

Demographic Characteristics of Members of Farmer Producer Organisations (FPOs) in Effectiveness of Group Dynamics and their Perceived Constraints in Lower Brahmaputra Valley Zone of Assam, India

ABSTRACT

The present study to investigate demographic profile of FPOs members in the effectiveness of group dynamics and their perceived constraints was conducted in Lower Brahmaputra Valley Zone (LBVZ) of Assam comprising six districts viz., Kamrup, Bongaigaon, NalbariChirang, Barpeta and Goalpara. In doing so, it utilized the descriptive research design following an ex-post-facto approach to fulfil the objectives of the study and. A total of eight FPOs promoted by Assam Agricultural University through CBBO-AAU and World Bank supported APART project were selected purposively. From each FPO, 15 active members were approached for data collection through personal interview method during 2022, which made 120 as final size of sample. The analysis of profile characteristics of the respondents revealed that the Majority of the respondents (FPOs members) in study areas were middle aged (66.67%) between 29 to 50 years with education level from high school to graduate/ above (80.83%), 64.17 percent were from small family size upto 4 members, 90.83 percent of the respondents had medium level of annual income (i.e. Rs 33190- 379866.6), 46.67 percent had medium level of socio- political participation and 38.33 percent low and 35.83 percent high levels of material possession. The study also shows that lack of co-ordination for different group activities, ineffective linkage and ineffective monitoring, lack of professional management, non-availability of timely credit and inadequate access to credit, weak financial position, absence of adequate market linkage, lack of storage facilities, distance from existing markets, lack of market information, lack of marketing knowledge and skills and difficulty in getting skilled labour may be related to the relatively lower achievement at FPO level.

Keywords: Demographic characteristics, Group dynamics effectiveness, Farmer producer organisation, Lower Brahmaputra valley zone, Assam

1. INTRODUCTION

Agriculture and its allied sectors predominantly act as the central pillar of Indian economy, employing 60 per cent of the nation's workforce, which contributes to about 17 percent of the country's GDP with significant role in the nation's entire socio-economic structure. However, the small and marginal farmers (SMFs) face challenges both in production and post production stages like access to production technology, quality inputs at reasonable prices, credit, custom hiring, seed production, value addition, processing, investments and most importantly market access. In this context, group approach has been gaining its wide recognition in India for poverty alleviation in recent years. Collectivization of such small and marginal farmers to form their organizations as Farmer Producer Organisations (FPOs) has been recognized as the most effective and appropriate institutional mechanism to reduce cost of production, increase per unit productivity and facilitate better market linkages so as to enhance their net income. The group based approach does not only help vulnerable citizens to accumulate the capital by

small savings but also provides them with access to structured credit facilities (Shylendra)[1]. Group dynamics involves the influence of personality, power and behaviour on the group process. It is the internal nature of the group as to how they are formed, what their structures and processes are, how they function and affect individual members, other groups and the organization (Van and Schaller) [2]. Thus, underscoring the importance of FPOs, Government of India launched the dedicated Central Sector Scheme titled “Formation and Promotion of Farmer Producer Organizations (FPOs)” in July, 2020 with a clear strategy and committed resources to form and promote 10,000 new FPOs by 2027 with a budgetary provision of Rs. 6865 crores to ensure economies of scale for farmers.

In Assam, presently there are 95 nos. of FPOs registered by different agencies. The importance of FPCs and FPOs in the state of Assam can be envisaged from the fact that Assam has 18.3 lakh marginal farmers and 4.96 lakh small farmers (Ministry of Agriculture & FW) [3]. In this scenario, formations, promotion and implementation of FPCs/ FPOs in Assam have the potentiality of benefiting these large groups of farmers immensely in the state. FPO being an organisation functioning primarily based on the contributions of the member farmers, their participation in activities and decision making, essentially group dynamics is important for better performance of such organisations (Ajith) [4]. As individual farmers, they face many challenges viz. low bargaining power, high transaction costs, lack of access to advisory services, exploitation by middle men, etc., there is an increased realisation that, mobilising and organising farmers into innovative grass-root institutions would help in overcoming these problems (Kumar et. al.) [5], (Singh and Hansra) [6], (Amitha et al.) [7]. This will not only help in augmenting income of the farmers but also considerably improve rural economy and create job opportunities for rural youths in village itself. Hence, the present study was designed and conducted to understand the important demographic characteristics of FPOs members, their role in group dynamics effectiveness and problems faced by them in implementing the various programmes and activities under the organisations.

2. MATERIALS AND METHODS

2.1 Sampling plan and data collection

The present study was carried out in six districts viz., Kamrup, Bongaigaon, Nalbari, Chirang, Barpeta and Goalpara under Lower Brahmaputra Valley Zone (LBVZ) of Assam, India.

These districts had good number of functional FPOs promoted by Assam Agricultural University in both the streams of Cluster Based Business Organisation (CBBO) and Assam Agri-business and Rural Transformation Project (APART).

A total of eight FPOs that were promoted by Assam Agricultural University through CBBO-AAU and World Bank supported APART project were selected purposively. These FPOs were *Maa Chandka Farmer Producer Company Limited* (Kamrup), *Pagladiya Agro-Organic Producer Company Limited* (Nalbari), *Mandia Co-operative Farmer Producer Organisation Ltd.* (Barpeta), *Manikpur Joha Rice Producer Company Ltd.* (Chirang), *Bhairavchura Farmer Producer Company Ltd.* (Bongaigaon), *Aya Bhaikho FPO Co-operative Society Ltd.* (Goalpara), *Maa Banabashi FPO Co-operative Society Ltd.* (Goalpara) and *Nasiriba Producer Company Ltd.* (Goalpara). From each FPO, a total of 15 active members who were directly involving/ associating in activities since inception of the FPOs for better performance of such organizations were randomly selected. Primary data collection from the selected respondents was done by using structured schedule with the help of personal interview method at their place of residence/ organisation. This makes a total sample size of 120 under the study.

2.2 Measurement and analytical tools

Based on inputs from a pilot study and review of literature, six independent variables such as age, education, annual income, family size, material possession and socio-political participation were identified. While Group dynamics effectiveness of FPOs members was considered as dependent variable for the study. Similarly, a set of problem statements pertaining to 7 categories viz; organizational, socio-political, economic, marketing, infrastructural, technical, human resource as well as any other constraints were collected in consultation with experts from Department of Agriculture, Govt. of Assam, Assam Agricultural university, KVKs personnel and review of relevant literature etc. faced by farmers as members of FPOs in the state of Assam. These problem items under each category were arranged in 3-point continuum such as “Not so serious”, “Serious” and “Very serious” with score assigned as 1, 2 and 3 respectively to measure the severity of the problems. The members of FPOs were asked about the problems they are facing and then their level of seriousness in the response category. Based on the responses given by the farmers, frequency distribution, percentages were calculated for each problem.

Problems faced by the FPO members were ranked according to the severity mean weightage score obtained for each problem.

$$P_{twg} = f_{xi} \times 3 + f_{xi} \times 2 + f_{xi} \times 1$$

Where,

P_{twg} = Total weightage score for a problem

f_{xi} = frequency of respondents for each severity

$$P_{mwg} = \frac{P_{twg}}{N}$$

Where, P_{mwg} = Mean weightage score for a problem

N = total number of respondents

3. RESULTS AND DISCUSSION

To have a better understanding of profile characteristics, a total of six socio- personal characters were analyzed in the present study. The respondents were categorized and frequency and percentage were also calculated to understand the distribution of respondents. In addition, mean, standard deviation (S.D) and coefficient of variation (C.V.) were also calculated.

Table 1. Socio-economic characteristics of FPOs members (N=120)

Independent variable	Category	Rang e/ score	Frequency (f)	%	Mean	S.D	C.V.
Age	Young (Below 30 years)	1	18	15.00			
	Middle (Between 30 – 50 years)	2	80	66.67	40.15	10.14	25.26
	Old (Above 50 years)	3	22	18.33			
Education	Illiterate	0	0	0.00			
	Can read only	1	1	0.83			
	Can read and write/primary level	2	8	6.67			
	Middle school level	3	14	11.67			
	High school level	4	38	31.67	-	-	-
	H.S/ P.U level	5	36	30			
	Graduate/diploma or above	6	23	19.16			
Family size	Small (Up to 4 members)	1	79	65.83			
	Medium (5-7 members)	2	29	24.17			

	Large (8 members and above)	3	12	10				
					1.44	0.67	46.53	
Annual income	Low <Rs. 33190	1	1	0.84				
	Medium (Rs. 33190- 379866.6)	2	109	90.83	206528.3	173338.3	83.92	
	High >Rs. 379866.6	3	10	8.33				
Socio- political participation	Low <(Mean-S.D.)	1	0	0.00				
	Medium (Mean-S.D. to Mean + S.D.)	2	83	69.17	2.20	1.31	59.54	
	High >(Mean +S.D.)	3	37	30.83				
Material possession	Low <(Mean-S.D.)	1	45	37.5				
	Medium (Mean-S.D. to Mean + S.D.)	2	31	25.83	2.52	1.44	57.14	
	High >(Mean +S.D.)	3	44	36.67				

3.1 The variable-wise findings and discussion

Age

The data presented in Table 1 indicate that majority (66.67%) of the FPO members belonged to middle age group of 30-50 years, followed by old age (18.3%) of above 50 years. While only 15 percent respondents belonged to middle age with the age range between 31 to 50 years. The mean value of the age of FPO members was found to be 40.15 with a standard deviation of 10.14. The coefficient of variation was 25.26% which shows low degree of variation among the FPO members in terms of age. From the results, it can be concluded that the majority of the FPO members belonged to the age group of 30-50 years followed by the members belonging to the age group of above 50 years. It can be observed that very less proportion of younger generation i.e below 30 years were members of FPOs. The probable reason may be that young people prefer to work in other jobs and trades that provide more income compared to farming in short term period. They did not want to pursue farming as profession as it is less profitable and has a higher risk as compared to other profession. Besides, majority youths did not own land that means that they were not farmers and could not have membership in an FPOs. The findings are in conformity with those of Dechammaet

al. [8], Amitha et al. [7] and Mahesh Babu et al.[9] in their study on Profile characteristics of members of Farmer Producer Organizations (FPOs).

Education

The table also indicate that 31.67 percent respondents had high school level education (9-10 years of formal education), followed by higher secondary education (30.00%) with 11-12 years of formal education, Graduate/diploma or above (19.16%) with 13-15 years of formal education, middle school level education (11.67%) with 6-8 years of formal education and 6.67 percent respondents were with primary level education. The study further shows that only 1 respondent (FPO member), i.e., 0.83 percent of the total respondents was reported in “can read only” category. While no respondents was found to be illiterate in the study area. It can be concluded that majority of the FPO members were having 6 to 15 years of educational experience. They had middle level, high school level to graduation or above level of education. All the FPO members were educated and it can be implied that people were aware of the importance of education or otherwise, it might be due to the availability of schools and colleges in their area. The findings of the current study are supported by the findings of Dechamma et al. [8], Amitha et al. [7] and Mahesh Babu et al.[9].

Family size

Over half of the respondents (65.83%) had a small family size with up to 4 members, followed by 24.17 percent respondents having medium family size with 5 to 7 members and only 10 percent respondents had large family size with more than 8 members in family. The mean score of family size was calculated to be 1.44, S.D of family size was 0.67 with a coefficient of variation of 46.53 percent with clear indication that majority respondents were from small family. It implies that majority of the FPOs members were from nuclear family. The joint family system is slowly declining and most people prefer nuclear family nowadays. This finding is supported by the findings of Suthamati and Prabhu [10].

Annual income

Annual income includes the income earned from agriculture and other occupation by the FPO member throughout the year. It is apparent from the table that over three-fourths (90.83%) of the respondents had medium level of annual income (i.e. Rs 33190- 379866.6), followed by 8.33 percent respondents having high level of annual income (> Rs 379866.6) and only 0.84 percent of them had low level of annual income (<Rs 33190). The mean annual income of

respondents is Rs. 206528.3 with S.D. and C.V. values were 173338.3 and 83.92 percent respectively. It is evident from the results that majority of the FPO members were having medium level of annual income (Rs 33190-379866.6) to high level of annual income (>Rs. 379866.6). Very less no. of FPO members had lower level of annual income. It may be due to the fact that the FPO members having medium to higher level of annual income might be earning from occupations along with agriculture. While the FPO members having low annual income is solely dependent on agriculture. This finding is in conformity with the findings of Amitha et al. [7], Prema and Manonmani [11].

Social-political participation

Findings presented in Table 1 indicate that more than half of the respondents (69.15%) had medium level of socio-political participation and remaining 30.83 percent had high level of socio-political participation. There was no respondent without any socio-political participation in the study area. The socio-political participation mean score of respondents was 2.20 with S.D. of 1.31 and coefficient of variation (C.V) of 59.54 percent. It can be concluded from the above result that majority (69.17%) of the FPO members had medium level of socio-political participation and remaining 30.83 percent of the FPO members had high level of socio-political participation. There is no FPO member without any socio-political participation. This may be due to the reason that FPO is a rural community organization where farmers have frequent contact with each other on activities of FPO as board members, members of purchase committees and regular interaction with promoting and facilitating agencies of various departments had made them aware about the importance of socio-political participation. This finding was supported by findings of Ahire and Kapse [12] and Wahab [13].

Material possession

Material possession refers to the materials and animal wealth possessed by the FPO members. It is apparent from Table 4. and Fig 1 that 37.5 percent of respondents had low level of material possession, followed by 36.67 percent of respondents having high level of material possession and remaining 25.83 percent had medium level of material possession. The material possession mean score of respondents was 2.52, with S.D of 1.44 and coefficient of variation (C.V) of 57.14 percent. It can be concluded from the above result that majority (37.5%) of the FPO members had low material possession, followed by 36.67 percent of FPO members having high material possession and remaining 25.83 percent had medium level of

material possession. It may be because of the reason that FPO members are farmer members that have medium level of annual income, so they want to spend their income wisely and want to have only those materials or animal wealth that they really needed. While other FPO members having higher level of annual income had the ability to buy more materials and animal wealth thus has higher material possession. This finding is supported by the finding of Swathi Lekshmi et al.[14].

3.2 Relationship of socio-economic characteristics of FPO members with their Group Dynamics Effectiveness Index

In order to study the nature of relationship between personality traits of respondents and group dynamic effectiveness index (GDEI), the rank order correlation co-efficients were calculated with the help of computer software SAS 9.2. The results are presented in Table 2. From the table, it is seen that out of 6 independent variables under study namely; age, education, family size, socio-political participation, annual income and material possession, four variables viz. education, annual income, socio-political participation and material possession Of the beneficiary members of FPOs had positively significant correlation with their group dynamic effectiveness as evident from their corresponding ‘r’ values. This finding was supported by that of the study conducted by Vipinkumar and Singh [15]and Ganguli [16]in case of education and socio-political participation. While family size was found to be having negative correlation with the group dynamics effectiveness of FPOs members in study areas. This is probably due to the large family size, the members were involved more in household activities and they didn’t spent more time in group activity. The results are in conformity with that of Garai and Maiti [17]. This indicates that higher the level of those positively significant variables of the respondents higher would be their level of effectiveness of their group dynamics in FPOs. Hence, the concerned stakeholders in the zone should provide more efforts to improve and develop those dominant personality traits through different innovative extension approaches including capacity building programmes supported by the provision for infra-structure facilities and inputs supply.

Table 2. Relationship between personal and socio-economic characteristics of FPO members with their Group Dynamics Effectiveness Index

Independent variable	‘r’ value	‘t’ value	‘p’ value
Age	0.056	0.061	0.951
Education	0.227	2.397*	0.045
Family size	-0.136	-1.490	0.138
Land holding	0.053	0.577	0.566
Socio-political	0.107	1.170*	0.044

participation			
Annual income	0.207	2.306*	0.022
Material possession	0.501	6.298*	0.040

* Significant at 0.05 level of probability

3.3 Constraints faced by the Farmer Producer Organizations (FPOs) in effectiveness of Group dynamics as perceived by their members

In order to study the problems perceived by respondents, a set of problem statements pertaining to 7 (seven) categories viz; organizational, socio-political, economic, marketing, infrastructural, technical, human resource as well as any other constraints were collected in consultation with experts from Department of Agriculture, Govt. of Assam, Assam Agricultural university, KVKs personnel and review of relevant literature etc. normally faced by farmers as members of FPOs in the state of Assam. The results are presented in Table 3.

Table 3. Constraints faced by FPOs members

S.No.	Constraints	Total score	Mean score	Rank
A.	Organisational constraints			
1	Lack of professional management	244	2.03	I
2	Lack of co-ordination for different group activities	233	1.94	II
3	Predominance of part time farmers	227	1.89	III
4	Weak organisational leadership	225	1.87	IV
5	Inefficient monitoring	223	1.86	V
6	Lack of trust amongst members	217	1.81	VI
7	Non – inclusion of local leaders in FPO	216	1.80	VII
8	Non – availability of literature on FPO activities	211	1.76	VIII
9	Ineffective linkage	207	1.72	IX
	Total	2003	16.68	
	Average of total mean score		1.85	VI
B.	Socio-political constraints			
1	Social tensions affecting effectiveness	218	1.82	I
2	Political affiliation of members	203	1.69	II
3	Non – representation of all sections in the area	202	1.68	III
	Total	623	5.19	
	Average of total mean score		1.73	VII
C.	Economic constraints			
1.	Weak financial position	285	2.37	I
2.	Non – availability of timely credits and inadequate access to credit	276	2.3	II
3.	In adequate profit to individual members	271	2.26	III
	Total	832	6.93	
	Average of total mean score		2.31	I
D.	Marketing constraints			

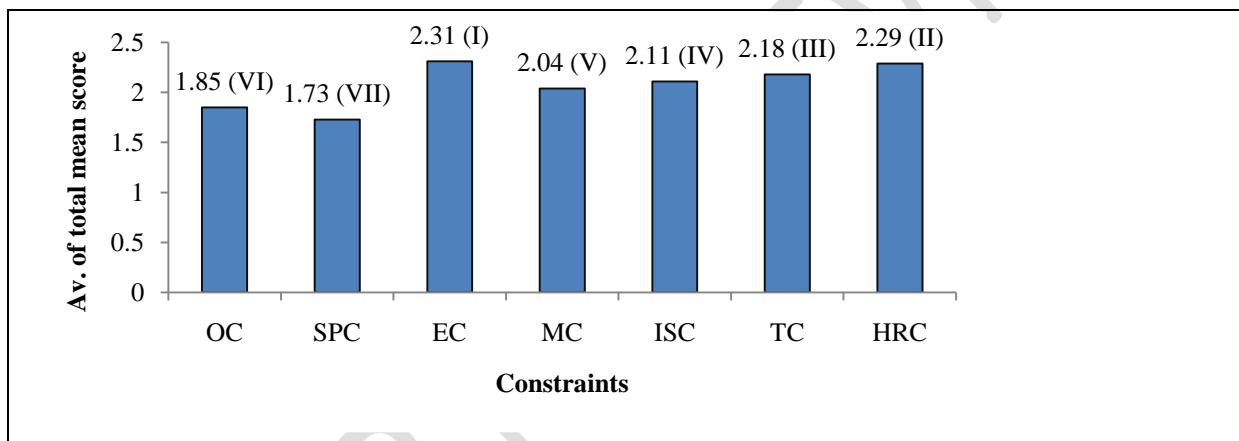
1.	Lack of storage facilities	272	2.27	I
2.	Low price for produces	264	2.2	II
3.	Preponderance of middlemen	250	2.08	III
4.	Lack of market information	241	2.01	IV
5.	Lack of produce transportation facilities	240	2.00	V
6.	Lack of marketing knowledge and skills	240	2.00	V
7.	Absence of adequate market linkage	236	1.97	VI
8.	Great distance from existing markets	222	1.85	VII
Total		1965	16.38	
Average of total mean score			2.04	V
E.	Infra-structure constraints			
1.	Lack of post-harvest handling facilities	275	2.29	I
2.	Lack of cold storage facilities	272	2.27	II
3.	Lack of warehouse facilities	253	2.11	III
4.	Lack of proper office building of the FPO	214	1.78	IV
Total		1014	8.45	
Average of total mean score			2.11	IV
F.	Technical constraints			
1.	Lack of technical knowledge and skills	281	2.34	I
2.	Absence of technical guidance and support	258	2.15	II
3.	Difficulty in getting required production inputs	256	2.13	III
4.	Difficulty in getting required machineries and equipments	252	2.1	IV
Total		1047	8.72	
Average of total mean score			2.18	III
G.	Human resource constraints			
1.	Difficulty in getting labour in peak season	289	2.41	I
2.	High labour wages	282	2.35	II
3.	Difficulty in getting skilled labour	270	2.25	III
4.	Lack of training facilities for capacity building of members	260	2.17	IV
Total		1101	9.18	
Average of total mean score			2.29	II

The findings presented in Table 3 reveal that out of nine identified problems under organizational constraints, lack of professional management emerged as the most important problem as indicated by its highest mean score of 2.03 and thus ranked first. Prishila Kujur et al. [18] also observed that poor professional management was one of the major hurdles for better performance of Producer Organizations. The other important problems in order of importance under this category were lack of co-ordination for different group activities with mean score of 1.94, predominance of part time farmers (1.89), weak organisational leadership (1.87), inefficient monitoring (1.86), lack of trust amongst members (1.81), non – inclusion of local leaders in FPO (1.80), non – availability of literature on FPO

activities(1.76) and ineffective linkage (1.72) respectively. The table also shows that social tensions affecting effectiveness was the most important problem pertaining to socio-political constraints. This was followed by political affiliation of members and non – representation of all sections in the area, as indicated by their corresponding mean values of 1.82, 1.69 and 1.68. Chopade et al. [19]also reported that lack of coordination for different group activities, political affiliation of members andlack of support from the government department after the establishment ofFPCs were the major problems in effective functioning of the organization. With regard to economic constraints, the study indicates that weak financial position was reported as the most significant problem followed by non– availability of timely credits and inadequate access to credit and in adequate profit to individual members faced by FPOs members, which according to them ranged from serious to very serious as evident from their corresponding mean values of 2.37, 2.30 and 2.26 respectively. The findings are in conformity with those of Nithya Shree and Vaishnavi [20].The study also reveals that lack of storage facilities (2.27), low price for produces (2.2), preponderance of middlemen (2.08), lack of market information (2.01), lack of produce transportation facilities (2.0) and lack of marketing knowledge and skills (2.0) were the other important problems related to marketing constraints ranging from serious to very serious problems. While other 2 problems under the category were absence of adequate market linkage (1.97) and great distance from existing markets (1.85). Rao [21] and Anand [22]observed thatlack of marketing facilities was one of the important problems confronting the performance of self help groups.Verma et. al.(23] also confirmed that inadequatestorage facilities and shortage of transportation facilities were the major constraints perceived by themembers and non-members towards the functioning of FPO. In case of infra-structure constraints, the study shows that the problem like lack of post-harvest handling facilities was found to be the most important one with highest mean value of 2.29 followed by lack of cold storage facilities (2.27) and lack of warehouse facilities (2.11), which ranged from serious to very serious as indicated by their corresponding mean values. The other important problem pertaining to this category was lack of proper office building of the FPO with mean value of 1.78. All the specific problems identified under technical constraints were found to be serious to very serious as perceived by the FPOs members in study areas, as clearly indicated by their corresponding mean values such as lack of technical knowledge and skills (2.34), absence of technical guidance and support (2.15), difficulty in getting required production inputs (2.13) and difficulty in getting required machineries and equipments (2.10) respectively. In case of

human resource constraints, Difficulty in getting labour in peak season was reported as the most important problem. This was followed by high labour wages, difficulty in getting skilled labour and lack of training facilities for capacity building of members, as evident from their corresponding mean values of 2.41, 2.35, 2.25 and 2.17 respectively and ranked them in descending order of importance accordingly.

The study further shows that category-wise, economic constraints was found to be the most important one with the highest average mean value of 2.31 compared to other remaining constraints. The other constraints in order of importance based on their corresponding mean values were human resource constraints (2.29), technical constraints (2.18), infra-structure constraints (2.11), marketing constraints (2.04), organizational constraints (1.85) and socio-political constraints (1.73).



(OC: Organisational constraints; SPC: Socio-political constraints; EC: Economic constraints; MC: Marketing constraints; ISC: Infra-structure constraints; TC: Technical constraints and HRC: Human resource constraints)

Fig. 1: Graphical presentation of category-wise problems of FPOs members

4. CONCLUSION

The expressed constraints, viz., lack of co-ordination for different group activities, ineffective linkage and ineffective monitoring, lack of professional management, non-availability of timely credit and inadequate access to credit, weak financial position, absence of adequate market linkage, lack of storage facilities, distance from existing markets, lack of market information, lack of marketing knowledge and skills and difficulty in getting skilled labour may be related to the relatively lower achievement at FPO level. In order to address this, the profile strengths of the sample, viz, young age,

relatively high educational profile, medium to high material possession and relatively high socio-political participation should be suitably exploited while reducing the profile weakness of low to medium annual income. The concerned authority of department of agriculture including KVKs must take proactive interventions such as management and leadership training at formative stage targeting the younger and relatively higher educated members of the organisations. It is also suggested for exploration of market linkages through a proactive and strategic approach by utilizing social linkages of members for better profitability. Cooperation spirit, goodwill and mutual trust among group members are considered as the items which are necessary for the effective and successful functioning of the farmer's producer organisations.

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