान्याचे बाजारभाव वेगाने वाढत आहेत. त्यामुळे कडधान्ये सर्वसामान्य गरीब लोकांच्या आहारातून नामशेल होण्याची भीती निर्माण झाली आहे.

५. नगदी पिके—भारतीय शेतीचे व्यापारीकरण अतिशय वेगाने होताना दिसत आहे. १९५०-५१ ते २०११-१२ या कालावधी मध्ये भारतातील ऊस या नगदी पीकाखालील क्षेत्र सर्वाधिक १९४.७३ टक्के वाढले आहे त्या खालोखाल तेलबिया १४५.२० टक्के व कापूस १०७.१४ टक्के यांचा क्रम लागतो.
६. जलसिंचनातील बदल भारतातील जलसिंचना खालील क्षेत्र सातत्याने वाढत असले तरी या वाढीचा वेग अतिशय संथ आहे. भारतातील जलसिंचना खालील क्षेत्र १९५०-५१ मध्ये १८.१ टक्के ते २०११-२०१२ मध्ये ४९.८ टक्के पर्यंत वाढले आहे. थोडक्यात आजही भारतातील ५० टक्के क्षेत्र कोरडवाहू असून ते पूर्णपणे पावसाच्या पाण्यावर अवलंबून आहे.

भारतीय शेतीपुढील आव्हाने:

अर्थात शेतीच्या विकासाबरोबरच भारतीय शेती क्षेत्रापुढे अनेक प्रश्न व आव्हाने निर्माण झाली आहेत. अन्नधान्य उत्पादनातील वाढीबरोबरच धान्य उत्पादन करणाऱ्या शेतकऱ्याची व शेतीवर अवलंबून असणाऱ्या ६० टक्के लोकांची आर्थिक परिस्थिती बदलली आहे का? देशातील गोर गरीब जनतेचा प्रत्यक्षात अन्नधान्य उपभोग वाढला आहे का? रोजगाराच्या संधी वाढत आहेत का? शेतीचा प्रादेशिक समतोल विकास होत आहे का? पीकांचे वैविध्य जपले जात आहे का? उत्पादनाची गुणवत्ता टिकून आहे का? बाजार व्यवस्थेस अनूसरून पीक पध्दती बदलत आहेत का? जमिनीचा पोत, भुगर्भातील जलसाठे टिकून राहात आहेत का? जागतिक तुलनेत आपली उत्पादकता वाढत आहे का? अशा असंख्य प्रश्नांची समाधानकारक उत्तरे मिळत नसतील तर त्यास कृषी विकास म्हणता येणार नाही.

संदर्भ

१. जी.एन. झामरे, (२००६) भारतीय अर्थव्यवस्था विकास व पर्यावरणीय अर्थशास्त्र, पिंपळपुरा अ'न्ड कं पब्लिशर्स, नागपुर.
२. रमेश पाध्ये, (२०१५) शेती शेतकरी आणि अर्थकारण, द युनिक अ'केडमी, पुणे.
३. Datt and Sundram (2013) S.Chand and Company Pvt.Ltd. New Delhi.
४. Agricultural Statistics at a Glance (2014), Directorate of Economics and Statistics, Govt. of India.

महाराष्ट्रातील शेती :समस्या आणि उपाय

प्रा.एस.बी.गोर्डे

(कला व वाणिज्य महाविद्यालय समशेरपूर.)

अर्थव्यवस्थेची तीन महत्वाची क्षेत्रे म्हणजेच कृषी ,उद्योग व सेवा हे होय. यातील कृषी हे प्राथमिक किंवा मुलभूत क्षेत्र मानले जाते. कृषी क्षेत्रावरच देशाच्या अर्थव्यवस्थेचा विकास अवलंबून असतो. भारत हा कृषिप्रधान देश म्हणून ओळखला जातो. महाराष्ट्राचा विचार करता ,महाराष्ट्राची अर्थव्यवस्थादेखील कृषिप्रधानच आहे. जवळपास 60%पेक्षा अधिक लोकसंख्या शेतीक्षेत्रावर अवलंबून आहे. शेती क्षेत्रातून उद्योगक्षेत्राला कच्चा माल पुरविला जातो. तसेच उद्योग क्षेत्रातील अनेक वस्तूंना शेतीक्षेत्रातूनच मागणी येते. उदा.शेतीची यंत्रे, अवजारे,रासायनिक औषध, खते, संकरित बी-बियाणे इ. म्हणजेच उद्योग क्षेत्राचा सर्वांगीण विकास शेतीवरच अवलंबून असतो. म्हणून असे म्हणता येईल कि शेती हा अर्थव्यवस्थेचा कणा आहे.

महाराष्ट्रातील शेती व्यवसायाचा विचार करता सद्यः स्थितीत हा व्यवसाय अत्यंत अडचणीत सापडला आहे. महाराष्ट्रातील शेती आणि शेतकऱ्यांची परिस्थिती अत्यंत वाईट आहे. राज्यात शेतीविषयीच्या समस्या पुढीलप्रमाणे-

समस्या:

1)अल्प उत्पादकता :राज्यातील शेती व्यवसायासमोर अनेक समस्या असून त्यातील महत्वाची समस्या म्हणजेच अल्प उत्पादकता होय. जगातील इतर देशांच्या शेती उत्पादकतेची तुलना करता महाराष्ट्रातील शेतीची उत्पादकता अत्यंत कमी आहे.

2)उत्पादन खर्चात वाढ: महाराष्ट्रातील शेतीक्षेत्राची ही देखील प्रमुख समस्या आहे. उत्पादन खर्च सध्या मोठ्या प्रमाणावर वाढलेला आहे. उदा. रासायनिक खते, औषधे, संकरित बी-बियाणे, मजुरी इ.च्या किमतीत वाढ झाली. मात्र शेतमालाच्या किमती स्थिर राहिल्या.

3)शेतकऱ्यांचे उत्पन्न कमी: शेतीची अल्प उत्पादकता व उत्पादन खर्चात झालेली वाढ यामुळे शेतकऱ्यांना शेतीपासून मिळणाऱ्या उत्पन्नात घट झाली. तसेच महाराष्ट्रातील अनेक सीमांत शेतकऱ्यांकडे इतर जोडधंद्या नसल्याने ते पूर्णतः शेतीवर अवलंबून आहे. त्यामुळे देखील त्यांचे उत्पन्न कमी राहते.

4)जलसिंचनाच्या अपुऱ्या सुविधा: महाराष्ट्रात पर्जन्य हा नेहमीच असमान राहिलेला दिसतो. पश्चिम महाराष्ट्राच्या तुलनेत मराठवाडा व विदर्भ या ठिकाणी पाऊस नेहमीच कमी पडतो. त्याचा परिणाम त्या ठिकाणच्या शेतीवर होतो. महाराष्ट्रात धरणे व तलाव यांची संख्या जास्त असली तरी शेतकऱ्यांचे अज्ञान, निरक्षरता ,शासनाचे दुर्लक्ष,विजेची टंचाई इ.कारणामुळे शेतीला पुरेसा पाणीपुरवठा होत नाही.

5)वीज भारनियमन:- महाराष्ट्रात ग्रामीण भागात वीजभार नियमन हि खूप मोठी समस्या आहे. वीजभार नियमन केल्याने शेतीला पुरेसा पाणीपुरवठा/ सिंचन करता येत नाही परिणामी त्याचा उत्पादनावर परिणाम होतो .ग्रामीण भागात जवळ - जवळ 12 ते 15 तास भारनियमन केले जाते .

6) शेतमालाच्या किंमतीत घट :- महाराष्ट्रातील शेती व्यवसाय हा जणू जुगारच आहे कारण एकीकडे उत्पादन खर्चात वाढ आणि दुसरीकडे शेतमालाच्या कमी किंमती अशा कात्रीत हा व्यवसाय सापडला आहे . म्हणजे शेती हा व्यवसाय नसून जुगाराचा खेळ आहे. अशीच भावना शेतकऱ्यांच्या मनात निर्माण झाली आहे.

7) कर्जबाजारीपणा :- महाराष्ट्रातील शेतकरी कर्जातच जन्माला येतो कर्जातच जगतो आणि कर्जातच मरतो. त्यामुळे येथील शेती व्यवसायाची हि एक अत्यंत चिंताजनक समस्या आहे. शेतकऱ्यांचे उत्पन्न कमी असल्याने तसेच शेतमालाच्या किमती कमी, लहरी मान्सून, उत्पादन खर्चात वाढ इ. कारणामुळे शेतकऱ्यांला अगतिक होऊन कर्ज घ्यावे लागते आणि ते वेळच्या वेळी फेडता न आल्याने कर्जफेडीसाठी कर्ज या दुष्टचक्रात शेतकरी अडकतो.

8) शेतकऱ्यांच्या आत्महत्या :- देशाच्या एकुण शेतीक्षेत्राचा विचार करता महाराष्ट्रातील शेतकऱ्यांच्या आत्महत्येच्या प्रमाणात वाढ झाली आहे. त्यातल्या त्यात विदर्भ व मराठवाडा या भागातील शेतकरी आत्महतेत प्रचंड वाढ झाल्याचे दिसते. शासनाच्या सवलती योग्य पद्धतीने शेतकऱ्यांपर्यंत पोहचत नाही पिक कर्ज हमीभाव पिक विमा आदींसह अनेक प्रश्न आहे सततची नापिकी दुष्काळी परिस्थिती मुळे शेतकरी हतबल झाला आहे. मराठवाडा व विदर्भातील केवळ 6 जिल्ह्यांमध्ये सन 2001 ते 2018 या 18 वर्षांच्या काळात एकुण 15843 इतक्या आत्महत्या झाल्या. शेतकरी आत्महत्या हा राज्याच्याच नव्हे तर देशाच्या इतिहासातील एक कलंक आहे.

9) शासनाचे दुर्लक्ष :- स्वातंत्र्योत्तर काळापासून सुरु झालेल्या पंचवार्षिक योजनांमधील कृषी क्षेत्रासाठीची तरतूद ही क्रमशः घटत गेलेली दिसते. सध्या नीती आयोग कार्यरत आहे. मात्र नियोजन आयोग असो वा नीती आयोग, शासनाचे शेतीक्षेत्राकडे कायम दुर्लक्ष झालेले आहे. उदा. हमीभाव, किमान आधारभूत किंमत, शेतमाल विक्री व्यवस्थेतील दोष इ. कडे सरकार कायम दुर्लक्ष करत असल्याचे दिसते.

याशिवाय शेतकऱ्यांचे अज्ञान, निरक्षरता, शेतीविषयक माहितीचा अभाव, कृषीविद्यापीठांचे अपयश इ. अनेक समस्या महाराष्ट्रातील कृषीक्षेत्रात दिसून येतात.

उपाय योजना :-

महाराष्ट्रातील शेतीक्षेत्रातील समस्या कमी करून शेतीक्षेत्राला एक नवीन दिशा देण्यासाठी काही उपाय योजना करणे आवश्यक आहे.

कर्जफेडीची क्षमता :-

शेतकऱ्यांमध्ये कर्जफेडीची क्षमता निर्माण करणे गरजेचे आहे. केवळ कर्जमाफी करून शेतकऱ्यांच्या समस्या सुटणार नाही. त्यासाठी शेतीविषयक धोरणांमध्ये प्रभावी बदल केले पाहिजे. उदा. आयात-निर्यात धोरण, बाजारपेठेची व्याप्ती, वाहतूक व्यवस्था. इ. शेतकऱ्यांनी स्वतः कर्ज फेडले तर अनुदान किंवा इतर मदतीची अपेक्षा तो सरकारकडून करणार नाही. मात्र शेतकऱ्यांचे उत्पन्न कमी असल्याने तो हतबल होऊन सरकारी मदतीची अपेक्षा करतो.

शासकीय योजनांची कार्यक्षम अंमलबजावणी :-

महाराष्ट्र शासनाने चालू केलेली जलयुक्त शिवार योजना चांगली असली तरी या योजनेची कार्यक्षम अंमलबजावणी होणे गरजेचे आहे. शेतकरी वर्गाकडून होणारी आंदोलने हा शासनाचे शेतीकडे होणारे दुर्लक्ष, याचा परिणाम आहे. शेतकरी कर्जमाफी योजना, दुध अनुदान, इ. योजनांची कार्यक्षम व प्रभावी अंमलबजावणी झाल्याशिवाय शेतकऱ्यांच्या आर्थिक स्थितीत सुधारणा होऊ शकत नाही.

जोडधंदा:-

राज्यातील शेतकरी फक्त शेतीक्षेत्रावरच अवलंबून राहिला तर त्याचे उत्पन्न खूपच कमी राहील. म्हणून शेतकऱ्यांनी शेतीला जोडधंदा म्हणून इतर व्यवसाय देखील केले पाहिजे. उदा. पशुपालन, कुटिरोद्योग, इ. यातून शेतकऱ्यांचे उत्पन्न वाढून त्यांची आर्थिक स्थिती सुधारेल.

जलसिंचनाच्या सुविधा :-

देशातील इतर कोणत्याही राज्यांपेक्षा आपल्या राज्यातील धरणे व बंधाऱ्यांची संख्या जास्त असूनदेखील केवळ 18% क्षेत्र सिंचनाखाली आहे. त्यामुळे उर्वरित क्षेत्राला सिंचन सुविधा उपलब्ध केल्यास शेतीची उत्पादकता वाढेल. तसेच ठिबक व तुषार सिंचन या पद्धती वापरण्यास शेतकऱ्यांना प्रोत्साहन दिले पाहिजे.

वाहतूक व विक्री व्यवस्था :-

राज्यात ग्रामीण भागात अनेक ठिकाणी रस्ते तसेच वाहतुकीच्या साधनांची कमतरता आहे. त्यामुळे शेतकरी स्थानिक बाजारपेठेत कमी किंमतीत माल विकतो. म्हणून वाहतूक व्यवस्थेत सुधारणा होणे गरजेचे आहे. शिवाय शेतमाल विक्री व्यवस्थेतील मध्यस्थांची साखळी कमी होणे गरजेचे आहे. शेतमाल विक्री निकोप व्हावी यासाठी शासनाने व्यापाऱ्यांवर नियंत्रण ठेवणे गरजेचे आहे.

किमान आधारभूत किंमत :-

राज्यातील शेतकऱ्यांकडून वारंवार शेतमालाच्या किंमतीसाठी आंदोलने होताना दिसतात. म्हणून शेतमालाला किमान आधारभूत किंमत ठरवून देऊन त्याची यशस्वी अंमलबजावणी होणे गरजेचे आहे. हि किमान आधारभूत किंमत उत्पादन खर्चापेक्षा अधिक असावी.

पुरेसा वीजपुरवठा :-

राज्यातील शेतीक्षेत्राला पुरेसा वीजपुरवठा होणे गरजेचे आहे. जेणेकरून सिंचनाखालील क्षेत्रात वाढ होऊन शेतीची उत्पादकता वाढेल. वीज भारनियमनामुळे अनेकदा पाणी असतानाही ते देता न आल्याने पीक जळून जाते. याचा परिणाम उत्पादनावर होतो.

कृषीप्रदर्शन कार्यक्रम:-

महाराष्ट्रात शेतकऱ्यांना शेतीविषयी तसेच जोडव्याविषयी माहिती देण्यासाठी कृषी प्रदर्शन कार्यक्रम वेळोवेळी घेणे गरजेचे आहे. तसेच अशा कार्यक्रमातून शेतकऱ्यांना प्रोत्साहन देणे गरजेचे आहे.

पीक नियोजन:-

शेतकऱ्यांनी पीक नियोजन करणे गरजेचे आहे. आपल्या जमिनीची सुपीकता, मृदेचा प्रकार, हवामान, जमिनीचे क्षेत्र, बाजारपेठ इ.ची माहिती घेऊन त्यानुसार पीक नियोजन करणे गरजेचे आहे. यातून शेतकऱ्यांच्या उत्पन्नात वाढ होईल.

वित्तपुरवठा :-

शेतकरी शेतीला लागणाऱ्या भांडवलासाठी खाजगी वित्त पुरवठ्याला महत्त्व देतो. कारण बँकिंग प्रणालीतून कर्जाची गरज वेळच्या वेळी भागवली जात नाही. परिणामी नाईलाजाने शेतकरी महाग कर्ज घेतो. त्यामुळे शेतीसाठी सरकारने स्वस्त कर्ज पुरवठा करणाऱ्या व वेळेत कर्ज पुरवणाऱ्या संस्थांची निर्मिती करणे गरजेचे आहे.

याशिवाय शेतकरी आत्महत्येवर प्रभावी उपाय योजना राबवणे, शेतकऱ्यांची मानसिकता बदलविणे, पीक विमा योजना प्रभावी राबविणे. इ. उपाययोजना करणे गरजेचे आहे.

संदर्भ :

1. महाजन, प्रवीण – जलसंपदा काल, आज, उद्या.
2. भिसे, रामेश्वर – कृषी विकासाचे अर्थशास्त्र
3. देसाई आणि भालेराव (२०१७):- “भारतीय अर्थव्यवस्था”
4. निराली प्रकाशन, पुणे



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