

ISSN 2063-5346



RISE OF FOOD PRODUCTION IN INDIA-ROLE OF FARMER PRODUCER ORGANISATIONS

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Article History: Received: 02.07.2023

Revised: 15.07.2023

Accepted: 23.07.2023

ABSTRACT:

Agriculture is the prime source of livelihood, constituting 58% of the country's population. The Gross Value Added by agriculture, forestry, and fishing was estimated at Rs. 19.48 lakh crore in FY20. The share of agriculture and allied sectors in the gross value added (GVA) of India at current prices stood at 17.8% in FY20. The Indian food industry is poised for significant growth, increasing its contribution to world food trade each year, thanks to its immense potential for value addition, particularly within the food processing industry.

The Indian food and grocery market is the world's sixth-largest, with retail contributing 70% of the sales. The Indian food processing industry accounts for 35% of the country's total food market and is one of the largest industries in India. It is ranked fifth in terms of production, consumption, export, and expected growth. In FY21, the total agricultural and allied products exports stood at US\$ 41.25 billion.

This paper aims to explore the growth of India in food production and the role of farmer's cooperatives, especially Farmer Producer Organizations (FPOs). The main role of FPOs was found to be encouraging small and marginal farmers to unite as a group and promote growth in all sectors, such as increased food production, the usage of modern technology, reduced dependency on pesticides and fertilizers, and generating employment. By doing so, these cooperatives contribute to the sustainable growth of the agriculture sector.

Key words: Agriculture, FPOS, Farmers.

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DOI:10.48047/ecb/2023.12.9.254

INTRODUCTION

In the world India is the second largest country in production of rice, wheat and sugarcane along with (25%) global production, (27%) consumption and importer (14%) of pulses in the world. (Table1) It forms an important source of livelihood for nearly 55% of the Indian population and generates employment for half of the Indian population. Regarding India's agricultural production on a global scale, it is the most important producer of pulses, okra, mango, banana, and lemon. In many agricultural crops like brinjal, banana, mango, okra, cauliflower and papaya it contributes to 20% of the global production.

(Haneef,Sharma,&Ahmad 2019).

But in recent years a major concern found was the lack of technical knowledge, as well as excessive use of fertilizers and pesticides. To ensure higher productivity,

the agricultural institutions of the country, such as the Indian Institute of Rice Research, Indian Council of Agricultural Research (ICAR), Indian Agricultural Research Institute (IARI), and National Academy of Agricultural Research Management (NAARM), have been conducting extensive research and providing effective solutions. In line with this, the Indian government has launched a central scheme to promote and establish 10,000 farmer producer organizations (FPOs) by 2027-28, with a budget allocation of Rs. 6865 Crore. The primary goal of creating FPOs is to provide farmers with better and advanced technology, improved inputs, access to credit, and more market opportunities, thereby encouraging them to produce higher-quality agricultural products. This, in turn, will increase the net incomes of each member of the FPOs. (Ashtankar ,2015).

Table 1 IN WORLD AGRICULTURE INDIAS POSITION

INDIA'S POSITION IN WORLD AGRICULTURE						
				India's		
	Item	India	World	% Share	India's Rank	Countries ranking than India
	1	2	3	4	5	6
1	Total Area (Million Hectares)	329	13442	2.4	Seventh	Russia, Canada, U.S.A.
						China,Brazil, Australia
	Land Area	297	13009	2.3	Seventh	Russia , China, U.S.A.,
						Canada, Brazil, Australia
	Arable Land	159	1411	11.3	Second	U.S.A.
2	Total Population*	1181	6750	17.5	Second	China

	(Million)					
	Agriculture	583	2617	22.3	Second	China
3	Economically Active Population* (Million)					
	Total	472	3178	14.9	Second	China
	Agriculture	262	1295	20.2	Second	China
4	Crop Production (Million Tonnes)					
(A)	Total Cereals	294	2849	10.3	Third	China, USA
	Wheat	93.5	749.5	12.5	Second	China
	Rice (Paddy)	159	741	21.4	Second	China
	Total Pulses	17.6	82	21.5	First	
(B)	Oilseeds					
	Groundnut (in shell)	7	44	15.6	Second	China
	Rapeseed	6.8	69	10	Third	Canada, China
5	Fruits & Vegetables (Million Tonnes)					
(A)	Vegetables & Melons	90	932	9.7	Second	China
(B)	Fruits excluding Melons	67	580	11.6	Second	China
(C)	Potatoes	35	326	10.6	Second	China
(D)	Onion (Dry)	14	73	18.5	Second	China
6	Commercial Crops (Million)					

	Tonnes)					
(A)	Sugarcane	348	1736	20.1	Second	Brazil
(B)	Tea	0.81	3.9	20.7	Third	China, Turkey
(C)	Coffee (green)	0.26	8.25	3.2	Seventh	Brazil, Vietnam, Colombia
						Indonesia, Ethiopia, Mexico
(D)	Jute & Jute like Fibres	2.02	3.2	63.1	First	
(E)	Cotton(lint)	3.77	22.85	16.5	Second	China
(F)	Tobacco Leaves	0.52	6.88	7.6	Third	China, Brazil
7	Livestock (Million Heads)					
(A)	Cattle	175	1372	12.7	Second	Brazil
(B)	Buffaloes	105	185	56.7	First	
(C)	Camels	0.63	24.73	2.5	Tenth	Somalia, Sudan, Ethiopia,
						Niger, Mauritania, Kenya,
						Mali, Pakistan, Chad
(D)	Sheep	65	1086	6	Third	China, Australia
(E)	Goats	126	864	14.5	Second	China
(F)	Chicken	584	18139.1	3.2	Fifth	China, USA, Indonesia, Brazil
8	Animal Products					
(A)	Total Milk (000 MT)	109000	694235.3	15.7	First	
(B)	Eggs Total (000	3060	66103	4.6	Third	China, U.S.A.

	MT)					
(C)	Total Meat (000 MT)	4353.1	277847.5	1.6	Fifth	China, U.S.A., Brazil, Germany
	Implements (Thousands of numbers) **					
	Agricultural Tractors-in-use	3149	29320	10.7	Second	USA
	* Estimated figure for 2020. ** Figure relates to 2019.					

Challenges Faced by farmers in India

Post-harvest losses

Horticulture and agriculture crops prices go down during harvest season to very low and increase during lean months creating the huge price slumps. Post harvesting (cleaning, sorting, packing, storage) and lack of processing facilities leading to huge price slumps. Post harvest lost accounting for 15-36 % ie nearly 90,000 crore by the report submitted by Niti Aayog) and agriculture , horticulture crops facing a huge losses . (Kumar&Kalitha,2017).

Pesticide contamination

Onions, fresh mangoes, fresh grapes, dried walnuts, mangopulp, form the major exports of horticulture and agriculture crops from Asian countries to south asia and west asia. In this indias exports found to be below 1 % of the entire market. The major reason found in drastic reduction is india is due to it not reaching international standards, due to overuse of pesticides and adhering to the quality standards required by countries which are involved in trading. Awareness to framers on smart agricultural practices found to be other major reason,(Sarathsingh,Ranjusarma,Talatparween&Patanjali,2018).

Unavailability of quality seeds

For farmers, good quality seeds are the basic raw material for growing crops. However, in the market, good quality seeds are either unavailable or priced so high that poor and marginal farmers cannot afford them. Additionally, farmers tend to prefer traditional variety seeds that yield lower results.

Lack of modern equipment and machinery

Even now, farmers in India continue to use old traditional tools for agriculture, leading to the need for more manpower and lower yields per hectare in crop processing. Only a small number of farmers utilize modern equipment for irrigation, processing, and transportation, while others are unable to do so due to the high prices of machinery and a lack of knowledge. There is an urgent need for the country to provide agricultural machinery to farmers through different schemes and on a hiring basis, placed within their respective villages.

Poor irrigation facilities

Irrigation plays a major role in crop growth and yield. However, according to available data, only one-third of the land in the country has sufficient irrigation

facilities available. (Jibran, S., & Mufti, A.,2019),(Singh,2017). (Balakrishna, Arya ,2021).

Government initiatives to increase food production:

Some recent major government initiatives in the agriculture and agri-allied sector are as follows

E-NAM

The National Agriculture Market (eNAM) is an online trading portal for agricultural commodities that functions through Agricultural Produce Market Committees (APMC) Mandis (wholesalers). This market supports price discovery and improves farm income. It helps farmers sell their produce in multiple mandis, and its digital platform enables various buyers to access different mandis, bringing transparency to business transactions and aiding farmers in better price discovery.

National Mission for Sustainable Agriculture (NMSA)

National Mission for Sustainable Agriculture (NMSA) main purpose is to increase agriculture productivity, mainly in rainfed areas, by using water efficiently and through integrated farming. It creates the environment to shift to sustainable development by adopting environmental friendly methods and technologies available, by using energy efficient equipment, and saving natural resources. (Balakrishna, Kumar, 2022).

Pradhan Mantri Krishi Sinchai Yojana (PMKSY)

This program focuses on water conservation and efficient management to provide water to more cultivable land and enhance agricultural production.

Paramparagat Krishi Vikas Yojana (PKVY)

This program promotes organic farming in the country by creating clusters of farmers engaged in organic farming across a larger area. The government provides financial

support to farmers enrolled in these clusters.

Pradhan Mantri Fasal Bima Yojana (PMFBY)

This government-sponsored crop insurance scheme integrates multiple farmers under a single premium.

Krishi Udan

On October 2021, Ministry of Civil Aviation started Krishi UDAN 2.0 scheme. Its main purpose is to movement of agriculture produce by using air transport. It will be implemented at 53 airports all over country , mainly giving preference to north east and tribal regionals. Which will be directly benefiting aviation industry , freight forwarders and farmers .

Digital agriculture mission

The govt of india to promote technology in agriculture introduced Digital Agriculture Mission 2021-2025, by using remote sensing, artificial intelligence, blockchain, and GIS technology, robots, and others."

Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PM FME)

For the period of over five years from FY21 to FY25 an outlay of Rs. 10,000 crore (US\$ 1.34 billion)has been sanctioned.

Role of cooperatives in providing food production and supply

It is a non-profit organization with members having a common goal of achieving the task, and members can choose management and share the benefits equally. An agricultural cooperative, also known as a farmers' cooperative, creates new markets, buys inputs at lower prices, sells their produce at reasonable rates, and earns a good income without middlemen.

They have access to various services and facilities at their own places, generating more income. It helps various small and marginal farmers in selling their produce, just like large-scale farming. As the government is providing financial support to the cooperatives, they are performing very well at each level. It paves the way for generating employment as farming increases. The government has an easy way to collect taxes, provide subsidies, and transfer new technology for production in cooperative farming (Bhadauriya, 2021).

Farmer Producer Organizations (FPOs)

During the year 2011-12, the Ministry of Agriculture introduced a pilot program to create FPOs, which was made successful through the Small Farmers' Agribusiness Consortium (SFAC). The main goal was to mobilize nearly 2.50 lakh farmers into 250 FPOs, each comprising 1000 farmers all over the country. FPOs are a group of mainly small/marginal farmers' collectives (70-80%). Presently, there are around 5000 FPOs in the country. FPOs provide small agricultural producers with opportunities and a good variety of services, as well as improved access to markets, natural resources, data, communications, technologies, credit, training, and warehouses (Chandrakar & Das, 2023), (Kavitha, 2008).

What are the benefits of FPOs in agriculture

Various reports and studies have shown that FPOs are playing a beneficial role for farmers and increasing their net income.

- a. Cultivation and production costs are reduced as necessary inputs are purchased in bulk at wholesale prices, along with custom hiring services of farm machinery.
- b. Joint cold storage and value addition facilities can reduce post-harvest losses of crops.
- c. Modern technology like cold storage, contract farming agreements, and

maintaining stock in common facilities can help manage huge price fluctuations and distress sales of crops.

- d. Selling crops at different locations in India where better prices are available through e-NAM, which is an online agriculture trading platform.
- e. Ease of credit against stock without collateral by virtue of joint liability implicit in the FPO framework.
- f. Getting good value on selling crops as their bargaining power increases.
- g. Negotiating with big corporates becomes easy as they are selling the crops as a group, which benefits small farmers.
- h. Engaging farmers towards organic farming, as it provides good yields and products with good value, thereby creating a healthy society.
- i. It helps in creating employment for various category of people as farming become increased with various resources utilized.
- j. FPOS helping the woman to engage in agriculture which is helping to become self-sufficient, providing nutritious food in the entire community. (Khan, Pratap, 2020)

Conclusion

In our country, FPOs have become a good model that mobilizes small marginal farmers, helping them compete with big corporates in bargaining. As a group, they can maintain modern facilities at their places, which reduces post-harvest losses and the need for excessive labor, as they utilize modern machinery. They can also bear huge fluctuations in prices during the off-season and promote organic farming, thereby reducing the usage of fertilizers and pesticides. As a whole, the government should promote this model throughout the entire country, as it not only doubles farmers' income but also moves the country towards sustainable development in agriculture.

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