



New Trends and Issues in Agricultural Development: A Study of the Farmers of Maharashtra

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Abstract

Agriculture & allied activities sector is predominant in the State as about 53 per cent of population is dependent on this sector for livelihood. Over the years the agriculture sector has witnessed remarkable transformations. The sector continues to be vulnerable to the challenges posed by climate change and degradation of productive land. Erratic rains, changing weather conditions, reduction in the size of operational holdings, high input costs and market uncertainties leading to non-profitability continue to be the prime concerns of the agriculture sector in the State. Efficient and effective use of water resources, enhancement of agro-processing capabilities, empowerment of small & marginal farmers, reduction in the wastage of agricultural produce, better-value chain market mechanism, steps towards reduction in desertification & degradation of land and protection & improvement of bio-diversity are the necessities for ensuring sustainable development of this sector.

Introduction

Emerging issues of agriculture in Maharashtra start from the problem of agriculture and rural infrastructure. Problems with agricultural infrastructure include irrigation, soil conservation and soil testing services. In addition, it includes issues of land, labor, capital, modern agricultural inputs and protection. Other major problems facing farmers in the state include environmental problems and production problems, production costs, market infrastructure problems and price fluctuations. On the other hand, due to the development of modern agricultural technology, farmers in our state have to face various difficulties

Agricultural development is the process of rational utilization of the country's agricultural resources, with special reference to improving the efficiency of agriculture and the living standards of the agricultural population. Agricultural development, through which modernization changes from conventional agriculture, consequently increases productivity and production per unit of various resources. Any major change in the agricultural sector affects the general economic situation and any progress in the agricultural sector therefore tends towards the economic progress of the whole country. Agricultural development in India varies from state to state depending on many factors. In different states of India, the quality and quantity of available resources and subsequent policies have led to wide disparities in agriculture. Maharashtra is one of the most developed and progressive states in the country. Compared to India, Maharashtra gets most of its income and employment from agriculture. Every possible effort has been made to increase agricultural production in Maharashtra through various schemes

Conceptual framework of Agricultural Development

Agricultural development is described as the process of formation of conditions for ensuring appropriate accomplishment of agricultural potential. It primarily aims to enhance the growth rate of development in agricultural sector by boosting crop production and productivity that would assist in strengthening the farmers economically and enhancing their status and life-style. Many small farmers in rural areas depend on agricultural sales for their livelihood to provide for their families. Large numbers of poor families rely on agricultural



products for daily nourishment. Unfortunately, in many poor regions, soil conditions, seed supply and other factors are not ideal for successful farming, which leads to poverty in the developing world. Agricultural development promotes the proper conditions for farming so that planting, harvesting and processing of crops can be done effectively, which ultimately can reduce poverty and save lives. There are many agricultural challenges that the practice of rural development can overcome. Some of the obstacles facing the agricultural industry include soil that might have been damaged by overuse, in addition to shortages in seeds, fertilizers and other irrigation supplies. A farmer's crops must be protected from disease and other threats, such as bugs and extreme weather conditions. Without the development of any of these basic farming components, a farmer cannot sell his or her goods to the market.

Transportation is also a key component to agricultural development. Even if a farmer does grow enough agricultural items to sell, if there is no way to transport these products to the market, the farmer cannot sell the crops and make money. In some regions, problems with roads and infrastructure interfere with a farmer's ability to sell his or her goods. Communication is another component to agricultural practices. This is because in order for a farmer to know the type of crop they must yield to generate a profit, they need to know the market prices for the types of crops they are growing. Solving these problems is where agricultural development and government funding comes into play. Agricultural development extends beyond the physical conditions of farming and into research, technology and political policy. For example, until some developing nations adopt aggressive funding programs to improve harvesting conditions, agricultural development is limited. There are endowments and foundations; however that earmark large sums of capital toward improving farming conditions in developing nations.

Literature Review

Timmer (2002) used a panel of 65 developing countries over 1960 – 1985 to show a positive correlation between growth in agricultural GDP and its lagged values and nonagricultural GDP growth. He suggests that this correlation can be explained by —first-order effects of agricultural growth on lower food prices, labor migration and capital flows from agriculture, as well as second-order effects such as improved nutritional intake, which improves workers' productivity. **Self and Grabowski (2007)** established that a positive relation between different measures of agricultural productivity and average growth of real GDP per capita over 1960 – 1995 for a cross-section of countries. However, on the basis of panel data from 52 developing countries during 1980-2001, Gardner (2005) concluded that agriculture does not seem to be a primary force behind growth in national GDP per capita. **S. Fan, A. Gulati and S. Thorat (2008)** examined that the impact of subsidies and investment of the government on agricultural growth and reduction in poverty. The authors suggested the ways to curtail the spending of the government. Availability of subsidies in credit, fertilizers and irrigation are sensitive for small farmers in adopting the new technologies.

Methodology

The present study is depending on secondary sources of data it attempts to investigate trends and issues of agricultural development among the farmers in the State of Maharashtra. It tries to explore how various factors of modernization and development affect both life and agricultural economy of the farmers in Maharashtra, so that it can provide some glimpses regarding how farmers use their local knowledge and information to keep pace with the overall agricultural development of the country and the state

Objectives of study

1. To know operational land holding status in Maharashtra state.
2. To evaluate Irrigation potential in Maharashtra

3. To study of New Initiatives for agriculture sector in Maharashtra state.
4. To analysis of financial assistance of government which provided to farmers

Discussion and Results

Agriculture development means providing assistance to the crop producers with the help of various agricultural resources. Providing protection, assisting in the research sphere, employing latest techniques, controlling pests and facilitating diversity all fall within the purview of agriculture development

Operational Land Holdings

As per the first Agriculture Census (1970-71) number of operational holdings and area of operational holdings in the State was 0.50 crore and 2.12 crore ha respectively.

Table 1. Operational holdings and area of operational holdings in the State

Size class (ha)	No. of operational holdings (‘000)		Area of operational holdings (‘000 ha)	
	2010-11	2015-16	2010-11	2015-16
Marginal (upto 1.0)	6,709	7,816	3,186	3,449
Small (1.0 - 2.0)	4,052	4,339	5,739	5,771
Semi-Medium (2.0 - 4.0)	2,159	2,327	5,765	6,025
Medium (4.0 - 10.0)	711	734	3,993	4,099
Large (10.0 & above)	68	69	1,084	1,162
Total	13,699	15,285	19,767	20,506

Source: Commissionerate of Agriculture, GoM

As per the tenth Agriculture Census (2015-16) number of operational holdings increased to 1.53 crore and area of operational holdings decreased to 2.05 crore ha. The average size of holding decreased from 4.28 ha in the first census to 1.34 ha as per tenth census. Operational holdings and area of operational holdings in the State is given in Table 1. The share of female operational holders was 14.1 per cent with 1.22 ha of average size of land holding. The time series data on operational holdings in the Maharashtra state is given in. Operational holdings and area of holdings in selected states is given in (Table 1.)

Irrigation

The irrigated area in command area under the jurisdiction of Water Resources Department, GoM is 35.97 lakh ha in 2018-19. Number of irrigation projects, irrigation potential created and utilised and number of minor irrigation projects (local sector), irrigation potential created and utilised are given in Table 2.

Table 2- Number of Irrigation Projects, Irrigation Potential Created and Utilized

Particulars	Projects of Water Resources Department		
	Major & Medium	Minor	Total
No. of projects completed & ongoing as on 30th June, 2019	404	3,473\$	3,877
Irrigation potential (lakh ha)			
(A) Irrigation potential created upto June, 2018	37.50	13.73	51.23
(B) Area under irrigation by canal & river during 2018-19*	17.88	6.14	24.02
(C) Area under irrigation by wells in command area during 2018-19*	10.38	1.57	11.95
(D) Total irrigation potential utilised during 2018-19 (B+C)*	28.26	7.71	35.97

Source: Economic Survey of Maharashtra 2019-20

Note: \$ Includes 284 lift irrigation schemes of Irrigation Development Corporation of Maharashtra (IDCOM) * Tentative

Reforms in irrigation sector in Maharashtra state, the Maharashtra Water Resources Regulatory Authority (MWRAA) was established in August, 2005 with a mission to provide sustainable water security to the State. Total 10,974 Water Users Associations (WUA) with an area of 49.79 lakh ha have been formed for management of irrigation system by farmer's upto the end of December, 2019 in the State.

Electrification of agricultural pumps

1. Number of agricultural pumps in the State is about 42.86 lakh. MAHAVITARAN has energised 60,817 (81.1 per cent) pumps against the target of 75,000 during 2018-19 and during 2019-20 upto December, 42,151 pumps have been energised.
2. Atal Saur Krishi Pump Yojana: The main objective of the scheme is day time power availability for agricultural pumps. In its first phase (2015 to 2018), in all 5,662 solar agricultural pumps were commissioned by MAHAVITARAN as against the target of 7,540. In the second phase (2018-19 onwards) upto December, 2019, in all 7,000 solar agricultural pumps were commissioned by Maharashtra Energy Development Agency.
3. Mukhyamantri Saur Krishi Pump Yojana: GoM has launched this scheme in 2018-19 with main objectives of day time power availability for agricultural pumps and replacement of diesel pumps to reduce pollution. GoM has targeted deployment of one lakh Off-Grid Solar
4. Powered agricultural pumps in phase wise manner within three years, 25,000 in first phase, 50,000 in second phase and 25,000 in third phase. Farmers not having electric agricultural pump or who are from remote & tribal non-electrified area or from area which is not electrified by MSEDCL, but own agriculture lands with assured source of water are eligible beneficiaries. Farmers have to pay maximum 10 per cent of total cost of solar pump as contribution. Under the scheme in all 17,206 solar pumps have been commissioned by MAHAVITARAN upto December, 2019.

Agricultural Finance

Financial assistance is provided to farmers by way of short-term loans, credit, etc. by the government through various banks and co-operative agencies. The National Bank for Agriculture and Rural Development (NABARD) is the apex bank for agricultural and rural development in India. NABARD provides agricultural short term & medium term loans through Maharashtra State Co-operative Bank (MSCB) & District Central Co-operative Banks (DCCB), Regional Rural Banks (RRB) and Commercial Banks (CB). Loans disbursed by Commercial banks, RRB and MSCB/DCCB (Table 3)

Table 3. Loans disbursed by Commercial Bank, RRB and MSCB/DCCB

Type of loan	Commercial Banks\$		RRB		MSCB/DCCB		Total	
	2018-19	2019-20	2018-19	2019-20	2018-19	2019-20	2018-19	2019-20
Crop loan	17,563	13,983	1,709	1,360	12,011	9,554	31,283	24,897#
Agriculture term loan	36,315	17,835	254	64	62	248	36,631	18,147@
Total	53,878	31,818	1,963	1,424	12,073	9,802	67,914	43,044

Source: State Level Bankers' Committee, Maharashtra State

Note- \$ denoted including nationalized banks, # upto December and @ upto September

The financial institutions directly associated with agricultural finance at grass root level in the State are Primary Agricultural Credit Co-operative Societies (PACS) which provide short-term crop loans to their cultivator members. During 2018-19, loans of ` 12,010 crore were advanced to farmers through PACS. The corresponding figures during 2017-18 were ` 10,546 crore. 7.12.3 Kisan Credit Card Scheme: Maharashtra State Co-operative Bank issued



36.90 lakh new Kisan Credit Cards (KCC) in the State during 2018-19. The amount of loans sanctioned to the new KCC holders during 2018-19 was ` 13,173.69 crore.

Chhatrapati Shivaji Maharaj Shetkari Sanman Yojana 2017: GoM has launched this scheme in June, 2017 with an objective to waive off crop loans borrowed by all family members, after 1st April, 2012, from one or more institutions and have become overdue due to natural calamities, as on 30th June, 2016. Under the scheme, overdue loans upto ` 1.50 lakh, including principle & interest, were waived off without any limit of size of land holding. The scheme was applicable only to individual farmers who have borrowed loan from Nationalised banks, Commercial banks, RRBs, DCCBs and PACS. Since inception of the scheme, upto December 2019, benefit has been given to 44.23 lakh farmers and expenditure of ` 19,843 crore has been incurred.

New Trends and Issues in Agricultural Development

National Agriculture Market (NAM): e-NAM is a pan-India electronic trading portal which is a device to connect existing physical APMC mandis which can be accessed online. This provides a single window service for all APMC related information & services and includes information on commodity arrivals & prices, buy & sell trade offers, provision to respond to trade offers. While material flow of agriculture produce continues through mandis, an online market reduces transaction costs and information asymmetry. In all 60 market committees in the State have been included under e-NAM. Of these 60 APMC, online gate entry, e auction have been started in 60 market committees and e-payment has been started in 31 APMC. At the end of November, 2019 in all 68.39 lakh quintal of grains have been e-auctioned amounting to ` 2,119 crore and e-payment of ` 52.57 crore has been done. In 60 APMC, Assaying labs have been established to monitor quality of agriculture produce.

New Initiatives for agriculture sector

Mahatma Jyotirao Phule Shetkari Karjamukti Yojana 2019: The State has been experiencing draught like situation continuously during 2015-16 to 2018-19. At the same time farming was affected due to unseasonal rains. Due to these natural calamities farmers' short term & medium term crop loans have become overdue and farmers are deprived of borrowing fresh loans. To relieve the farmers from this vicious circle, GoM has announced this welfare scheme with the objective to waive off loans borrowed during 1st April, 2015 to 31st March, 2019, from one or more institutions and has become overdue as on 30th September, 2019. Under the scheme, the decision has been taken to waive off overdue loans upto ` two lakh, including principle & interest, without any limit of size of land holding. The scheme is applicable only to individual farmers who have borrowed loans from Nationalised banks, Commercial banks, RRBs, DCCBs and PACS.

Pradhan Mantri Kisan Maan-Dhan Yojana (PM-KMY): PM-KMY, a voluntary and contribution based pension scheme has been initiated in the State from 9th August, 2019 to provide social security to all small and marginal farmers. Under this scheme, a fixed pension of Rs. 3,000 per month is to be given to all eligible small and marginal farmers. Farmers in the age group 18 to 40 years, as on 1st August, 2019 are eligible to enroll into the scheme. Farmers have to contribute an amount between Rs 55 to Rs. 200 per month in the pension fund till they reach retirement age of 60 years. Pension is to be paid to the farmers from a pension fund managed by Life Insurance Corporation of India. GoI is going to contribute an equal amount in the pension fund, as on 12th February, 2020 in all 74,988 beneficiary farmers have been enrolled.

Dr. Punjabrao Deshmukh Jaivik Sheti Mission: This mission is being implemented for promotion of organic farming in the State through cluster approach (20-30 farmers in a cluster of 50 acre land) from 2019-20. Benefits of the scheme are given to each cluster for three consecutive years. In the first phase six distressed districts in the Vidarbha region, viz.



Buldhana, Akola, Washim, Amravati, Yavatmal and Wardha are included in the program with target of formation of 500 clusters. Proposed fund for the mission is Rs. 100 crore for four years.

Conclusion

It was concluded that the various strategic initiatives have been taken up by the Central and the State Government to enhance farmers' income. Various schemes and programmes are being implemented to enhance agricultural production, to promote export and to encourage agro-processing. Problems with agricultural infrastructure include irrigation, soil conservation and soil testing services. In addition, it covers issues of land, labor, capital, modern agricultural inputs and protection. Other major issues facing farmers in the state include environmental issues and production issues, cost of production, market infrastructure problems and price fluctuations. On the other hand, due to the development of modern agricultural technology, farmers in our state have to face various difficulties. Changing lifestyles and inclination towards consumption of organic produce provide significant growth potential in this sector, which needs to be harnessed.

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