

## Impact of Farmer Producer Companies on Marginal and Small Farmers: A Study of Osmanabad District of Maharashtra, India

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### Abstract

The concept of a farmer producer company (FPC) has emerged as an inclusive concept to address the issues of farmers, especially, small, and marginal farmers. The present study is to examine the impact of farmer producer companies on small and marginal farmers. 150 small and marginal farmers were chosen through multi-stage stratified random sampling in the Osmanabad district of Maharashtra state, India to assess the impact. It was found that the farmers organized under FPCs in the study area are not getting adequate support from the FPCs. It was also found that services provided by FPCs like marketing, value addition, technological services and pre-harvest services were satisfactory, while agricultural advisory services, capacity building and credit access services were poor. A model ACITM (Agriculture Advisory, Capacity Building, Technological and Marketing Services) is suggested to be executed by the FPCDN (Farmer Producer Companies Development Network) – a development network consortium for addressing FPCs problems and strengthening the FPCs.

### Keywords

Farmer producer companies; FPC impact; Marginal and small farmers; Consortium



## Introduction

In India, agriculture contributes not only 15.0 per cent of GDP (GoI, 2018), but also a livelihood to a large section of the population. It employs nearly 56.0 per cent of the working population (Census of India, 2011), and not only accounts for the overall growth of the economy but also for the reduction of poverty by providing food security to most of the population. Agriculture is pivotal not only from an economic perspective but also from the social, political, and cultural perspectives. First prime minister of India, Jawahar Lal Nehru, had said that “agriculture needed topmost priority because the government and the nation would both fail to succeed if agriculture could not be successful” (GoI, 1951). However, this sector has been plagued by multiple problems across the decades, resulting in low growth rates and increased farmer distress causing farmer suicides. This situation is more evident in the post reform period (after 1990) as agriculture showed a distinct fall in the average growth of crop production. There has been progress in agriculture after independence of India, as the sector grew at just 1.0 per cent per annum before independence and recorded an annual growth of 2.60 per cent in the post-independence period. However, the decades past 1990 have been tough, with the decline in agricultural production since 1992. The decline is predominantly attributed to the fall in the growth of non-food-grains, recording 2.50 per cent in the post-liberalization period as against 4.80 per cent recorded during the 1980s (Gulati, 2009). This decline in agricultural situation has led farmers, landowners, sharecroppers, tenants, women, Dalit<sup>1</sup> and Adivasi<sup>2</sup> cultivators or landless agricultural labourers bankrupt. Increased debt burden is accentuating farming as a loss-making profession, with nearly 40 per cent of Indian farmers preferring to leave agriculture (Murray, 2008). According to official estimates, 328,544 farmers have committed suicide since 1995 (National Crime Record Bureau, 2015; Sudheer and Swain, 2015). To elevate the farmers out of this debt trap, the Government of India has introduced the concept of farmer producer company (FPC). The FPC is a novel concept to resolve farmers’ issues by organizing farmers into collective units to improve their bargaining strength. It is aimed to combine the efficiency of farmers with the ‘spirit’ of traditional cooperatives, i.e., FPCs. FPCs integrate smallholders into modern supply networks that would minimize transaction and other process related costs that ensure benefiting from economies of scale. Given that small and marginal farmers face numerous constrains related to uneconomical size of their operations, FPCs focus primarily on them (Hazell, 2011). These major constrains result in inability to create scale economies, low bargaining power as a result of low quantities of marketable surplus, scarcity of capital, lack of market access, shortage of knowledge, information, market imperfections and poor infrastructure and communications. In India, almost 62.00 per cent of the farmers are marginal farmers, thus attention needs to be paid to the small and marginal farmers so that they can climb up the ladder and be on equal level with the big farmers. To save small farmers from the ill effects of globalization, there is a need to integrate them into the modern competitive markets (Small Farmers’ Agribusiness Consortium, 2016). A serious brainstorming is going on how the FPCs are addressing the farmers’ problems, its regulatory framework, capital allocation, capacity building and other administrative issues, and how to strengthen them. Increased focus of the Government of India on these new institutions has resulted in 704,451 farmers being mobilized and 706 FPCs being formed, with states like Madhya Pradesh, Karnataka and Maharashtra taking the lead (NABARD, 2017). This paper explores the impact of FPC services on marginal and small farmers.

The philosophy of cooperative is to facilitate all agriculture support such as inputs, credit, marketing to the most vulnerable peasants in India. Cooperatives in India have served over 100 years and reached seminal milestones, but the overall performance of the cooperatives is unsatisfactory in addressing the farmer issues. The present conditions of farmers in various spheres are the testimony for that. The major factors involved in delimiting the cooperative performance were influenced by political parties, hierarchical social structures, strong caste identities, over-dependence on state assistance (subsidies, grants) and poor management. However, permitting to register different types of cooperatives, lack of capacity building for the non-agriculture cooperatives resulted in ignoring main philosophy such as the democratic approach becoming

<sup>1</sup> Dalit is a name for people belonging to the lowest caste in India, characterised as "untouchable".

<sup>2</sup> Adivasi is a member of any of the aboriginal peoples of India.

undemocratic and then becoming endangered in creating a support system (Abraham, 2015). Considering all 100 years of experience, the policymakers have believed that “cooperatives failed but cooperation must succeed” (Reserve Bank of India, 1954), so that they have developed a contemporary collective approach. It was designed by eliminating all demerits of cooperatives. Farmers Producer Companies are called new generation cooperatives. They had the values of cooperatives and efficiency of a corporate company. It provides the flexibility, freedom, and efficiency of the private companies. Considering above thesis, it is important to study the impact of FPCs on the farmers, especially marginal and small farmers.

## Literature Review

Kumar, Thombare and Kale (2019) argued that collectivization of small farmers is an effective way to improve access to technology, inputs, and markets. Integrating farmers with the value chain will provide the net return to farmers. FPOs can organize and formalize the farmers of India by pooling the resources in cooperation. This will leverage the bargaining power and collective strength. It will also increase the opportunity in value addition (Nayak, 2016). In 2001, Y.K. Alagh committee (Alagh, 2000) recommended that FPO be registered as Producer Organisation or Producer Company under the section IXA of the Companies Act, 1956; this changed the legal status of FPOs with features of cooperatives. Intensive and local technologies are cited as the basis of efficiency and sustainability in agriculture. According to NABARD (2017), “producer company is composed of certain people who are dealing with the primary produce and connecting with allied sectors, namely agriculture as well as, forest produce, horticulture, floriculture, viticulture, forestry, revegetation, bee farming, animal husbandry and farming products, and also the persons engaged in handicraft, handloom and other cottage industries and by-products of the supplementary industry. The shareholders should be part of business operations in the collaborative mode for the profit” (NABARD, 2017).

Salokhe (2016) explains about the farmer groups formed by the small and marginal farmers who are predominantly facing several agricultural and related problems for many generations. The collective actions concept is a remedy for eliminating intermediaries that are involved with agriculture and agribusiness. Hence, it also helps in the process of pre-production to post-production activities. There are several issues related to agriculture in the present world, so that the FPOs create social capital in the small and marginal communities, at last, leading to better bargaining power to the primary producer and helping form their own businesses. Such groups adopt technology in agriculture practices widely, as a result, leading to high production in a lesser amount of time when they involve in the activities like commercialization, value addition, branding, marketing thereby generating better condition in agriculture so that the agriculture will be alive in the long run. Torero (2011) acknowledges that the FPCs are collective action-based organizations. It helps farmers to access credit for agriculture and agro-practices. Hence, it also creates an opportunity to improve varieties of crops by collective action. These organizations are small groups that improve economies of small scale while practicing operations like production, processing, and marketing; lastly, it creates incentives for small and marginal producers. The model creates healthy conditions for the farmers who predominantly produce primary produce at the block level, supporting them with higher prices for their products and lower prices for their agricultural inputs, and reduce transport costs. Furthermore, the creation of on-site packaging and other value-added activities also addresses and encourages rural non-farm economics. The broad definition emphasizes that the FPCs can play five important and potential roles that strengthen markets for commodities produced by smallholders, reducing transport cost, a lesser amount of risk by the collective process, building social capital, permitting cooperative action, and restoring markets which are undiscoverable. Cooperatives initiate welfare to farmers via state intervention, while FPCs are perceived to educate and empower farmers through collective bargaining along with introducing an entrepreneurial quality to farming, particularly for the small and marginal farmers. These collectives clearly offer ways for small and marginal farmers to participate in economic activities (Bachke, 2009). Capacity building for the producer organizations is of utmost importance. Capacity building must be compulsory for the producer organizations that apply innovative methods like PRA, latest agricultural methods, use of technology, etc., which are majorly useful for collective action. This will also help the forward operations

like value addition and marketing. The farmers face several challenges such as lack of technology, storage, post-harvest management, transportation, and marketing. FPCs help the farmers overcome these challenges with the support of the government and other allied institutions. This will lead to sustainable development in the agriculture sector through government support (Bijman and Tan, 2008). In developing countries cooperatives serve only at the village level and inter-village level, but FPCs can function at the regional level as nationwide platform (Onumah *et al.*, 2007).

## Methodology

To study the farmer producer companies exploratory research design was employed. Both primary and secondary data were collected for the study. Secondary data is collected from various sources such as Agriculture Technology Management Agency (ATMA) and District Agriculture Statistics of Osmanabad. Primary data was collected at the farm level across Osmanabad district in Maharashtra. Multistage stratified random sampling technique was employed to select the Farmer Producer Companies (FPCs). The multi-stage criteria included: 1) In the first stage, the FPCs that were operational for the last 3 years; 2) FPCs should have been providing various services e.g., a) pre-harvest services, b) capacity building, c) agriculture advisory services, d) access to credit, e) technological services, f) value addition, and g) access to market; and 3) the FPCs should have more than 75 per cent marginal and small farmers as members. A total of 56 FPCs were found operational in Osmanabad districts, which were formed by government and NGOs. Out of 56, there were 21 FPCs that fulfilled the first criteria, and out of these 21 only 7 companies fulfilled the second criteria. Out of 7, there were 2 companies that fulfilled the third criteria. These two companies named as Jayalakshmi and Shivguru FPC were considered for the present study. The two companies have a total of 425 farmers among whom 116 farmers are marginal and 96 are small farmers. A total of 150 farmers (75 marginal and 75 small farmers) were selected, making more than 30 per cent sample size. The study employed a simple random sampling technique to select the sample farmer respondents. The primary data was collected using a well-designed interview schedule. The interview schedule was divided into two parts. Part I consists of questions that collected information regarding demographics and socio-economic data. Part II was designed to measure the impact in frame of 7 thematic areas viz., pre-harvest services, capacity building, agriculture advisory services, access to credit, technological services, value addition, and access to market. The responses collected were scored on a five-point scale. The interpretation of the scores on a five-point scale is 0.01 to 1.00 (Very Poor), 1.01 to 2.00 (Poor), 2.01 to 3.00 (Good), 3.01 to 4.00 (Very Good), and 4.01 to 5.00 (Excellent). The data is interpreted using SPSS and MS Excel<sup>3</sup>.

## Results and Discussion

### *Status of Farmer Producer Companies in India*

Table 1 shows the registration wise status of farmer producer companies in India. Presently, 7,374 FPCs are registered in India, whereas Maharashtra state comprises 26.0 per cent of them. As can be observed from the data, the importance of FPCs is increasing among farmers over time.

### *Status of Farmer Producer Companies in Osmanabad*

The Osmanabad block itself registered 50 per cent of the companies recorded in the district. In Osmanabad district, 2 88,352 farmers have formed 236 Farmer Producer Companies (FPCs) whose cultivable area is 664,608.01 hectares. Under these FPCs, there are also a few successful FPCs like Padole and Ramwadi, indicating that the farmers registered under the FPCs are scaling up better agriculture growth compared to non-registered farmers. This is due to the FPCs maintaining collective action, collaboration, collective services and communal harmony successfully (Swain and Sudheer, 2015).

<sup>3</sup> A Likert Scale is a type of rating scale used to measure attitudes or opinions. With this scale, respondents are asked to rate items on a level of agreement.

Table 1: Details of State Wise FPCs

S. No.	State	FPCs registered	Percent of total
1.	Maharashtra	1,940	(26.00)
2.	Uttar Pradesh	750	(10.00)
3.	Tamil Nadu	528	(7.00)
4.	Madhya Pradesh	458	(6.00)
5.	Telangana	420	(6.00)
6.	Rajasthan	373	(5.00)
7.	Karnataka	367	(5.00)
8.	Odisha	363	(5.00)
9.	Bihar	303	(4.00)
10.	Haryana	300	(4.00)
11.	Other states	1,571	(21.00)
12.	Total	7,374	(100.00)

Source: NABARD, 2020

### Impact of FPCs on Marginal and Small Farmers

To measure the impact of Farmer Producer Companies on marginal and small farmers in the study area, 38 services provided by FPCs are categorized into 7 thematic areas (see Table 2).

Table 2: Impact on services provided by the Farmer Producer Companies to the farmers

S. No. (1)	Services (2)	Scores: Marginal Farmers (3)	Scores: Small Farmers (4)	Scores: All Farmers (5)
I	Pre-Harvest Services provided by the Farmer Producer Companies to the Farmers			
1.	Community Irrigation Facility	1.08	1.00	1.04
2.	Information on Selection of Crops	3.52	3.43	3.47
3.	Crop Diversification	1.79	1.68	1.73
4.	Soil Test Facility	1.00	1.00	1.00
5.	Micronutrients	1.13	1.13	1.13
6.	Seeds Distribution	3.08	2.96	3.02
7.	Fertilizers	2.85	3.04	2.95
8.	Pesticides	2.92	2.84	2.88
9.	Overall	2.17	2.14	2.15
II	Capacity Building Services provided by the Farmer Producer Companies to the Farmers			
10.	Awareness of Various Farming Practices	2.04	1.73	1.89
11.	Training on Latest Agriculture Practices (Operations)	1.05	1.00	1.03
12.	Training on Productivity/Production/Enhancement Management	1.39	1.23	1.31
13.	Training Programs on New Agricultural Methods	2.60	2.65	2.63
14.	Interaction with Successful Farmers and Practitioners	1.00	1.00	1.00
15.	Community Leadership Program	1.39	1.19	1.29
16.	Overall	1.58	1.47	1.52
III	Agricultural Advisory Services provided by the Farmer Producer Companies to the Farmers			
17.	Agriculture Extension Services	1.39	1.09	1.24
18.	Extension Services on Requirement	1.67	1.47	1.57

S. No. (1)	Services (2)	Scores: Marginal Farmers (3)	Scores: Small Farmers (4)	Scores: All Farmers (5)
19.	Government Line Departments Services on Farming Activities	1.67	1.47	1.57
20.	Crop Insurance	2.01	1.97	1.99
21.	Documentation Support for Availing Different Government Schemes	3.33	3.35	3.34
22.	Overall	2.01	1.87	1.94
IV	Access to Credit Services provided by the Farmer Producer Companies to the Farmers			
23.	Awareness on (Formal Institutions) Credit Sources	2.40	2.44	2.42
24.	Accessibility to Credit Facility from FPCs	1.12	1.16	1.14
25.	Credit for Constructing Well	1.15	1.13	1.14
26.	Credit for Constructing Borewell	1.16	1.20	1.18
27.	Credit for the Farm Mechanization	1.15	1.17	1.16
28.	Overall	1.39	1.42	1.41
V	Technological Services provided by the Farmer Producer Companies to the Farmer			
29.	Technology Accessibility for Agriculture Practice	3.13	2.83	2.98
30.	ICT Applications on Agricultural Practices	2.07	2.40	2.23
31.	Community Mechanization Services/Sowing/Harvesting/Rent machines (Tractors/Sowing Machine/Pumps/Harvester)	2.85	2.96	2.91
32.	Latest Agriculture Practices (NPM/Zero Budget Agriculture/Other)	1.00	1.00	1.00
33.	Overall	2.26	2.30	2.28
VI	Value Addition Services provided by the Farmer Producer Companies to the Farmer			
34.	Cleaning Services	3.77	3.57	3.67
35.	Drying Services	3.03	3.16	3.09
36.	Grading Services	2.96	3.09	3.03
37.	Packing Services	2.85	3.27	3.06
38.	Storing Services	3.05	3.04	3.05
39.	Branding	3.75	3.55	3.65
40.	Overall	3.13	3.23	3.18
VII	Market Access Services provided by the Farmer Producer Companies to the Farmers			
41.	Information on Market Price	2.16	2.34	2.25
42.	Better Price for Produce by FPC	2.08	2.22	2.15
43.	Overall	2.11	2.25	2.18
Interpretation of Scores: 0.01 to 1.00 (Very Poor), 1.01 to 2.00 (Poor), 2.01 to 3.00 (Good), 3.01 to 4.00 (Very Good), 4.01 to 5.00 (Excellent)				

Table 2 explains the impact on services provided by the FPCs to the farmers. In the marginal farmers category, pre-harvest services and value addition services are scored as good services, whereas agricultural advisory services, technological services and access to market services indicate record of poor services. The capacity building, access to credit scored 'very poor' services. In the marginal farmer category, none of the services provided by the FPOs was 'very good' and 'excellent'. In the small farmer category, value addition indicates 'very good' score, while pre-harvest services, technological services and accessing to market services indicate 'good' score. In the same category, capacity building, agricultural advisory services, access to credit and experiences indicate 'poor' scores. In the small farmer category, none of the services provided by the FPOs was 'excellent'. In the all-farmer category, value addition indicates 'very good' score, and pre-harvest services and accessing to marketing services indicate 'good' services. On the other hand, capacity

building, agricultural advisory services, technological services, and experiences indicate ‘poor’ services, whereas access to credit indicates ‘very poor’ services. In the all-farmer category, none of the services provided by the FPOs was ‘excellent’. It is concluded that the FPCs were performing low in the said services, so there is an urgent need to address problems of farmers. The benefits of FPCs and farmer groups are not reaching to the small and marginal farmers. Only the politically and socially connected farmers benefited from the services.

## Suggestions and Policy Implications

A study (Swain and Sudheer, 2015) has found that the benefits of the farming groups and FPCs are not reaching marginal and small farmers completely. Most of the services is reaching only a few farmers who are politically and socially influential and who can anyhow manage the situations. The present study found that capacity building services, agricultural advisory services and technological services offered by FPCs are inadequate. The FPCs need to ensure the quality of services to the farmers. The members of the Farmer Producer Companies need capacity building services (Joglekar, 2016). A model ACITM to address farmers’ problems is proposed. In this model, ‘A’ stands for Agricultural Advisory Services, ‘C’ stands for Capacity Building Services, ‘I’ stands for Institutional Support Services, ‘T’ stands for Technological Services, and ‘M’ stands for Marketing Services. The proposed model can be executed through a consortium of FPCs named FPCDN (Farmer Producer Companies Development Network) where the FPCs will be the members of the network. The consortium will have a specific purpose to deliver services and address FPCs problems at the district level.

The consortium will work on specific objectives as follows:

- Integration of FPCs at the district level.
- Sharing of knowledge, products, and services among FPCs.
- To gain collective bargaining power for inputs and outputs.
- To avail government support and benefits.
- To create a peer pressure group on the government line departments for the benefits of the farmers.

### *How to execute the ACTIM model?*

This consortium should organize meetings at the beginning and end of every season to discuss and finalize the plan of action. In addition to this, FPCDN can call meetings as and when required. The main duty of the consortium is to execute the model of ACITM. The proposed ACTIM functional flowchart can be observed in Figure 1.

Under Agricultural Advisory Services, the FPCs need to improve the services like community irrigation facility, soil test facility and micronutrients used for each crop and provide advice on cropping pattern. FPCs should develop special communication channels using social media. The services provided by FPCs would integrate the work of the government line departments.

### Capacity Building Services:

Capacity Building Services are crucial to strengthen the capacities of members of FPCs. FPCs need to improve awareness of various farming practices, training on the latest agriculture practices (operations), training on productivity/production/enhancement/management, interaction with successful farmers and practitioners and community leadership programs by allocating the external resources and government support.

**Technological Services:**

Technology plays an important role in improving the yields. The National Commission on Farmers also indicates that there is a large knowledge gap between the yields in research stations and actual yields in farmers’ fields (MoA, 2006). Technological Services of FPCs need to improvise the latest agriculture practices (non-pesticidal management/zero budget agriculture/other) by linking with agricultural technologies management agency and krushi vignana kendras (KVKs).

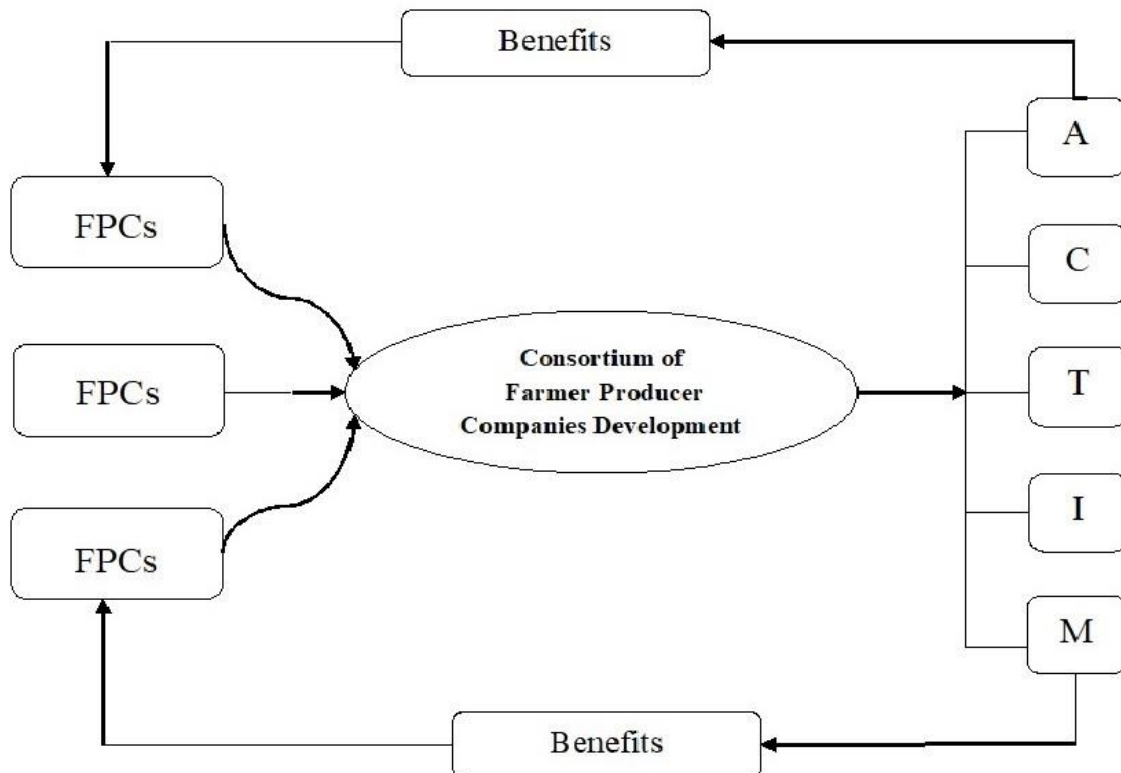


Figure 1: Farmers Producer Companies Development Network (FPCDN) Process Chart

**Institutional Services:**

Inaccessibility to credit markets or imperfect credit markets leads to suboptimal investment decisions or input applications. Likewise, a poor human resource base and smaller access to suitable extension services restrict suitable decisions regarding cultivation practices and technological know-how. Poorer access to ‘public goods’ such as public irrigation, command area development, electricity grids and greater negative externalities from poor quality land and water management are found to impact outputs (Sarthak and Mishra, 2011). Under Institutional Services the FPCs are required to channelize to get credit from formal financial institutions and on the convergence of other line departments like NABARD.

**Access to Market Services:**

Small farmers can benefit from the emerging supermarkets and value chains. The presence of supermarkets as retail trade is rapidly expanding in the emerging economies. According to Reardon and Gulati (2008), this process has developed at an astonishing speed. NCEUS (2008) says “some of the general issues that confront marginal and small farmers as agriculturalists are imperfect markets for inputs/products leading to smaller value on returns to farming”. Under Access to Market Services the FPCs are supposed to improvise information on market price and better price for produce by integrating with various marketing channels.



### *Operationalization of FPCDN (Farmers Producer Companies Development Network)*

In FPCDN, two types of members will be included viz., primary members and honorary executive members.

Primary Members: All FPCs members in Osmanabad district. Honorary Executive Members: Krishi Vigyan Kendra (KVK), Tuljapur, Agriculture Technology and Extension Management Agency (ATMA), Osmanabad, Department of Agriculture, Osmanabad and Tata Institute of Social Sciences (TISS), Tuljapur representatives.

#### Procedure of Membership:

- Each FPC nominates one person to FPCDN.
- FPCDN is a group that can work on ACTIM based on members' expertise.
- Government line departments like Krishi Vigyan Kendra, Agriculture Technology Management Agency, Department of Agriculture and TISS will nominate one person from their organization to FPCDN as an honorary member. These members provide suggestions on how to provide better services to the members of FPCs in the district.
- The FPCDN will hold its meeting with all members twice in a year before the cropping season. In addition, FPCDN can organize meetings as and when required.

### Conclusion

In India, farming is becoming an exceedingly difficult job and most of the farmers are leaving under stressful conditions. Government and civil society are fighting to address the problem with several schemes and other innovative initiatives. The formation of FPCs is one such initiative that is trying to address farmers' problems by bringing them to a collective forum. The present study found that the farmers of the Osmanabad district have taken forward a step to reduce their problems by reintegrating themselves through FPCs. They achieved certain goals in the direction of value addition and increased market opportunities. However, they are still far away in addressing other issues like agricultural advisory services, capacity building services, technological services, institutional services, and market access services, etc. Government and civil society support are required to achieve the goal of inclusive growth and self-sustenance. The study proposes the ACTIM model to help strengthen and sustain the FPCs.

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## Authors' Declarations and Essential Ethical Compliances

### *Authors' Contributions (in accordance with ICMJE criteria for authorship)*

Contribution	Author 1	Author 2
Conceived and designed the research or analysis	Yes	Yes
Collected the data	Yes	Yes
Contributed to data analysis & interpretation	Yes	Yes
Wrote the article/paper	Yes	Yes
Critical revision of the article/paper	Yes	Yes
Editing of the article/paper	Yes	Yes
Supervision	Yes	Yes
Project Administration	Yes	Yes
Funding Acquisition	No	No
Overall Contribution Proportion (%)	50	50

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### *Research involving human bodies (Helsinki Declaration)*

Has this research used human subjects for experimentation? No

### *Research involving animals (ARRIVE Checklist)*

Has this research involved animal subjects for experimentation? No

### *Research involving Plants*

During the research, the authors followed the principles of the Convention on Biological Diversity and the Convention on the Trade in Endangered Species of Wild Fauna and Flora.

### *Research on Indigenous Peoples and/or Traditional Knowledge*

Has this research involved Indigenous Peoples as participants or respondents? No

### *(Optional) PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)*

Have authors complied with PRISMA standards? Yes

### *Competing Interests/Conflict of Interest*

Authors have no competing financial, professional, or personal interests from other parties or in publishing this manuscript.

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