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Characteristics of Farmer Producer Company Members and their Perceived Constraints with Reference to Commercial Potato Production and Marketing

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ABSTRACT: Farmer Producer company model is considered to be a very effective tool for overall socio-economic development of small and marginal farmers in India. The effectiveness and success of the company primarily depends upon meaningful participation of their members, their skills and how well they understand the internal and external environment of the company. Keeping this in view, 18 variables were included in the study to analyze the characteristics of the members of the selected FPCs. It was found in the study that majority of the respondents had medium level of scientific orientation (62.50%), leadership ability (53.33%), decision making ability (64.17%), risk orientation (65.00%), achievement motivation (58.34%) economic motivation (66.67%) and also medium level of information exposure (75.00%) and training exposure (55.83%). The major perceived constraints found by the members were 'Lack of credit facility' (81.67%) in production and 'problem of price variability' (76.67%) in marketing of potato. To address this constraints, awareness generation camps on credit linkage may be organise, besides familiarizing the FPC members about the benefits on offer from various flagship programmes of the Ministry of Agriculture & Farmers' Welfare, Govt. of India and other government programmes. Though the concept of FPC is very effective mean for augmenting the marginal and small farmers, less concentration was given on successful management of FPCs in Assam. Also there are very few studies conducted on FPCs in Assam and it was great challenge for the investigator to collect the information on it as the concept of FPC was very new to the people of Assam.

Keywords: Farmer Producer Company, Commercial potato production, Constraints, Primary producer, Marginal and Small farmers.

INTRODUCTION

According to the Agricultural Census of 2015-16 marginal and small farm holders together accounted for 86.08 percent of all agricultural holdings in India. As per estimates, about 1.5 to 2.0 million new marginal and small farms are being added every year due to continued land fragmentation (Anonymous, 2014). Today scenario, these small and marginal farmers are more vulnerable regarding agricultural problems like the lower scale of operational land holding, natural hazards, lack of a market link, lower productivity, crop failures, lack of information, lack of agricultural credits, increasing cost of input and cultivation, 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 and aggressive loan recovery practices, *etc* and farmers struggling to meet their basic need (Dev, 2005). The Situation Assessment Survey of Farmers indicates that monthly per capita consumption expenditure is higher than the monthly per capita income of farmers (Mishra, 2008). The average monthly income of small and marginal farmers is 6426 rupees/household and about 52 percent of small and marginal farmers in the country were indebted (NSSO 2013). These agrarian stresses increase the number of agricultural suicides among small and marginal farmers (National Crime Records Bureau, 2011). Today many farmers leaving agriculture and switching toward other employments opportunities for livelihood security. Traditional farmers and several youngsters thought that agriculture is not a beneficial business so they leaving agriculture as their primary occupation. To overcome this situation, a variety of approaches have emerged in response to solving the problems faced by the small and marginal farmers like contract farming under the PPP model, Agricultural Produce Marketing Committee (APMC) Act and collective action approaches like agricultural cooperatives formed under the Co-operative Credit

Societies Act, 1904, etc. But the impact of these reforms in agriculture is not much significant. Cooperatives focus on social welfare rather than on the economic welfare of the farmers (Mondal, 2010). Cooperatives tend to operate as political rather than economic entities with underrepresentation or a total lack of representation of smallholders who often do not even receive credit from cooperatives (Sharma, 2010). In this context, the need of the hour to frame a policy that should give major focuses on "collectivization of the farmer for capitalization not only for collectivization of the farmer for their social welfare". The major focus of this new cooperative model on enhancing the processing, value addition, and marketing linkage of farmers. This new cooperative model is called Farmer Producer Companies (FPCs) and these are private-owned producer companies by the farmers and for the farmers. The government of India decides to form and promotion of FPCs as a viable alternative to cooperatives at the ground level. In this context, the Government of India amended the Companies Act, 1956 by incorporating farmer producer companies under part of IX A, based on the recommendations of the Y.K. Alagh Committee (Mondal, 2010). The Food and Agriculture Organization (FAO, 2007 as cited in FAO, 2013) notes that producer companies are also considered to be institutions that have all the significant features of private enterprise while incorporating principles of mutual assistance in their mandate similar to cooperatives (Pustovoitova, 2011). Producer Organizations, therefore, are supposed to be non-political entities aimed at providing business services to smallholder farmer members, founded on the principle of self-reliance (Onumah *et al*., 2007). The basic purpose envisioned for the FPOs is to collectivize small farmers for backward linkage for inputs like seeds, fertilizers, credit, insurance, knowledge, and extension services; and forward linkages such as collective marketing, processing, and market-led agriculture production (Mondal, 2010).

However, the effectiveness and success of the company primarily depends upon meaningful participation of their members, their skills and how well they understand the internal and external environment of the company. Therefore it is very important to study the members characteristics as low participation rates of the members in farmer producer companies' activities may put a serious threat to the success, sustainability, and viability of farmer producer companies. Keeping this in view, this study was aimed at analysing the characteristics of the selected members of the two FPCs and their perceived constraints in production and marketing of potato. It will assist technocrats in identifying need-based and location-specific techno-social solutions suited for comparable companies, as well as advocating for appropriate corrective actions to address the limits experienced by Farmer Producer Company members.

METHODOLOGY

The study was undertaken in the state of Assam, one of the states in North-Eastern region of India. The state of Assam is divided into 33 Administrative Districts. Out of these 33 districts, the study was conducted in Nagaon and Biswanath districts which were selected purposively as two FPCs related to commercial potato production were operating in those two districts. A list of the FPC members of each of the selected villages was prepared with the help of the concerned executive officers of the companies. A proportionate-cum-random sampling (probability proportionate to size) technique was followed for selection of 120 respondents which constituted the sample for the study.

After review of the relevant literatures available to the investigator and consulting experts, 18 variables were included in the study. The variables were – Age (Structured schedule), Education level [SES scale (Rural) developed by Trivedi and Preek, 1964], Family size (Structured schedule), Family type (Structured schedule), Potato farming experience (Structured schedule), Occupational status (A scale developed by Salim, 1985), Size of operational land holding (Structured schedule), Area under potato cultivation (Structured schedule), Total net annual farm income (Structured schedule), Social participation [SES scale (Rural) developed by Trivedi and Preek, 1964], Scientific orientation (A scale developed by Supe, 1969), Leadership ability (A scale developed by Nandapurkar, (1980), Decision making ability (A scale developed by Supe, (1969), Risk orientation (A scale developed by Supe, (1969), Achievement motivation (A scale developed by Chandrapaul, (1998), Economic motivation (A scale developed by Supe, (1969), Degree of information exposure (Procedure suggested by Sangle, (1984) and Exposure to training (Structured schedule).

For assessment of the constraints as perceived by the members of FPC, the respondents were asked through an open-ended question to mention the important constraints in their opinion. A constraint is something that imposes limit or restriction or that prevents something from occurring. In this study, constraints refer to the items of difficulties faced by the members of FPC in production and marketing of potato. The constraints that were mentioned by the respondents were than ranked on the basis of the frequency of reporting.

FINDINGS AND DISCUSSION

The respondents were categorized and their frequency and percentage were worked out in relation to each characteristics. The Mean ($\bar{X}$) and Standard deviation (S.D.) were calculated and relative extent of homogeneity and heterogeneity among respondents with respect to each variable were examined with the help of Co-efficient of variation (C.V.). The distribution of respondents according to their personal, socio-economic, psychological and communicational characteristics is presented in Table 1-4 respectively.

A perusal of the Table 1 revealed the personal characteristics of the members of FPC. It was found that majority of the respondents (50.00%) were in the middle aged group followed by 28.33 per cent of respondents in old aged group and 21.67 per cent of the respondents in young aged group. Most of the

respondents (30.83%) had higher secondary/ PU level of education followed by 27.5 per cent respondents with high school level of education. Majority of the respondents (51.57%) had large family size and rest had small family size. Majority of the respondents (74.17%) belonged to the nuclear family and the rest 25.83 per cent belonged to the joint family. Majority of the respondents (53.33%) had medium term (10-20 years) experience of potato farming followed by 27.50 per cent respondents with long term experience (21 years and above).

Table 1: Distribution of respondents based on selected personal characteristics.

Category	Criterion	Score/ Score range	Frequency (n=120)	%	Mean	S.D.	C.V.
1. Age							
Young aged	Up to 35 years	18-35 years	26	21.67	—	—	—
Middle aged	36 – 50 years	36-50 years	60	50.00			
Old aged	Above 51 years	51-72 years	34	28.33			
2. Education							
Illiterate	0	0	0	0.00	—	—	—
Can read only	1	1	0	0.00			
Primary school	2	2	8	6.67			
Middle school	3	3	30	25.00			
High school level	4	4	33	27.50			
Higher secondary/P.U.	5	5	37	30.83			
Graduate/ diploma &above	6	6	12	10.00			
3. Family Size							
Small family	Up to 5	< 5 members	58	48.33	—	—	—
Large family	Above 5	> 5 members	62	51.67			
4. Family type							
Nuclear family type	1	1	89	74.17	—	—	—
Joint family type	2	2	31	25.83			
5. Potato farming experience							
Short term	Up to ($\overline{X}$ – 1 S.D.)	Up to 9 years	23	19.17	14.82	5.88	40.33
Medium term	($\overline{X}$ – 1S.D.) to ($\overline{X}$ +1S.D.)	10-20 years	64	53.33			
Long term	Above ($\overline{X}$ + 1 S.D.)	Above 21	33	27.50			

Table 2 revealed about the socio-economic characteristics of the members. According to the investigation, majority of them (65.00%) had only cultivation as their occupation followed by 25.00 per cent of respondents had cultivation + business as occupation. Majority of the respondents (45.00%) belonged to the small farmer category followed by 26.67 per cent in semi-medium and 21.67 per cent of the respondents in marginal land holding category. Only 6.66 per cent of the respondents belonged to the medium land holding category. In case of area under potato cultivation, majority of the respondents (47.50%) were having a land area above 2 ha followed by 37.50 per cent respondents having land area from 0.3 to 2 ha. Majority of the respondents (61.67%) had medium annual net farm income ranging from Rs 41731.34 to Rs 109585.33 followed by 23.33 per cent respondents with low annual net farm income up to Rs 41731.33. In case of social participation, majority of the respondents (70.83%) were member of one organization, followed by 22.50 per cent respondents having membership with more than one organization/institutions.

The finding of Table 3 highlights the psychological characteristics of the members of FPC. It reveals that majority of the respondents (62.50%) had medium level of scientific orientation followed by 22.50 per cent respondents with low level of scientific orientation and 15.00 per cent respondents with high level of scientific orientation. Majority of the respondents (53.33%) had medium level of leadership ability followed by 24.17 percent respondents with low level of leadership ability and 22.50 per cent respondents with high level of leadership ability. Majority of the respondents (64.17%) had medium level of decision making ability followed by 23.33 percent respondents with low level of decision making ability and 12.50 per cent respondents with high level of decision making ability. Majority of the respondents (65.00%) had medium level of risk orientation followed by 20.83 per cent respondents with low level of risk orientation and 14.17 per cent respondents with high level of risk orientation. Majority of the respondents (58.34%) had medium level of achievement motivation followed by 20.83 per cent respondents with both low level and high level of achievement motivation. Majority of the respondents (66.67%) had medium level of economic motivation followed by 18.33 per cent respondents with high level of economic motivation and 15.00 per cent respondents with low level of economic motivation.

Table 2: Distribution of respondents based on selected socio-economic characteristics.

Category	Criterion	Score/Score range	Frequency (n=120)	%	Mean	S.D.	C.V.
1. Occupational status							
Only cultivation	1	1	78	65.00	—	—	—
Cultivation + skilled labour	2	2	5	04.17			
Cultivation + business	3	3	30	25.00			
Cultivation + service	4	4	7	5.83			
2. Size of operational land holding							
Marginal	Up to 1 ha	Up to 1 ha	26	21.67	1.84	1.24	67.39
Small	1.1-2 ha	1.1-2 ha	54	45.00			
Semi-medium	2.1-4 ha	2.1-4 ha	32	26.67			
Medium	4.1-10 ha	4.1-10.0	8	6.66			
Big	Above 10.0	Above 10.0 ha	0	0.00			
3. Area under potato cultivation							
Up to 0.3 ha	-	Up to 0.3 ha	18	15.00	1.08	0.82	75.93
0.3 to 2.0 ha	-	0.3 to 2.0 ha	45	37.50			
Above 2.0 ha	-	Above 2.0 ha	57	47.50			
4. Total net annual farm income							
Low	Up to ($\overline{X}$ – 1 S.D.)	Up to 41731.33	28	23.33	75658.33	33927.00	44.84
Medium	($\overline{X}$ – 1S.D.) to ($\overline{X}$ +1S.D.)	41731.34 – 109585.33	74	61.67			
High	Above ($\overline{X}$ + 1 S.D.)	Above 109585.33	18	15.00			
5. Social participation							
No membership	0	0	0	0.00	—	—	—
Member of 1 organization	1	1	85	70.83			
More than one organization	2	2	27	22.50			
Office bearer of one organization	3	3	8	6.67			
More than one organization	4	4	0	0.00			

Table 3: Distribution of respondents based on selected psychological characteristics.

Category	Criterion	Score/ Score range	Frequency (n=120)	%	Mean	S.D.	C.V.
1. Scientific orientation							
Low	Up to ($\overline{X}$ – 1 S.D.)	6- 17	27	22.50	21.35	4.36	20.42
Medium	($\overline{X}$ – 1S.D.) to ($\overline{X}$ +1S.D.)	18 – 26	75	62.50			
High	Above ($\overline{X}$ + 1 S.D.)	27-42	18	15.00			
2. Leadership ability							
Low	Up to ($\overline{X}$ – 1 S.D.)	0- 3	29	24.17	4.58	1.13	24.67
Medium	($\overline{X}$ – 1S.D.) to ($\overline{X}$ +1S.D.)	4- 6	64	53.33			
High	Above ($\overline{X}$ + 1 S.D.)	7-10	27	22.50			
3. Decision making ability							
Low	Up to ($\overline{X}$ – 1 S.D.)	7-11	28	23.33	13.26	2.35	17.72
Medium	($\overline{X}$ – 1S.D.) to ($\overline{X}$ +1S.D.)	12- 16	77	64.17			
High	Above ($\overline{X}$ + 1 S.D.)	17-21	15	12.50			
4. Risk orientation							
Low	Up to ($\overline{X}$ – 1 S.D.)	6-20	25	20.83	24.08	4.36	18.11
Medium	($\overline{X}$ – 1S.D.) to ($\overline{X}$ +1S.D.)	21-28	78	65.00			
High	Above ($\overline{X}$ + 1 S.D.)	29-42	17	14.17			
5. Achievement motivation							
Low	Up to ($\overline{X}$ – 1 S.D.)	6-20	25	20.83	23.77	3.17	13.34
Medium	($\overline{X}$ – 1S.D.) to ($\overline{X}$ +1S.D.)	21-27	70	58.34			
High	Above ($\overline{X}$ + 1 S.D.)	28-30	25	20.83			
6. Economic motivation							
Low	Up to ($\overline{X}$ – 1 S.D.)	6-20	18	15.00	25.44	5.14	20.20
Medium	($\overline{X}$ – 1S.D.) to ($\overline{X}$ +1S.D.)	21-31	80	66.67			
High	Above ($\overline{X}$ + 1 S.D.)	31-42	22	18.33			

The finding of Table 4 highlights the communication characteristics of the members of FPC, where majority of the respondents (75.00%) had medium level of information exposure followed by 15.00 percent respondents with high level of information exposure and 10.00 percent respondents with low level of information exposure. Majority of the respondents (55.83%) had medium level of exposure to training followed by 23.34 percent respondents with high level of exposure to training and 20.83 percent respondents with low level of exposure to training.

Table 4: Distribution of respondents based on communication characteristics.

Category	Criterion	Score/ Score range	Frequency (n=120)	%	Mean	S.D.	C.V.
1. Degree of information exposure							
Low	Up to ($\bar{X}$ – 1 S.D.)	0-10	12	10.00	14.18	3.76	26.52
Medium	($\bar{X}$ – 1S.D.) to ($\bar{X}$ +1S.D.)	11-18	90	75.00			
High	Above ($\bar{X}$ + 1 S.D.)	19-26	18	15.00			
2. Exposure to training							
Low	Up to ($\bar{X}$ – 1 S.D.)	Up to 10	25	20.83	12.77	3.06	23.96
Medium	($\bar{X}$ – 1S.D.) to ($\bar{X}$ +1S.D.)	10 to 16	67	55.83			
High	Above ($\bar{X}$ + 1 S.D.)	Above 16	28	23.34			

Table 5 highlights the various types of constraints as perceived by the respondents along with their frequency, percentage and rank order. It is evident from Table 5 that majority of the respondents (81.67%) perceived that 'Lack of credit facility' was the most important constraint (ranked first) faced by the members of FPC in production of potato. The other constraints faced by the members in order of importance were 'high cost of labour' (71.67%), 'non availability of good quality seeds' (68.33%), 'high cost of good quality inputs' (65.00%) and 'seeds and fertilizers are not provided in proper time'(62.50%) which were ranked 2nd, 3rd, 4th and 5th, respectively. 'Lack of exposure to new technology and machines' (58.33%), 'new varieties of seeds are not available' (37.50%), 'poor quality of insecticide and pesticides provided by FPCs' (35.00%), 'lack of information regarding weather' (25.33%) and 'inability to attend training programmes on potato production due to distance' (20.83%) were the other constraints faced by the members of FPC in production of potato which were assigned ranks from 6th to 10th, respectively.

Table 5: Constraints in production and marketing of potato as perceived by the members of FPC.

S. No.	Constraints	Number	%	Rank
Production related constraints				
1	Lack of credit facility	98	81.67	I
2	High cost of labour	86	71.67	II
3	Non availability of good quality seeds	82	68.33	III
4	High cost of good quality inputs	78	65.00	IV
5	Seeds and fertilizers are not provided in proper time	75	62.50	V
6	Lack of exposure to new technology and machines	70	58.33	VI
7	New varieties of seeds are not available	45	37.50	VII
8	Poor quality of insecticide and pesticides provided by FPCs	42	35.00	VIII
9	Lack of information regarding weather	28	25.33	IX
10	Inability to attend training programmes on potato production due to distance	25	20.83	X
Marketing related constraints				
1	Problem of price variability	92	76.67	I
2	Lack of proper market place (*mandis*)	87	72.50	II
3	Large number of middlemen in the marketing system	82	68.33	III
4	Poor product handling and packaging	58	48.33	IV
5	Poor transportation and communication facility	47	39.17	V
6	Poor storage facility	27	22.50	VI

As regards marketing related problems, majority (76.67%) of the respondents perceived that 'problem of price variability' was the most important constraint faced by the members of FPC which was ranked first. The other constraints faced by the members in marketing of potato were 'lack of proper market place/ mandis' (72.50%), 'large number of middlemen in the marketing system' (68.33%), 'poor product handling

and packaging' (48.33%), 'poor transportation and communication facility' (39.17%) and 'poor storage facility' (22.50%) which were assigned ranks from 2nd to 6th, respectively.

Similar studies were also reported by Singh, (2008); Prabhakar *et al.*, (2012); Salokhe, (2016).

CONCLUSION

Farmer Producer Company (FPC) is emerging as the most effective means of Farmers Producer Organizations (FPO) to cater the needs of farmers at the grass root level. When compared to other forms of farmer aggregation, FPC offers a wide variety of advantages. Production, harvesting, processing, procurement, grading, pooling, handling, marketing, selling, primary produce export aid, welfare measures, financial services, insurance of members' products, and import of commodities or services for their benefit are among its key operations. Promotion of mutual help, welfare measures, financial services, and producer or primary produce insurance are also included. In the study we found that 'Lack of credit facility', 'high cost of labour', 'non availability of good quality seeds', 'high cost of good quality inputs' were the major constraints faced by the members of FPC in production of potato and 'Problem of price variability', 'lack of proper market place (mandis)', 'large number of middlemen in the marketing system' were the major constraints in marketing of potato as perceived by the members of FPCs. Hence, accessible institutional financing should be made available to FPC members, and the concerned FPCs should take efforts to ensure that high-quality seeds and other inputs are delivered on time and at a fair cost to their members. Concerned FPCs should also organise collective marketing of their members' goods, minimizing the use of intermediaries and providing a sufficient profit margin for the farmers.

Conflict of Interest. None.

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