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Determinants of socio-economic status of the chickpea growers FPOs and non-FPO members in Banda district of Bundelkhand region (U.P.)

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Abstract

The study was carried out to examine the “Determinants Socio-economic Status of the chickpea growers FPOs and Non-FPOs Members in Banda District of Bundelkhand Region, (U.P.)” The Banda district comprises eight blocks i.e. Badokhar Khurd, Jaspura, Tindwari, Naraini, Mahuva, Baberu, Bisanda, and Kamasin. Among these, the Mahuva block was selected purposively, because it had the highest number of FPOs. In Mahuva block, out of eight FPOs, four FPOs were selected which total of 60 chickpea growers and 60 Non-FPOs member chickpea growers from 4 villages were selected to make 120 samples for the study. The variables of the Socio-economic status of chickpea growers revealed that the majority of FPOs members had completed their middle school education 33.34 percent while the majority of Non-FPOs members had only completed their primary school 58.34 percent. The majority of percent of FPOs members 60 percent and non-FPO members 70 percent belong only agriculture sector while the annual income for FPOs members was 10 percent and Non-FPOs members were 3.33 percent for a range of 150001-200000. Further, the study revealed that about 55 percent of FPOs members and 38.30 percent of Non-FPOs members occupied the small 1.0 to 2.0 ha. Land holding. The majority of both members and non-members had buffalo cattle which was 91.67 percent for FPOs members and 80 percent for Non-FPOs members.

Keywords: Chickpea growers, annual income, socio-economic economic status of FPOs and Non-FPOs members, etc.

Introduction

Agriculture plays a vital role in the Indian economy. Agriculture is the main source of livelihood for the majority of the farm family, and 56 percent of the total workforce is engaged in agriculture and allied sector across the country (A.K. Sah 2021) ^[1]. The growth of Indian agriculture over the last few decades has helped the country enhance food and nutritional security at the national level (Dave V.C. and Tarpara V.D. 2016) ^[2]. At the view point the Bundelkhand is a major pulses-growing region of India. Apart from this, the livelihood of the farm households in the region is dependent on agriculture and particularly on pulses as one of the major cultivated crops (Rajesh Kumar et. al. 2017) ^[3]. India is the largest producer and consumer of pulses accounting for about 26 percent of global production, and 28 percent of their global consumption. Raising the importance of pulses for the human diet 2016 was declared the International year of pulses (Rooba Hasan and Khan D.N. 2018) ^[4]. The total pulses cultivated land area is about 28.78 M ha, production 25.46 Mt., and yield is about 885 kg/ha across the country. Uttar Pradesh pulses’ sowing is about 2.37 M hac, production is about 2.44 Mt, and yield is 1033 kg/ha. Globally 50 countries are cultivating chickpea crop. India is the largest producer of chickpea which contributes about 64.47 percent of total chickpea production in the world. While the area cover is about 9.69 million hectares, production is about 11.91 million tonnes and yield 1192 kg/ha. Uttar Pradesh area covered under chickpea cultivation is about 0.625 M ha, production is about 0.759 Mt, and Yield 1243 Kg/ha (2nd Advance Estimated DE&SDA&FWMA&FW, Govt. of India 2020-21).

Farmer Producer Organization (FPO) is registered under the Companies Act 1956. The Department of Agriculture, Cooperation and Farmers Welfare, Government of India declared a "Farmer Producer Organization" in the year 2014 to promote agriculture. The main objective of the Farmer Producer Organization is to benefit the farmers collectively and to provide better opportunities for income to the farmers through direct business operations. Farmer Producer Organization (FPO), through a market-oriented approach; about 7374 Farmer Producer Companies (FPCs) are working across the country to strengthen the socioeconomic status of

small and marginal farmers (Himanshu Panday *et al.* 2021) [6]. The Union Finance Minister, Government of India has set a target of creating 10000 FPOs in the next five years by 2023-2024. According to the Ministry of Agriculture & Farmer Welfare 898 FPOs registered in SFAC, 3904 FPOs registered in NABARD, and 2257 FPOs registered by IAs under CSS for the formation of 10,000 FPOs across the country. The total number of FPOs registered by respective agencies is about 7059 in 2022 (MA&FW & PIB Delhi 2022) [7].

Research Methodology

The determinants of Socio-economic Status of the Chickpea growers FPOs and Non-FPOs members in Banda districts of Uttar Pradesh, obtaining the required information for the selection of chickpea growers. Multistage sampling was adopted for the collection of sample data. The first Stage Banda district of Bundelkhand Region of Uttar Pradesh was selected purposively and Block was also selected purposively in the study area. The selection of FPOs and Non-FPOs chickpea growers were selected randomly. The random selection of the chickpea growers was done based on the list of farmers collected from FPOs. In this way, a total of 120 chickpea grower has selected of which 60 farmers are FPOs members and 60 farmers are Non-FPOs members in the study

area. Descriptive statistics such as percentage, mean and average were used to analyse the Socio-economic status of chickpea growers FPOs and Non-FPOs members including the Average age of Farmers, Educational qualification, Type of House, Occupation, Size of land holding and Farm inventory etc., are analysed by statistical tools and simple tabular method.

Frequency and Percentage

The frequency and percentage were used for making simple comparisons. The frequency of the particular category was multiplied by a hundred and divided by the total number of farmers in that particular category to get the percentage.

Percentages

Percentages were used in the descriptive analysis for making comparisons. For calculating percentage, the frequency of a particular cell was multiplied by 100 and divided by the total number of respondents in that particular cell.

$$\text{Percentage (\%)} = \frac{\text{The sum of all the responses}}{\text{Total number of all the responses}} \times 100$$

Results and Discussion

Table 1: Distribution of Age of FPOs and Non-FPO members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Young (18 to 30 Years)	1	1.67	4	6.66
2.	Middle Age (31 to 45 Years)	38	63.33	32	53.34
3.	Old Age (46 Years and above)	21	35	24	40
Total		60	100	60	100

Table 1 it is revealed that the majority of chickpea growers of FPOs members were found at 63.33 percent in the middle age group and followed by the old age group at 35 percent and the young age group at 1.67 percent. In the case of Non-FPOs chickpea growers, the majority of respondents were found

53.34 percent in the middle age group followed by the old age group 40 percent and the young age group of 6.66 percent. The average age of FPOs and Non-FPOs chickpea growers were found 43.90 and 38.60 years respectively.

Table 2: Pattern of Educational FPOs and Non-FPOs members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Illiterate	2	3.34	12	20.00
2.	Primary School	24	40	35	58.34
3.	Middle School	20	33.34	8	13.32
4.	High School	9	15	5	8.34
5.	Intermediate	3	5.00	0	0.00
6.	College and above	2	3.34	0	0.00
Total		60	100	60	100

Table 2 showed that the FPOs members of the chickpea growers' educational qualifications were highest found in primary school 40 percent followed by middle school 33.34 percent and high school 15 percent in the study area. The Non-FPO member's chickpea growers' educational

qualification was also the highest estimated primary school at 58.34 percent followed by illiterate farmers at 20 percent, middle school at 13.32 percent, and high school at 8.34 percent in the study area.

Table 3: Farming experience of FPOs and Non-FPO members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Up to 10 years	4	6.70	5	8.30
2.	11-20 years	18	30	24	40.00
3.	21 years & above	38	63.30	31	51.70
Total		60	100	60	100

Table 3 revealed that the average age of experience highest found in FPOs and Non-FPO members at 21 years & above FPOs members is about 63.30 percent and Non-FPOs members were found 51.70 percent followed by 11-20 years

FPOs members at 30 percent and Non-FPOs members at 40.00 percent. Whereas the least farming experience was recorded for both FPOs and Non-FPOs members of the Up to 10 years' age group.

Table 4: Religion of FPOs and Non-FPO members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Hindu	60	100	59	98.34
2.	Muslim	0	0.00	1	1.66
3.	Any other specific	0	0.00	0	0.00
Total		60	100	60	100

Table 4 it is revealed that the all chickpea growers of the FPOs members were found Hindu religion in the study area. Whereas Non-FPOs members of the chickpea growers 98.34 percent were found Hindu and the remaining 1.66 percent chickpea growers are found Muslims in the study area.

percent whereas, Non-FPOs members the majority of respondents 66.70 percent belong to the OBC caste, followed by the general caste 15.00 percent and SC categories 18.33 percent in the study area.

Table 5: Pattern of Caste of FPOs and Non-FPOs members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	UR	13	21.70	9	15.00
2.	OBC	39	65.00	40	66.70
3.	SC	8	13.30	11	18.30
4.	ST	0	0.00	0	0.00
Total		60	100	60	100

Table 5 indicated in the case of FPOs members the majority of respondents 65.00 percent belong to the OBC caste, followed by the general caste 21.70 percent and SC categories 13.30

Table 6: Pattern of FPOs and Non-FPOs members' Family type

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Nuclear	17	28.34	36	60.00
2.	Joint	43	71.66	24	40.00
Total		60	100	60	100

Table 6 showed that the majority of chickpea growers in FPOs members was found highest in the joint family about 71.66 percent followed by Non-FPOs member's chickpea growers' Nuclear family is about 60.00 percent in the study area.

Table 7: Family size of the FPOs and Non-FPO members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Small (1-5 Members)	22	36.67	25	41.66
2.	Large (>5 Members)	38	63.33	35	58.34
Total		60	100	60	100

Table 7 it is revealed that the majority of respondents for FPOs member's family size was highest obtained in large family size is about 63.33 percent whereas for small family size was found 36.67 percent in the study area. Whereas Non-FPOs

members the majority of farmers were also highest found in large family size is about 58.34 percent whereas for small family size 41.66 percent in the study area.

Table 8: Housing pattern of FPOs and Non-FPO members

S. No	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Hut	0	0.00	0	0.00
2.	Kachcha	10	16.66	25	41.67
3.	Mixed	38	63.34	28	46.66
4.	Pucca	12	20	7	11.67
Total		60	100	60	100

Table 8 Indicated that the housing pattern of both FPOs and Non-FPOs highest found mixed type house is about 63.34 percent and Non-FPOs members 46.66 percent respectively

followed by kachcha type 16.66 percent & 41.67 percent and pucca type 20 percent & 11.67 percent in the study area.

Table 9: Pattern of occupation of FPOs and Non-FPO members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Only Agriculture	36	60.00	42	70.00
2.	Agriculture + Labour	2	3.30	3	5.00
3.	Agriculture + Dairy	19	31.70	14	23.30
4.	Agriculture + Service	3	5.00	1	1.70
Total		60	100	60	100

Table 9 revealed that the majority of respondents' occupation for FPOs members was only agriculture was highest found 60.00 percent followed by agriculture + dairy 19 percent Agriculture + Service 5 percent and Agriculture + Labour 3.30 percent. While, Non-FPOs members the majority of only

Agriculture was also highest found at 70.00 percent followed by Agriculture + Dairy 23.30 percent, Agriculture + Labour 5.00 percent, and Agriculture + Service 1.70 percent in the study area.

Table 10: Pattern of Annual income of FPOs and Non-FPO members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	50000 -100000	31	51.70	45	75.00
2.	100001-150000	23	38.30	13	21.67
3.	150001-200000	6	10.00	2	3.33
Total		60	100	60	100

Table 10 it is revealed that the annual income of a farm family includes all kinds of revenue generation, majority of the FPOs members of chickpea growers most of the respondents found under 50000-100000 annual income is about 51.70 percent followed by 38.30 percent (100001-150000) medium-income

category in the study area. The Non-FPOs member chickpea grower's majority of respondents were also highest found under 50000-100000 annual income is about 75.00 percent followed by 21.67 percent medium annual income (100001-150000) in the study area.

Table 11: Pattern of land holding of FPOs and Non-FPO members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Marginal (< 1 hac.)	27	45.00	37	61.70
2.	Small (1.0 to 2.0 hac)	30	55.00	23	38.30
Total		60	100	60	100

Table 11 showed that the majority of FPOs members of the chickpea growers were highest found under a small land holding size is about 55.00 percent followed by marginal farmers is about 45.00 percent in the study area. The Non-

FPOs members of chickpea growers were highest found in marginal farmers is about 61.70 percent followed by small farmers is about 38.30 percent in the study area.

Table 12: Source of irrigation FPOs and Non-FPOs members

S. No.	Particular	Members		Non-member	
		Frequency	Percentage	Frequency	Percentage
1.	Pond	2	3.30	9	15.00
2.	Canal	0	0.00	0	0.00
3.	Tube well	8	13.30	7	11.70
4.	Pump set	50	83.30	44	73.30
Total		60	100	60	100

Table 12 revealed that the majority of FPOs members used a pump set 83.30 percent for irrigation followed by a tube well 13.30 percent and a pond 3.30 percent while, Non-FPOs

members of the majority of farmers use a pump set 73.30 percent followed by the pond 15 percent and tube wells 11.70 percent for irrigation in the study area.

Table 13: Pattern of farm inventory FPOs and Non-FPOs members

S. No.	Particular	Member		Non-member	
		Frequency	Percentage	Frequency	Percentage
(A)	(A) Building				
i	Residential House	60	100	60	100
ii	Cattle Shed	52	86.67	30	50.00
iii	Implement Shed	24	40.00	10	16.60
iv	Other Building	0	0.00	0	0.00
(B)	Livestock				
i	Drought Animal	2	3.34	4	6.67
ii	Milch Cattle				
a)	Cow – (I) Dry	16	26.67	28	46.70
	(ii) Milking	28	46.67	21	36.70
b)	Buffalo-(i) Dry	55	91.67	48	80.00
	ii) Milking	48	80.00	30	50.00
c)	Goat	24	40.0	25	41.60
d)	Sheep	0	0.00	0	0.00
3.	Other Animal.	0	0.00	0	0.00
(C)	Implements and Machinery				
i.	Desi Plough	0	0.00	1	1.70

ii.	Tractor	2	3.34	0	0
iii.	Seed Drill	2	3.34	0	0
iv.	Cultivator	2	3.34	0	0
v.	Sprayer	18	30	7	11.67
Vi	Chaff cutter	40	66.67	39	65.20

Table 13 indicated the pattern of farm inventory of the chickpea growers' FPOs members and Non-FPOs members in the study area. The residential house 100 percent found all FPOs and Non-FPOs members of the chickpea growers followed by cattle sheds 86.67 and 50.00 percent, and implement sheds also found in the study area. The livestock production in FPO members 46.67 percent milking cow, 80 percent milking buffalo, etc are found in the study area. The Non-FPO member's chickpea growers milking cow and buffalo was also found is about 36.70 & 50.00 percent in the study area. The percentage for various implements and machinery used by FPOs members like a tractor, seed drill, and cultivator was found 3.34 percent. A maximum percentage of about 66.67 percent was recorded for chaff cutters followed by sprayers at 30 percent. Non-FPOs members use desi plough. While the Non-FPO members only use three implements and machinery *viz.* desi plough 1.70 percent, sprayer 11.67 percent, and chaff cutter 65.20 percent in the study area most of the Non-FPOs members of chickpea growers cultivated through the Bullock for chickpea production.

Conclusions

The results show that the chickpea growers' FPOs members contribute significantly towards high agricultural incomes and welfare among small and marginal farmers in the study area. FPO is an efficient and holistic extension system that should be capable of meeting the need of small and marginal farmers in the fast-changing scenario and the need to enhance the number of FPOs that generate employment, argumentation of farmer's income, security and sustainable growth of the farmers in the study area.

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