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## A study on the growth, status and distribution of farmer producer organisations in West Bengal

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#### Abstract

Farmer Producer Organisations or Companies have gained immense popularity in the last few years for its success based upon collective action approaches. Pooling of resources presents numerous opportunities for the farmers as it smoothens the marketing process by eliminating the middlemen from the market, establishes direct contact with consumers and producers, help the farmers to get more than the remunerative price. Besides that, it presents farming as an enterprise to the farmers rather than a subsistence way of living. The Government of India has approved and launched the Central Sector Scheme of "Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)" to form and promote 10,000 new FPOs till 2027-28 with a total budgetary outlay of Rs.6865 Cr. Initially one FPO is allocated per block. So far, a total of 4465 new FPOs produce clusters have been allocated to Implementing Agencies for formation of FPOs, of which a total of 632 no. of FPOs have been registered. In West Bengal, the first FPO established in 2012 under SFAC in Nadia district followed by another FPO in Birbhum district in the same year. Since then a total of 151 FPOs under NABARD and 89 FPOs under SFAC have been established so far. Hence, this study was carried out in 2021 to study the present status and growth of FPOs in West Bengal. The compound annual growth rate of FPOs under NABARD and SFAC has been calculated. Also, the distribution of FPOs across the state was analysed. It was found that 63% FPOs comes under NABARD whereas 37% FPOs comes under SFAC. NABARD has identified several districts and blocks for further expansion of the FPOs.

Keywords: Farmer producer organisations, socio-economic factors, FPO status, NABARD, SFAC

#### Introduction

In India, about 70% people are associated with agriculture and its allied activities. Majority of the farmers are small and marginal farmers. Over the years the average landholding of the farmers has decreased whereas their problems have increased significantly. The major issues related to these small and marginal farmers are high transaction costs and vulnerability to risks. The reason behind these issues includes the lower scale of operation, lack of information, poor communication linkages with the wider markets and consequent exploitation by intermediaries in procuring inputs and marketing fresh produce, access to and cost of credit, low quantities of marketable surplus, scarcity of capital, lack of market access, low bargaining power because of low quantities, lack of knowledge of marketing their products, market imperfections, and poor infrastructure. The major problem with small and marginal farmers is that these farmers do not involve in activities beyond production such as processing, value addition, and marketing of products by themselves. Due to these issues, farmers are exploited by the intermediaries and have less share in consumer price even less than these middlemen. Input services like quality seeds and fertilisers, marketing of products and agro-advisories are need of the hour. The concept of Farmer Producer Organisations came as a major solution to the small and marginal farmers of the country. Under the Companies Act, 2013, several FPOs were formed in different parts of the country initially under SFAC and then under NABARD, NRLM, NGOs and different state governments. FPCs are collectivization of producers, especially low and marginal farmers, into a producer organization and came out as one of the most efficient pathways to address these challenges of the agriculture sector. A farmer producer company gives a robust framework for small producers to organize themselves for effective linkage with markets. It gives bargaining power to the small farmers, enables costeffective delivery of extension services, and empowers the members to influence the policies that affect their livelihoods. FPCs help to overcome the constraints imposed by the small size of individual farms, members of FPCs can leverage collective strength and bargaining power to access financial and non-financial inputs, services and appropriate technologies, the leads to

a reduction in transaction costs, tap high-value markets and enter into partnerships with private entities on more equitable terms. Major activities of FPCs are the supply of inputs such as seed, fertilizer, and machinery, market linkages, training & networking, and financial & technical advice. In this context, the collectivization of small farmers has become even more important. Research shows that smallholders would be able to substantially increase their incomes from agriculture and allied activities if they participate in markets. As a result, the focus of development has shifted from the enhancement of production to market connectivity. Small farmer organizations such as co-operatives and FPCs are expected to enhance incomes, reduce costs of input purchase along with transaction costs, create opportunities for involvement in value addition, enhance bargaining power and provide access to formal credit. Many studies on FPCs found that this collective action approach has a significant impact on enhancing the socio-economic conditions of farmers and solving the agricultural problem faced by farmers. The concept of FPOs or FPCs in West Bengal are still at an early stage. Though it already has 240 FPOs (151 under NABARD and 89 under SFAC), but the big boom is still due in the near future. The concept of FPO perfectly suits the agrarian situation of Bengal where more than 90% farmers are small and marginal with 0.77 ha of average landholding. Besides, through previous researches it was found that marketing of agri-products is the major challenge faced by the farming communities. This study would reveal the present agriculture scenario of Bengal along with status of FPOs. Also, how FPOs are distributed throughout the state is another aspect of this study.

#### Materials and Methods

The present study was conducted in the state of West Bengal. All the 240 FPOs present there both under NABARD and SFAC has been taken into consideration. Besides, the study was based on the secondary data collected from different state and central government sources and research articles. The growth of FPOs over the years was calculated using Compound Annual Growth Rate (CAGR). Also, tabular and graphical analysis has been done to find out the distribution of FPOs in the state.

#### **Results and Discussion**

#### 1. Agriculture scenario of Bengal

West Bengal is located between 21°31' & 27°14' North Latitude and 85°91' & 89°53' East Longitude. The tropic of Cancer passes through the middle of the state covering the district in the East, Nadia and Bardhhaman and in the West Bankura and Purulia. Predominantly being an agrarian state having 2.7% of India's geographical area and supporting nearly 8% of its population, the state has 71.23 lakh farm families of whom 96% are small and marginal farmers with an average size of their land holding only 0.77 ha. However, the State is bestowed with diverse natural resources and varied agro-climatic conditions that supports cultivation of a wide range of crops. The net cropped area is 52.05 lakh ha which comprises 68% of the geographical area and 92% of arable land. The cropping intensity of the state has seen a discontinuous growth over the past ten years from 180% to 184%. However, as the State is located in the humid tropic and the Bay of Bengal is close by, it has to often face vagaries of nature like flood, cyclone, hailstorm etc. Though the State has a surplus production of rice, vegetables and potato, a huge

gap exists between the requirement and production of pulses, oilseeds and maize. Deterioration of soil health due to imbalance in the use of chemical fertilizers, paucity of suitable improved varieties of seed, inadequate farm mechanization, unorganized marketing structure etc. are major challenges to agricultural growth. West Bengal has six agro-climatic zones and offers a diverse variety of environments for agriculture and horticulture production. The state has a long coastline over 150 kms and innumerable water bodies, reflecting the huge potential for inland fishing and fish cultivation. The state is the largest producer of rice and potato in India. In 2018, the state gave 100% waiver for Khajna and mutation fee for agricultural land. In 2020-21, 12.9 lakh MT of Fish and 24875 million fish seeds have been produced in West Bengal.

Table 1: Demographic profile of West Bengal
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Particulars	Numbers
Area (in '000)	8875.20 ha
Population	91.35 million
Rural population	62.21 million
Female	44.4 million (49%)
Male	46.9 million (51%)
Literacy Rate	76.26%
Districts	23
Gram Panchayats	3349
Villages (Census 2011)	40218
Sex ratio	940:1000
Gross Cropped Area (in '000)	9881.35 ha
Net Cropped Area ('000)	5248.26 ha
Permanent Pasture & other Grazing land	2451 ha
Cultivable Waste Land	15923 ha
Forest Area	1173669 ha
Net irrigated area	3428117 ha
Cropping Intensity	184%
Total farm holdings	7.2 million
Marginal holdings (=< 1 ha)	5.85 million
Small holdings (1 to $< 2$ ha)	0.98 million
Size of average landholding	0.77 ha
Contribution of Agriculture in state's GDP	22.42%

Source: Census 2011 and Bureau of Economics and Statistics, West Bengal

The state is the largest producer of Rice and Jute along with second largest producer of Potato in the country. A significant decrease in wheat production has prompted increase in maize production in the state. The state has also adopted policies to increase further maize production. Although there is a gap in overall production of oilseeds and pulses, but it has increased in the past few years. Due to decrease in jute market, the jute production has gone down significantly in the state (Table 2). The different districts of Bengal have uneven cultivable area, net cropped area and cropping intensity. Purulia have the largest cultivable area but the net cropped area is quite lesser than other districts. Paschim Medinipur, Murshidabad and Purba Bardhaman has largest cultivable area as well as highest net cropped area. Purulia and Jhargram have significant differences between their cultivable and net cropped area due to large share of forests and red rocky small mountains. Districts falling under the Gangetic-alluvial zone shares similar cultivable and net cropped area along with high cropping intensity (>200%). The northern districts of the state except Alipurduar (Forest area) and Darjeeling (Mountains) also have significant cropping intensity. Hence, West Bengal with 5.25 million hectares net cropped area enjoys a high

cropping intensity of 190% (2018-19) (Table 3).

and it has resulted into net savings of Rs.1384 per acre.

#### 2. Scenario of farmer producer organisations in India

Farmer Producer Organisation is a legal entity comprising of any type of primary producers like agriculture, handicrafts, forestry etc., formed on the implementation of recommendations made by Y.K. Alagh committee in 2001. Government of India amended the Companies Act, 1956 to include collectivisation of large section of primary producers to function as independent companies. Small Farmers' Agribusiness Consortium (SFAC) is recognised as the nodal agency by the Government of India in the promotion of FPOs in the country. Different state departments and central level agencies are involved in the act of mobilising the primary producers into producer organisations under various schemes like Promotion of 10000 Farmer Producer Organisations scheme, Paramparagat Krishi Vikas Yojana (PKVY), Rashtriya Krishi Vikas Yojana (RKVY) and Vegetable initiative for Urban Cluster (VIUC) etc. Among the central level institutions, SFAC and NABARD are the major institutions along with National Rural livelihood Mission (NRLM) and several private foundations like Ambuja Cement Foundation, TATA trusts, Grant Thornton, etc., and NGOs taking up the task of promoting FPOs in the country.

The Government of India has approved and launched the Central Sector Scheme of "Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)" to form and promote 10,000 new FPOs till 2027-28. Under the scheme, with a total budgetary outlay of Rs.6865 Cr, the formation and promotion of FPO is based on Produce Cluster Area approach and specialized commodity-based approach. While adopting cluster-based approach, formation of FPOs will be focused on "One District One Product" for development of product specialization. A total of 4465 new FPOs produce clusters have been allocated to Implementing Agencies for formation of FPOs, of which a total of 632 no. of FPOs have been registered.

As per research studies in Maharashtra, some points came into light:

- i) Sale through Farmer Producers Companies (FPCs) has resulted in increased price realization by members by 22%.
- ii) Incidence of cost of marketing is 31% lower than other channels.
- iii) 28 percent of members have purchased inputs from PCs

The number of farmers mobilised towards FPOs are highest in Maharashtra with 706717 farmers (Table 4). The figures reveal that more than fifty per cent of total mobilised farmers belong to five states namely Maharashtra, Uttar Pradesh, Tamil Nadu, Madhya Pradesh and Karnataka. Maharashtra also has the largest number of FPOs i.e., 1137 out of total 6521 which accounts for 17.5 per cent of the total FPOs registered throughout the country. The state-wise analysis shows that total of 892409 farmers and 910 FPOs are promoted by SFAC and 1236146 farmers and 4237 FPOs are promoted by NABARD. SFAC promoted the largest number of FPOs in Madhya Pradesh followed by Karnataka and Maharashtra with 126 and 105 FPOs respectively. Maximum number of FPOs promoted by NABARD is in Uttar Pradesh with 362 followed by Madhya Pradesh with 361 number of FPOs. It is significant to note that the largest number of FPOs is promoted by NABARD but SFAC covers larger number of farmers. The number of farmers who are member of FPOs promoted by SFAC were highest in the state of Madhya Pradesh (150000) and was followed by Karnataka (128500), Maharashtra (104500), West Bengal (90500), Rajasthan (60500), etc. Similarly, the number of farmers who are members of FPOs promoted by NABARD are highest in Madhya Pradesh (149963), Tamil Nadu (131205) and was followed by Odisha (131169), West Bengal (109113), Andhra Pradesh (80616), etc. On the whole, the number of farmers linked to FPOs are highest in Maharashtra (7.06 lakhs) and is followed by Madhya Pradesh (3 lakhs), Uttar Pradesh (2.6 lakh), Tamil Nadu (2.2 lakh), Karnataka (2 lakh) etc.

### **3.** Growth and status of farmer producer organisations in West Bengal

In West Bengal, there are 151 FPOs under NABARD and 89 FPOs under SFAC. NABARD has 63% share of total FPOs. The numbers are on the verge of increasing as many new FPOs are being setup in all over the state. The first FPO in Bengal was established under SFAC in South 24 Paraganas district in 2012. Two more FPOs at North 24 Paraganas and Hooghly were also set up that year. NABARD promoted its first FPO one year later in Nadia district. The growth of FPOs over the year has remain inconsistent. The year 2015 saw a significant rise in the number of FPOs both under SFAC and NABARD as 41

Crops	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Rice	15376.9	15297.2	15948.3	16070.0	14970.0	16507.3	16503.0
Wheat	927.8	939.3	788.5	930.0	450.0	337.8	510.0
Maize	620.5	649.9	662.4	706	1139.9	1732.9	2447.6
Pulses	215.3	230.9	256.2	311.7	440.6	368.7	393.7
Oilseeds	840.7	858.1	888.6	924.1	1140.7	1163.5	1015.5
Potato	9050.0	13908.0	9726.2	12932.0	12652.5	11071.7	12559.2
Sugarcane	1954.0	2105.5	1327.8	2076.0	1130.0	1340.0	1530.0
Jute ('000 bale)	8771.8	8808.3	7667.1	7706.0	7640.0	7690.0	7901.4

**Table 2:** Production of different crops grown in West Bengal ('000 MT)

**Table 3:** Cultivable area and cropping intensity of Bengal (2018-19)

Districts	<b>Cultivable Area</b>	Gross cropped area	Net cropped area	Cropping Intensity (%)
Darjeeling	125853	153106	115805	132
Kalimpong	28355	56696	23400	242
Jalpaiguri	208562	381280	203800	187
Alipurduar	139327	187719	135300	139
Coochbehar	263109	547042	257000	213
Uttar Dinajpur	275644	512881	273200	188

Dakshin Dinajpur	187745	388682	186900	208
Malda	282888	467038	231800	201
Murshidabad	402372	937356	399000	235
Nadia	298841	662573	293700	226
North 24 Paraganas	252047	500385	230900	217
South 24 Paraganas	371876	603658	358300	268
Howrah	84265	165003	80400	205
Hooghly	213537	527233	210895	250
Purba Bardhaman	402000	740072	400050	185
Paschim Bardhaman	56056	63261	55010	115
Birbhum	332140	581559	327400	178
Bankura	374441	541194	345080	159
Purulia	437807	369801	314507	118
Paschim Medinipur	417527	832316	385800	216
Jhargram	171477	221060	139900	158
Purba Medinipur	288787	532773	284810	187
West Bengal	5614656	9972688	5248257	190

Source: Department of Agriculture, Govt. of West Bengal

Table 4: Scenario of Farmer Producer Organisations in India

States	NABARD		SFAC		Others		Total	
	<b>FPOs</b>	Farmers	<b>FPOs</b>	Farmers	<b>FPOs</b>	Farmers	<b>FPOs</b>	Farmers
Andaman & Nicobar Islands	5	187	0	0	0	0	5	187
Andhra Pradesh	282	80616	16	15300	7	0	305	95916
Arunachal Pradesh	2	255	6	4750	0	0	8	5005
Assam	59	13952	18	10500	25	0	102	24452
Bihar	273	80551	38	35600	2	0	313	116151
Chhattisgarh	69	27687	28	29000	56	45362	153	102049
Delhi	1	0	4	3500	1	825	6	4325
Goa	2	104	2	1750	0	0	4	1854
Gujarat	171	46013	25	24000	138	72680	334	142693
Haryana	75	24678	23	12750	1	850	99	38278
Himachal Pradesh	79	9468	8	7150	0	0	87	16618
Jammu & Kashmir	23	3485	2	9561	0	0	25	13046
Jharkhand	190	55794	10	12000	0	0	200	67794
Karnataka	263	69900	126	128500	3	1900	392	200300
Kerala	121	58797	0	0	2	1600	123	60397
Lakshadweep	2	0	0	0	0	0	2	0
Madhya Pradesh	361	149963	149	150000	1	525	511	300488
Maharashtra	239	33517	105	104500	793	568700	1137	706717
Manipur	5	1833	8	6950	1	300	14	9083
Meghalaya	9	1353	4	3750	0	0	13	5103
Mizoram	19	3576	2	2700	0	0	21	6276
Nagaland	5	0	4	3750	14	1000	23	4750
Odisha	325	131169	41	38900	0	0	366	170069
Punjab	94	7141	7	6000	0	0	101	13141
Rajasthan	296	97792	50	60500	0	0	346	158292
Sikkim	4	692	30	15750	0	0	34	16442
Tamil Nadu	214	131205	17	17000	73	70000	304	218205
Telangana	300	36572	26	29998	35	28950	361	95520
Tripura	1	80	7	5750	0	0	8	5830
Uttar Pradesh	362	44500	58	56000	182	156892	602	257392
Uttarakhand	83	16153	7	6000	38	30560	128	52713
West Bengal	303	109113	89	90500	0	0	392	199613
Puducherry	0	0	0	0	2	1345	2	1345
Total	4237	1236146	910	892409	1374	981489	6521	3110044

and 14 respective new FPOs came up. SFAC was actively forming FPOs all over the state until 2018. From 2019 onwards, NABARD took the forefront and successfully promoted and established 111 FPOs from 2019-2021 while SFAC could register only 7 FPOs under them. NABARD with

its better outreach and resources is outperforming SFAC in forming, promoting and establishing FPOs. Over the years, FPOs under NABARD experienced 75% growth in the last nine years whereas SFAC could only manage 40% growth.

Table 5: Growth rate of FPOs of different Promoting Institutions

Promoting Institute	CAGR
NABARD	0.75
SFAC	0.40

FPOs are unevenly distributed over different districts of the state. NABARD and SFAC does not enjoy balanced no. of FPOs except for Birbhum, Purba Midnapore, Hooghly and Bankura. In Alipurduar, Dakshin Dinajpur and Jhargram, SFAC don't have any FPOs supported by them whereas NABARD went blank in Bardhaman and Purulia. NABARD has highest no. of FPOs in Coochbehar district whereas SFAC has it in Uttar Dinajpur. The large proportion of FPOs by NABARD in the northern region, especially in Jalpaiguri and Coochbehar indicates progressive mindset of farmers. Also,

existing farmers' clubs, NGOs and SHGs has helped in changing the mindset of the people. Cultivation of vegetables and wide range of other crops and large plantations along with favourable climatic conditions, presents potential for agricultural expansion.

About 50% of NABARD promoted FPOs are in the eastern Himalayan region of the state with Coochbehar and Jalpaiguri having 57 out of 77 FPOs situated therein. SFAC have highest share of FPOs in the lower gangetic plain region with Uttar Dinajpur having largest FPO numbers under it.

Table 6: Comparison in number of FPOs in	different agree alimetic regions of Pangel
<b>Table 0:</b> Combanson in number of FFOS in	unrelent agro-chinatic regions of Deligar

Agro-climatic regions of West Bengal	NABARD	SFAC
Eastern Himalayan region	77	18
Lower gangetic plain region	30	41
Eastern plateau and hill region	44	30

NABARD has identified several regions as the potential regions for expansion of FPOs in the near future. Block-wise expansion strategy is being adopted for this by selecting several crops and commodities having good marketing potential in domestic as well as international market (Table 7). Two blocks each from fourteen districts has been selected.

District	Block	Crops/Commodities
Bankura	Indas	Aromatic rice
Dalikula	Onda	Sesame
Birbhum	Dubrajpur	Black rice
DIFONUIN	Mayureshwar-II	Potato
Coochbehar	Coochbehar-II	Maize
Coochdenar	Mathabhanga-I	Potato
Dekshin Dineinur	Balurghat	Vegetables
Dakshin Dinajpur	Kushmandi	Vegetables
Hooghly	Dhaniakhali	Potato, Potato seed, vegetables
Hooghly	Khanakul-I	Groundnut
Ialmaiauri	Dhupguri	Potato
Jalpaiguri	Maynaguri	Seed production of paddy, mustard, maize
Malda	Habibpur	Bee-keeping
	Manikchak	Mango
Murshidabad	Lalgola	Mango
	Raghunathganj-I	Litchi
Nadia	Krishnanagar-I	Nursery for flower and fruit plants
Inaula	Ranaghat-II	Aromatic rice
Paschim Medinipur	Chandrakona-II	Potato
Paschini Medinipur	Garbeta-II	Potato
Purba Bardhaman	Kalna-I	Onion
Purba Darunaman	Kalna-II	Gobindobhog rice
Purba Medinipur	Kolaghat	Floriculture (Marigold, Jasmine)
	Potashpur	Organic vegetables
Purulia	Bandwan	Horticulture (Mango, Cashew) and Vegetables
Purulla	Manbazar-I	Horticulture (Mango) and Vegetables
Uttar Dinajpur	Islampur	Vegetables
	Karandighi	Maize

Table 7: Regions and Commodities identified by NABARD for expansion of FPOs

Source: NABARD

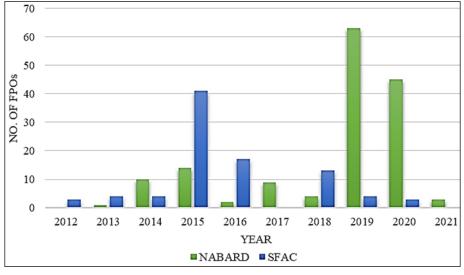
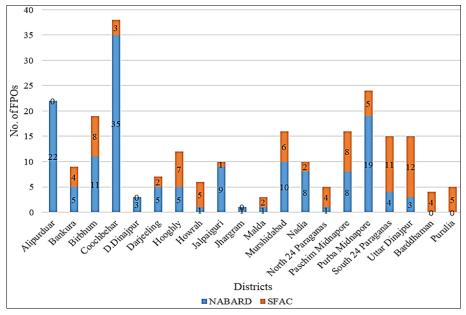


Fig 1: Growth of FPOs in WB over the years



**Fig 2:** District-wise distribution of FPOs

#### Conclusion

Farmer Producer Organisations or Companies is growing at a fast pace in West Bengal under NABARD and SFAC. NABARD has already identified potential areas for expansion of FPOs. SFAC has also contracted with several CBBOs in the state for a greater number of FPO establishment. Agriculture in Bengal is a sector for further future development. A large number of small and marginal farmers along with a developing agri-allied sector is the main reason behind it. About 150 more FPOs under NABARD PROUDCE Fund are close to being established. SFAC and NABARD should work together keeping in close proximity with the state government. In Bengal, the state government schemes like Krishak Bandhu, Bangla Sashya Bima Yojana, etc., can be promoted through FPOs. Also, a government dedicated portal named 'Matir Katha' can be utilised by the FPOs for advisory services and marketing connectivity. Proper evaluation and plan of work can definitely enhance the work and function of FPOs in the state and in the coming years doubling of farmer's income can be achieved.

#### References

- 1. https://wb.gov.in/departmentsdetails.aspx?id=D170907140022669&page=Agriculture
- http://www.wbpspm.gov.in/SiteFiles/Publications/5\_1805 2017112619.pdf
- 3. https://eands.dacnet.nic.in/
- 4. https://www.nabard.org/
- 5. http://sfacindia.com/
- 6. http://matirkatha.net/
- 7. https://krishakbandhu.net/
- Barani Kumar, Navaneetham, Kandasamy, Mahendran, Sivakumar SD, Kumar Senthil. Status of Farmer Producer Companies in India. 2017;12:88-892.
- Deka Nabajyoti, Goswami Kishor, Thakur Abhay, Bhanu Pratap. Are farmer producer companies ready to behave as business entities? Insights from the vegetable-based farmer companies in West Bengal, India. International Journal of Agricultural Sustainability, 2020. 18.10.1080/14735903.2020.1794213.
- 10. Dev R, Mahendra CS. How FPOs can help small and marginal farmers, 2021.

- 11. Dubey LR, Sharif M, Hiremath D, Meena DK. Generalised Status of Farmer Producer Organisations (FPO's) in India-A Review. Development (MoRD), 3, 4.
- 12. Govil R, Neti A. Strengthening Rural Economy through Farmer Producer Companies. In Smart Villages. Springer, Cham. 2022, 247-262.
- 13. Jaya G, Lakshmi SR, Gummagolmath KC, Bhawar RS. Strategies for Promoting Farmer Producer Organisations (FPOs) in India. Journal of Agricultural Extension Management, 2020;21(1). 93.10.9734/IJPSS/2021/v33i1430501.
- 14. Lalitha N. Can Farmer Producer Organisations Transform the Small Holder Farming in India? A Case Study of Sahyadri Farmers Producer Co. Ltd Nashik, Maharashtra. Pathways for Changing Rural Landscape 2019;49(1-2):117.
- 15. Prasad CS, Prateek G. Farming Futures: An Annotated Bibliography on Farmer Producer Organisations in India, 2019.
- Tagat Venkatesh, Tagat Anirudh. The Potential of Farmer Producer Organizations in India. SSRN Electronic Journal, 2016. 10.2139/ssrn.2972488.