

Factors Contributing Farmers' Association in Tata Kisan Sansar: A Critical Analysis

Anirban Mukherjee¹, Ram Bahal², R. Roy Burman³ and S. K. Dubey⁴

1. Ph.D. Scholar, 2. Principal Scientist, 3. Sr. Scientist, Division of Agril. Ext.,

4. Sr. Scientist (CATAT), IARI, New Delhi

Corresponding author e-mail: anirbanmukjiari@gmail.com

ABSTRACT

Private extension, as one mechanism, providing effective services to the farmers is becoming popular in developing countries including India. At present, there are many private companies working as extension agencies among these TATA has done quite impressive job not only in agricultural sector but also in developing rural scenario. Tata Kisan Sansar (TKS) had started in 2002 by Tata Chemicals Limited with an objective of providing technology information and crop advisory services to empower the farmer as well as providing agricultural inputs to them. It is working through 'hub and spoke' model. In Tata Kisan Sansar there is a provision of having membership of farmers. These member farmers have created an association called Tata Kisan Parivar (family). The present study was conducted in Aligarh district of Uttar Pradesh to find out factors associated with farmers membership in Tata Kisan Sansar. Data was collected from two outlets of Tata Kisan Sansar i.e. at Gabhana and Harduaganj, 50 member farmers were selected randomly. Farmers profile analysis was done under socio personal, communication and socio psychological dimensions. It was found that education, occupation, social participation, extension agency contact, economic motivation, innovation proneness and marketing orientation were positively and significantly correlated with dependent variable farmers' membership in TKS. The six variables viz. marketing orientation, education, economic motivation, social participation, family size and extension agency contact influenced 74.00 per cent in farmers membership in TKS.

Key words: Tata Kisan Sansar; Correlation; Stepwise multiple regression; Socio personal variables;

Pprivate extension, as one mechanism, providing effective services to the farmers is becoming popular in developing countries including India. According to *Bloome (1993)* private extension involves any person or organisation in the private sector, which delivers advisory services in areas of agriculture and is seen as an alternative to public extension. Many developed countries have gone far ahead with this system and outcome has been seen as a mixed one. At present, there are many private companies working as extension agencies like 'Hariyali Kisan Bazaars' (DCM), 'Aadhars' (Pantaloone-Godrej JV), 'Choupal Sagar' (ITC) 'Kisan Sansars' (Tata), Reliance Fresh, and others such as the 'Naya Yug Bazaar, Gurdian Aushadhi, Kisan Seva Kendra (Indian Oil corporation), Mahindra & Mahindra, Rallis etc. Among these Tata has done an excellent innovative job for ushering rural prosperity not only retailing the agricultural inputs but also all kind

of advisory services to farmers of rural India.

Tata Kisan Sansar is an initiative of Tata Chemicals Limited (TCL). With a vision of environmental and biodiversity restoration and "giving back to society", Tata Chemicals Limited had promoted the Tata Chemicals' Society for Rural Development (TCSR) for the benefit of the rural population, in and around the company's plants and townships. Tata Kisan Sansar (TKS) was the initiative of the Tata Group under the flagship of Tata Chemicals to provide the technological aspects for solving India's social and economical problems for enhancing agricultural productivity and on the road to recover the condition of rural farmers. (http://www.tatachemicals.com/services/tata_kisan_sansar.htm). In order to support the activities of TKS, which are basically franchisee outlets, the supply chain model that evolved is a 'hub and spoke' model. The hub acts as the Resource Center to cater to

the needs of the TKS in its vicinity. Each Resource Center supports primarily 20-25 TKS franchisee outlets called Distribution Centre or Spoke in a radius of 50-60 km, where each TKS cater to 30-40 villages covering approximately 13 million acres. The hubs were named as "Tata Krishi Vikas Kendras" the word "Vikas" being synonymous with value added activities conducted like organization of farmer meets, repository of related agriculture knowledge, soil, water and plant testing laboratory, demonstration farms, an input storage house, and also distribution centres or spokes. The Tata Kisan Sansars are spread across 68 districts in the North Zone and 20 districts in the East Zone spanning 4 and 3 states respectively. Presently, there are 32 hubs, which cater to 681 Tata Kisan Sansar covering around 22,000 villages reaching out to approx. 2.7 million farmers. (<http://www.tatakisansansar.com/>)

Membership criteria of Tata Kisan Parivar (TKP): In Tata Kisan Sansar there is a provision of having membership of farmers. These member farmers have created an association called Tata Kisan Parivar (family). The Tata Kisan Parivar Membership Program is unique affiliation based initiative intended to facilitate participation of the most important stakeholder in the value chain.

The membership is voluntary and renewable in each and every year with a nominal cost of Rs.115 per annum. These members are enjoying a host of benefits include:

- i. Free Soil Testing before cropping season,
- ii. Accidental Insurance of up to Rs. 1 Lakh,
- iii. Educational trips organized by TCL to various information platforms like crop visits, demo farm visits etc.
- iv. Free Subscription to the TKS quarterly magazine – the TKS Patrika (magazine),
- v. Annual TKS diary,
- vi. Exclusive Membership Card
- vii. Exposure to various forums for disseminating and gathering information like crop seminars, Kisan Melas (Farmers fair), Agri Exhibitions etc.

Interestingly, since 2007 to 2011 each year more than 900 new members are joining the Tata Kisan Sansar. According to Mukherjee *et. al.* (2011) 28 per cent of the member farmers of TKS have very high level of satisfaction and majority (72%) of farmers have higher level of satisfaction from quality inputs and

services of TKS. Apart from inputs and services there are some personal variable which influence to take membership in TKS. The present study aimed to analyse member farmers profile and different factors related to farmers' membership in Tata Kisan Sansar.

METHODOLOGY

The present study was conducted in Aligarh district of Uttar Pradesh. The state of Uttar Pradesh was selected purposively for the study, because maximum numbers of Tata Kisan Sansar resource centers situated in this state. Aligarh District was purposively selected as it is one of the pioneer districts where Tata Kisan Sansar established, and well organized. Semi structured interview schedules was developed to collect the data from respondents. Data was collected from two outlets of Tata Kisan Sansar i.e. at Gabhana and Harduaganj. Each outlet covers farmers from 20-23 nearby villages. From them 50 member farmers were selected randomly. Profile analysis, and comparison of member and non member farmers was done by using descriptive and inferential statistics. To support findings of primary data and verifying the same, secondary data was also collected from Tata Kisan Sansar offices and Tata Chemicals websites.

RESULTS AND DISCUSSION

Farmers profile analysis is an important tool to understand about different characteristics of farmers. For this purpose socio personal, communication and socio psychological dimensions were considered.

Table 1 depicted farmer's distribution according to different socio personal variables. It was evident that most of the respondents were in younger class with frequency 64 per cent and rests were of middle aged. It indicated that the young farmers were taking more membership than elders.

In case of educational point of view the number of member farmers' were 17 (34%) who had completed higher secondary level of education, where 32 per cent was of middle level. Level of education also denoted that the educated farmers were more interested in taking membership of Tata Kisan Sansar. Interestingly, the farmers having family member less than 7 were consisting 50 per cent of the sample. It indicated that the small farming family were joining more as a member.

Table 1. Distribution of the member farmers according to Socio-personal variables (N=50)

S. No.	Socio-personal variables	Member farmers	
		No.	%
A	<i>Age</i>		
1.	Young (35 Years and below)	32	64
2.	Middle age (36-58) years	18	36
3.	Old (59 years and above)	0	0
B	<i>Education</i>		
1.	Primary	10	20
2.	Middle	16	32
3.	Higher secondary	17	34
4.	Collegiate	7	14
C	<i>Family size</i>		
1.	<7	25	50
2.	8-10	9	18
3.	11-15	12	24
4.	>15	4	8
D	<i>Farm size</i>		
1.	0-1 ha (Marginal farmer)	6	12
2.	>1-2 ha (Small farmer)	5	10
3.	>2-4 ha (Semi medium farmer)	20	40
4.	>4-40 ha (Medium farmer)	19	38
E	<i>Farming experience</i>		
1.	Up to 10 years	28	56
2.	>10-20	18	36
3.	More than 10	4	8
F	<i>Occupation</i>		
1.	Farming	12	24
2.	Farming + Labour	0	0
3.	Farming + Business	17	34
4.	Farming + Independent profession	6	12
5.	Farming + Service	15	30
G	<i>Social participation</i>		
1.	No membership	21	42
2.	Membership in one organization	19	38
3.	Office holder	10	20
H	<i>Urban contact</i>		
1.	Weekly	12	24
2.	Fortnightly	8	16
3.	Monthly	15	30
4.	Quarterly	15	30

In case of land holding, mostly semi medium (40%) and medium farmers (38%) were the member. Farming experience also indicated that the majority of the farmers (56%) were having less than 10 years of experiences whereas 36 per cent of the respondents were of 10 to 20 years of farming experiences.

Data from Table 1 clearly indicated that the occupation of the majority of the respondents (34%) was farming + business category. Thirty per cent of them were also doing part time services either in public or private organisation. Twenty four per cent of farmers were solely dedicated to farming.

Social participation is important socio personal variable. It was seen that 20 per cent of the Member farmers were involved in official post of some social organizations but majority of them (42%) were not taking part in any of the organizations.

In case of level of urban contact, 30 per cent respondents visited urban areas monthly and quarterly followed by 24 per cent weekly and 16 per cent fortnightly. Urban contact indicated the mobility according to requirements. The farmers were getting the facilities in village itself for which monthly and quarterly contacts were accounting more.

Table 2. Distribution of the member farmers according to Communication variables (N=50)

S. No.	Communication Variables	Member farmers	
		No.	%
A	<i>Extension agency contact</i>		
1.	Once in three months	1	2
2.	Once in two months	9	18
3.	Monthly	19	38
4.	Fortnightly	21	42
B	<i>Mass media utilization</i>		
1.	Some time	5	10
2.	Often	15	30
3.	Most often	30	60

The communication of the respondents with the extension agency is shown in Table 2. The Member farmers had frequent contact with the extension agency (fortnightly 42%) where as 38 per cent farmers had monthly contacts with extension agencies of Tata Kisan Sansar and other governmental organisation.

Based on the mass media utilization it was classified as in three categories and was seen that mass media was being most often utilized by 60 per cent farmers, often utilized by 30 per cent. Only 10 per cent of respondent used mass media some times. The data indicated that the members were good in communication aspect.

Table 3 described the distribution of the respondents according to socio psychological variables. The respondents who have taken membership of TKS had high economic motivation 68 per cent. This might

be due to the intention of the member farmers to get the assured price for the produce.

Most of the farmers had a higher level of innovation proneness i.e. 76 per cent while 24 per cent farmers had medium innovation proneness. Interestingly no one farmer has been found to be lies in low innovation proneness. The data in the table clearly showed that the Member farmers of Tata Kisan Sansar had relatively higher level of innovation proneness.

The nature of the farmers with respect to their risk orientation was also measured and it was found that The Member farmers had higher risk orientation (66%) and they were better in encountering the risk and uncertainty. The decision to adopt Membership of Tata Kisan Sansar to grow crops in assured input supply and other support described this very nature about the respondent.

Table 3. Distribution of the member farmers according to Socio-psychological variables (N=50)

S. No.	Socio Psychological Variables	Member farmers	
		No.	%
A	<i>Economic motivation</i>		
1.	Low	1	2
2.	Medium	15	30
3.	High	34	68
B	<i>Innovation proneness</i>		
1.	Low	0	0
2.	Medium	12	24
3.	High	38	76
C	<i>Risk orientation</i>		
1.	Low	3	6
2.	Medium	14	28
3.	High	33	66
D	<i>Marketing orientation</i>		
1.	Low	7	14
2.	Medium	18	36
3.	High	25	50

In case of marketing orientation of the respondents, The Member farmers were well oriented to market. It depicted that 50 per cent member farmers had higher marketing orientation where as in medium categories 36 per cent farmers belonged. Pearson's product moment correlation between selected independent variable and farmers' membership in Tata Kisan Sansar.

The Pearson's correlation was done in this case to determine the real relationship between farmers' membership in Tata Kisan Sansar and different above mentioned independent variables, the direction of the relationship and the strength of the relationship.

Table 4. Correlation between selected independent variable and farmers' membership in Tata Kisan Sansar

S. No.	Name of variables	Pearson's Correlation coefficient
A	Socio personal variables	
1.	Age	-0.271
2.	Education	0.590**
3.	Family size	-0.225
4.	Farm size	-0.098
5.	Farming experience	-0.170
6.	Occupation	0.280*
7.	Social participation	0.398**
8.	Urban contact	0.116
B	Communication variables	
1.	Extension agency contact	0.361*
2.	Mass media utilization	0.014
C	Socio Psychological variables	
1.	Economic motivation	0.680**
2.	Innovation proneness	0.331*
3.	Risk orientation	0.267
4.	Marketing orientation	0.719**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The study revealed that the socio personal characteristics of the respondents namely education, occupation and social participation were positively and significantly related with returns from vegetable cultivation (Table 4). It indicated that the above mentioned characteristics had a relation with farmers' membership in Tata Kisan Sansar.

The farmers having higher level of education was seen to be more eager to take membership in Tata Kisan Sansar. It was because the educated farmers understood more about the schemes of membership and how benefits can be earned. The farmers engaged with other occupation with farming were more interested to take membership as they were unable to put whole time and effort to farming. The Tata Kisan Sansar provided such facilities to the members which helped them in farming. It has also been seen that the farmer with high social participation, interact with several peoples and know about the schemes of membership were more eager to take membership.

In case of communication variables, farmers' extension agency contact was positively and significantly correlated with farmers' membership. In case of socio psychological characteristics of farmers, it was seen that economic motivation, innovation proneness and marketing orientation were positively and significantly

related with farmers' membership in Tata Kisan Sansar. It indicated that the farmers having higher economic motivation, innovation proneness and marketing orientation were highly interested in making relationship with such organization which can help them in farming to earn better economic returns.

Multiple regression analysis of farmers' membership in Tata Kisan Sansar: With Pearson's product moment correlation, we have examined only the association between the different variables but not the causes. For that purpose regression statistics is used to have a sound theoretical reason for hypothesizing such causal link.

The method of line regression analysis was used for predicting the relative contribution of independent variables to influence the dependent variable i.e. farmers membership in Tata Kisan Sansar. All the selected

variables were subjected to multiple linear regression analysis. The finding in Table 5 revealed that the computed F value of 7.662 was highly significant at 0.01 level of probability indicating that all the variables together contributed significantly to the dependent variable farmers' membership. The coefficient of determination (R^2) revealed that 75.40 per cent of farmers' membership was explained by these variables. Out of all these selected variables the 't' value of three variables was found to be significant. These variables were level of education ($t=2.300$), social participation ($t=2.613$) and marketing orientation ($t=2.836$). This may be due to the fact that the educated farmers comprehend better the schemes and procedures of membership and kinds of benefits one can earn. The farmer with high social participation, interact with several peoples and

Table 5. Multiple regression analysis of farmers' membership in Tata Kisan Sansar

S. No.	Independent variables	Unstandardized coefficient		Standardized coefficient Beta	t value	Partial correlation (b)
		B	Std. Error			
	(Constant)	-0.180	1.158		-0.155	
1	Age	-0.013	0.028	-0.111	-0.460	-0.078
2	Education	0.256	0.111	0.289	2.300*	0.362
3	Family size	-0.120	0.062	-0.216	-1.950	-0.313
4	Farm size	0.034	0.069	0.055	0.487	0.082
5	Farming experience	0.037	0.043	0.190	0.852	0.143
6	Occupation	-0.057	0.073	-0.079	-0.777	-0.130
7	Social participation	0.460	0.176	0.270	2.613*	0.404
8	Urban contact	0.035	0.102	0.037	0.338	0.057
9	Mass media utilization	0.039	0.163	0.024	0.241	0.041
10	Extension agency contact	0.190	0.154	0.140	1.236	0.205
11	Innovation proneness	0.055	0.119	0.059	0.461	0.078
12	Economic motivation	0.034	0.030	0.154	1.158	0.192
13	Risk orientation	0.001	0.023	0.005	0.051	0.009
14	Marketing orientation	0.081	0.029	0.384	2.836**	0.432

R^2 value = .754 (75.40%); F value = 7.662**; **. Correlation is significant at the 0.01 level (2-tailed);

*. Correlation is significant at the 0.05 level (2-tailed); Durbin-Watson value 1.507

Table 6. Step-wise multiple regression analysis of farmers' membership in Tata Kisan Sansar

S. No.	Independent variables	Multiple correlation coefficient (R)	R^2	Unstandardized coefficient		Standardized coefficient Beta	t value
				B	Std. Error		
	Constant			.162	.663		.245
1	Marketing orientation	.719	.517	.074	.024	.350	3.149**
2	Education	.773	.598	.212	.081	.239	2.606**
3	Economic Motivation	.809	.654	.044	.024	.199	1.816
4	Social participation	.829	.687	.448	.147	.263	3.047**
5	Family size	.845	.714	-.111	.047	-.199	-2.356*
6	Extension agency contact	.860	.740	.233	.113	.172	2.066*

F Value = 20.398**; **Correlation is significant at the 0.01 level (2-tailed);

*Correlation is significant at the 0.05 level (2-tailed); Durbin-Watson value 1.440

became aware about the schemes of membership and marketing oriented farmers were highly interested in making relationship with such organization which can help them in farming to earn better economic returns.

Step-wise multiple regression analysis of farmers' membership in Tata Kisan Sansar: Stepwise multiple regressions is a way of choosing predictors of a particular dependent variable on the basis of statistical criteria. Essentially the statistical procedure decides which independent variable is the best predictor, the second best predictor. It is a type of multiple regressions and is called hierarchical multiple regressions which provides specific predictors. In this case Step-wise regression analysis was used to get joint influence of the independent variables to the dependent variable i.e. farmers' membership in Tata Kisan Sansar. Though the multiple regression analysis gave the influence of all selected independent variables jointly, it was felt better to have a simpler model in which there would be lesser number of predictors in explaining the dependent variable.

The results presented in table 6 indicated that the marketing orientation contributed 51.70 per cent in farmers' membership. However, marketing orientation and education both accounted 59.80 per cent; while marketing orientation, education and economic motivation together accounted 65.40 per cent. Along with that, social participation, family size and extension agency contact also contributed much in membership

of Tata Kisan Sansar. All together, these six variables viz. marketing orientation, education, economic motivation, social participation, family size and extension agency contact contributed 74.00 per cent in farmers' membership.

CONCLUSION

Tata Kisan Sansar member farmers are educated, mostly young and middle aged person engaged in different other income generating activities along with farming, have good social participation, urban contact and extension agency contact. The Member farmers use mass media effectively. Education, occupation, social participation, extension agency contact, economic motivation, innovation proneness and marketing orientation were found to be significantly associated in farmers' membership in TKS. Whereas marketing orientation, education, economic motivation, social participation, family size and extension agency are significantly influenced the farmers in taking membership of TKS. Farmers were more concerned about the quality of produce to get better market price which will ultimately lead to more profit. If the farmers become member of TKS to ensure timely quality inputs and value added services to get quality produce and better market for better profit.

Paper received on : November 23, 2011

Accepted on : February 11, 2011

REFERENCES

1. Bloome, P. (1993). Privatization lessons for US extension from New Zealand and Tasmania. *J. Ext. Int.* **31** (1): 24-25
2. Mukherjee, A.; Bahal, R.; Roy Burman, R.; Dubey, S.K.; Jha, G.K. (2011). Effectiveness of Tata Kisan Sansar in technology Advisory and Delivery Services in Uttar Pradesh. *Indian Res. J. Ext. Edu.*, **11** (3): 8-13.
3. <http://www.tatakisansansar.com/> and http://www.tatachemicals.com/services/tata_kisan_sansar.htm
