RESEARCH ARTICLE

SOCIO-ECONOMIC AND AGRO-SITUATIONAL PERSPECTIVES OF SMALL TEA GROWERS OF NORTH BENGAL, INDIA

[1]Avrajyoti Ghosh and *[2]Pal, P. K.

[1]Sr. technical officer, ICAR-Central Plantation Crops Research Institute (Research Center), PO.-Mohitnagar, Dist,-Jalpaiguri, WB, India
[2]Associate Professor, Uttar Banga Krishi Viswavidyalaya. PO, Pundibari, Dist.-Cooch Behar, WB, India

ABSTRACT

Small tea growing system (STGS) is gradually emerging as a promising sector in North-Bengal and being substitutive to the traditional crop production system. High return compared to other traditional crops and less risk of crop failure makes it more popular among the youth; and small and marginal farmers. Limited works has been done on STGS in North-Bengal perspective. In this condition, to study the socio-economic and agro-situational perspectives of small tea grower of North Bengal, present study was undertaken in Jalpaiguri and Uttar-Dinajpur district as the most concentrated small tea growing districts in West Bengal. The maximum Small tea growing system of North-Bengal is dominated by younger and middle age group who were from small or nuclear family. Maximum small tea growers are educated up to high school level with moderate to high economic status. They have moderate level of cosmopoliteness and extension media contact. Besides it, except innovativeness , they are possessing moderate to high level of self confidence and leadership characters. In case of total land holding status, STG of North-Bengal possesses mean land of 3.27 acre of which 3.21 acre is under irrigation. The mean area of small tea garden in Jalpaiguri district is observed low in comparison of Uttar-Dinajpur district.

INTRODUCTION

The concept of cultivating tea individually in small holding is relatively a recent phenomenon which was extensively started since 1990s; although in North India, it was started in Upper Assam during the late seventies and early eighties. A number of youth in the region initiated the process of growing tea in upland abandoned areas. The initial experiment was largely successful and attracted others to enter similar ventures (Hannan, 2013). Relatively low capital required for investment, favourable climate condition, technical support from cheap and skilled surplus labourers from big tea gardens in these areas to extend technical support and a locally available market for green tea leaves turned this new effort of a section of local and enthusiastic youth into a huge success story (Tea Board, 2011). In Bengal, history of small tea growing started from North-Bengal area transforming traditional pineapple fields into tea due to lack of processing units, cold storage and problem of demand and market. The majority of the pineapple growers of North-Bengal took advantages of this situation and converted their land from pineapple to tea plantations (Tea Board, 2007; Majumdar, 2008; Hannan, 2013). Afterwards, gradually, the traditional crop areas had also been converted as small tea growing sector in North Bengal. Now-a-days in North-Bengal area there are approximately 50,000 numbers of small tea

growers who supplied around 36% of total tea production received during 2013-14 in North Bengal (ABP, 2014). The definition of small tea growers (STGs) varies from country to country. However, in India, they are defined as a tea grower who is having tea plantation upto 10.12 hactare and not possessing his own tea processing factories (Tea Board of India, 2002).

Small tea growing system is gradually emerging as a promising sector and being substitutive to the traditional crop production system. Small and marginal farmers are dependent on tea plantation for their livelihood. Tea in the North Eastern region has become a farmers' crop, providing livelihood and new opportunity not only for self-employment but also for other wage earners (Barua and Taparia, 2004; Hannan, 2013).

The abundance of suitable land and climate, demonstration effect of tea estate in immediate surroundings, skilled labour, advantage of a long duration plantation crop over the other seasonal agricultural crops, suitable soil and minimum risk are some of the factors that encouraged the small and marginal farmers as well as educated unemployed and others to take up tea plantation (Mansingh and Jhonson, 2012). Tea cultivation provides work and income throughout the year for at least 8 to 10 months which attracted small and marginal farmers to this sector (Tea Board of India, 2011). Socio-economic and agro-situational characters are the important determinants of human behavior towards some action. It is imperative to study these characters in any social science research to understand the

Corresponding author: Pal, P. K.,
Associate Professor, Uttar Banga Krishi Viswavidyalaya. PO, Pundibari, Dist.-Cooch Behar, WB, India.

overall as well as area-specific features of different variables under investigation. This investigation was undertaken as a part of Ph. D. study (2011-14) in North Bengal in respect of different social, economic and personal characters of small tea growers.

MATERIALS AND METHODS

In North-Bengal area Jalpaiguri and Uttar-Dinajpur districts were purposively selected because these two districts comprise about 80% of small tea growers (Tea Board of India, 2011). Among these two districts, higher concentration of growers was found in Jalpaiguri and Islampur sub-divisions. Therefore random sampling was employed to select the respondents from these two sub-divisions. Hundred small grower from each sub-division have been selected randomly for interview. Data were collected by interviewing the respondents with the help of a structured pre-tested schedule.

Social variables like caste, religion and family information, personal variables like age, education, family education status, communication and extension media contact, organizational participation, outside contact (cosmopoliteness), self-confidence, leadership, innovativeness and economic variables like primary and secondary occupation; land holding status and land characteristics and occupation, economic status were taken into account for study. Scales derived by Pareek and Trivedy (1964); Nandapurkar (1981) etc. were used to measure these variables with minor modifications according to the objectives and data characteristics, if needed.

RESULTS AND DISCUSSION

Socio-economic perspectives

Characteristics of the society

Fig.-1 (A to D) depicts the distribution of small tea growers of North Bengal according to religion, caste, economic class and occupation other than tea in the family. From the pie chart 1A, it is evident that 85 per cent of STGs of the study area were Hindu and only 15 per cent were Muslims. None other religious groups were associated with small production of tea, although some of the tribal groups are religiously Christian in Jalpaiguri district. Fig.-1B distributed STGs according to caste which shows that the Other Backward Classes were the dominant Castes who were associated with STG system followed by SC and General castes. Only 2 per cent STs were associated with STGs; which also support the finding of Fig-1A that although a section of tribes are Christian but among tribes only 2 per cent (Christian Tribes may not be considered as respondent) are associated with STGs. Fig.-1C and Fig.-1D represents the economic class and occupational distribution respectively which shows that 70 per cent STGs were under APL class and 82 per cent were associated with farming including tea cultivation. Other occupations including tea were business, service and others like contract job, private tuition etc. which contributed only 1% of total STGs.

Characteristics of the family

Table-1 represented the family characteristics in respect of socio-economic status.
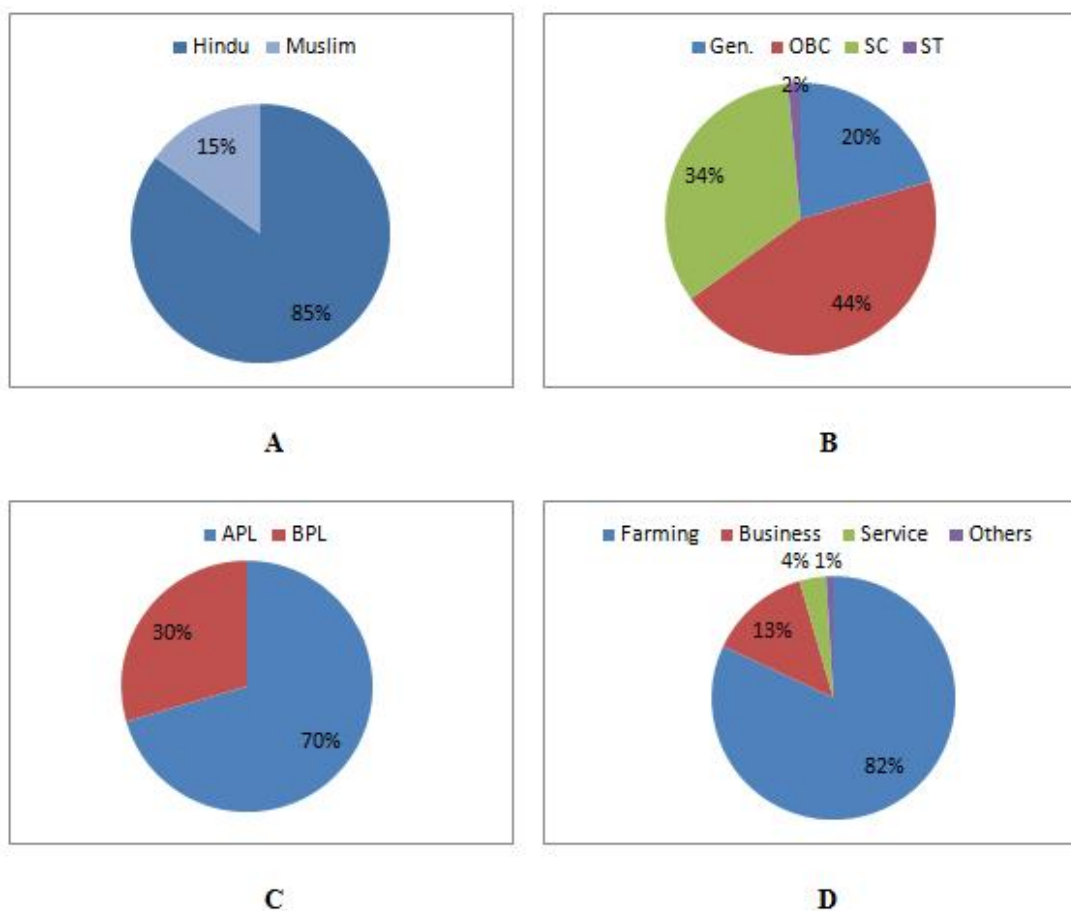

Fig.1. Social perspectives of small tea growers of North Bengal [A: Religion, B: Caste, C: Economic Class and D: Occupation including tea]

Table 1. Socio-economic characteristics of small tea growers' family in North Bengal

Expressed in % of total

Class	NB (N=200)	Jal (n1=100)	U D (n2=100)	Statistical implication
Family size (Scale: No. of family members)				
Small(upto 4)	52.00	50.00	54.00	Mean
Medium(5-7)	46.00	48.00	44.00	NB=4.58; Jal=4.55; UD=4.61
Large (>7)	2.00	2.00	2.00	t-value between districts=0.38NS
Highest Education among family members(Scale: Year of formal education undergone)				
No formal education	0.00	0.00	0.00	Mean
Primary (upto Class- 4)	0.00	0.00	0.00	NB=11.05; Jal=11.35; UD=10.74
Middle School (Class-5-8)	11.00	7.00	15.00	t-value between districts=2.31*
High School (Class-9-12)	79.00	80.00	78.00	
Greater than HS (>Class-12)	10.00	13.00	7.00	
Occupational Diversity (Scale: Number of occupations found in a family)				
Only 1 occupation	25.50	18.00	33.00	χ^2-value between districts= 178.17***
2 occupations	55.00	48.00	62.00	
3 and more occupations	19.50	34.00	5.00	
Asset Possession (Scale: Sum of scores assigned to different household assets)				
Low (Upto 12)	6.50	8.00	5.00	Mean
Medium (13 to 18)	50.50	49.00	52.00	NB=17.41; Jal=17.22; UD=17.60
High (>18)	43.00	43.00	43.00	t-value between districts=0.93NS

NS=Not Significant; *significant at 5% level; **significant at 1% level; ***significant at 0.1% level
NB=North Bengal; Jal=Jalpaiguri district; U D=Uttar Dinajpur district

Table 2. Psycho-personal characteristics of the respondents

Expressed in % of total

Class	NB (N=200)	Jal (n1=100)	U D (n2=100)	Statistical implication
Age (Scale: Chronological age rounded to nearer integer in yrs.)				
Young (Upto 30)	2.00	4.00	0.00	Mean (yrs)
Middle aged (31-50)	73.00	64.00	82.00	NB=45.16; Jal=46.39; UD=43.92
Old aged (>50)	25.00	32.00	18.00	t-value between districts=2.61**
Respondent's Education (Scale: Year of formal education undergone)				
No formal education	0.00	0.00	0.00	Mean
Primary (upto Class- 4)	7.00	8.00	6.00	NB=9.32; Jal=9.18; UD=9.46
Middle School (Class-5-8)	36.00	34.00	38.00	t-value between districts=0.11NS
High School (Class-9-12)	52.00	53.00	51.00	
Greater than HS (>Class-12)	5.00	5.00	5.00	
Extension Media Contact (Scale: Frequency of contact with different media)				
Low (upto 6)	26.5	21.00	32.00	Mean
Medium (7-12)	70.5	74.00	67.00	NB=7.73; Jal=8.03; UD=7.42
High (>12)	3.00	5.00	1.00	Student t-value between districts=1.91NS
Outside Contact (Scale: Frequency of visit to outside areas)				
Low (upto 3)	36.00	45.00	27.00	Mean
Medium (4-5)	63.50	54.00	73.00	NB=3.80; Jal=3.58; UD=4.02
High (>5)	0.50	1.00	0.00	t-value between districts=4.51***
Organisational participation (Scale: Membership of number of organisations)				
No (0)	41.50	38.00	45.00	χ^2-value between districts= 232.66***
Only 1	44.50	37.00	52.00	
2 and more	14.00	25.00	3.00	
Self confidence (Scale: Sum of scores obtained from contrived confidence situations)				
Low (upto 18)	5.00	3.00	7.00	Mean
Medium (19-24)	68.00	68.00	68.00	NB=22.94; Jal=23.31; UD=22.56
High (>24)	27.00	29.00	25.00	t-value between districts=2.01*
Leadership (Scale: Sum of scores obtained from contrived leadership situations)				
Low (upto 3)	5.50	4.00	7.00	Mean
Medium (4-7)	76.00	75.00	77.00	NB=5.85; Jal=6.01; UD=5.68
High (>7)	19.50	21.00	16.00	t-value between districts=1.31NS
Innovativeness (Scale: Sum of scores obtained from contrived innovativeness situations)				
Low (upto 18)	61.00	55.00	67.00	Mean
Medium (19-24)	34.50	41.00	28.00	NB=17.79; Jal=18.22; UD=17.36
High (>24)	4.50	4.00	5.00	t-value between districts=1.66NS

NS=Not Significant; *significant at 5% level; **significant at 1% level; ***significant at 0.1% level
NB=North Bengal; Jal=Jalpaiguri district; U D=Uttar Dinajpur district

The maximum growers of North-Bengal (52%) were from small and nuclear family (family member upto 4) followed by medium family (family number 5 to 7). In case of educational measurement the class system (year of total formal education) as prescribed in India were taken. However total year of formal education were grouped into five ranges as 'no formal education', 'primary', 'middle school', 'high school' and 'more than high school'. Although the respondents are not much educated, but if any member from a family is educated the resultant action in decision making will be more or less similar as an educated respondent. It is evident from the table that 79% of the family members are educated upto high school level and 11% upto middle school level. 10% of the family members are observed to be educated up to graduate level. In this way of system transformation, it is found that the people who lead the transformation are educationally ahead of other people of the society. The same picture is found in case of small tea growing system also (also refer Table-2).

Table 3. Agro-situational perspectives

Parameters	Total Land (ac)	Irrigated Land holding (ac)	No. of plots where tea is grown	Total Area under tea (ac)	Age of the garden (year)
Minimum	0.45	0.00	1	0.42	2
Maximum	22.00	22.00	4	22	14
Mean	3.27	3.21	1.25	2.99	7.08
CV(%)	98.25	107.94	44.47	112.99	40.93
District-wise analysis					
Jalpaiguri	2.68	2.64	1.21	2.47	6.26
UD	3.87	3.78	1.28	3.5	7.9
t-value	2.57**	2.98***	0.89NS	2.18*	4.13***

CV=Coefficient of variation; Jal=Jalpaiguri; UD=Uttar Dinajpur
NS=Non-significant*p<0.05**p<0.01***p<0.001
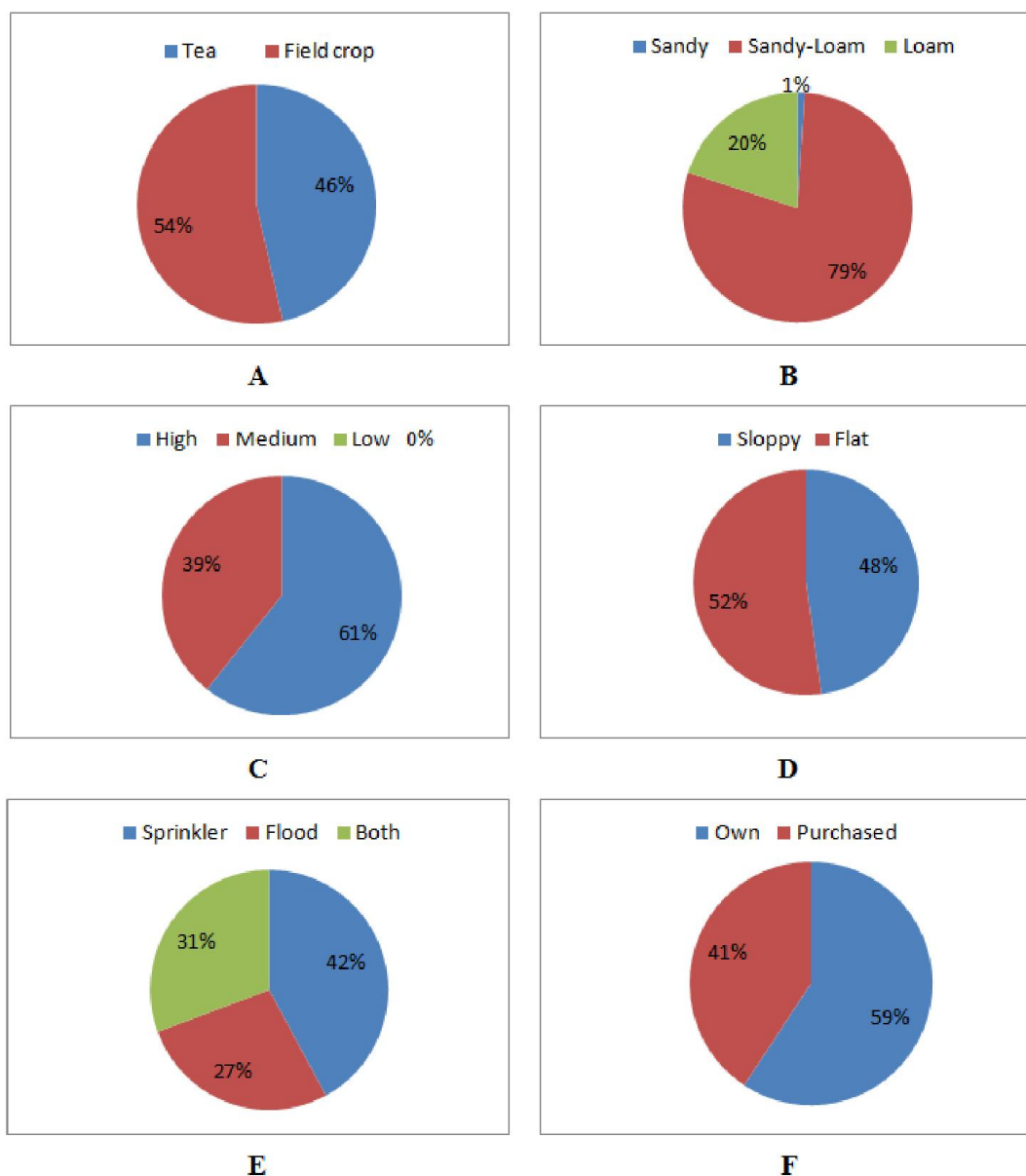
A: Crops in adjacent plot; B: Texture; C: Topography; D: Physiographic class; E: Method of irrigation followed; F: Ownership of irrigation

Fig. 2. Agro-situational perspectives

Occupational diversity means the number of secondary occupation option/options found in the family other than tea. Occupational diversity is directly correlated with the livelihood security and also changes the economic status. Here, 1, 2 or 3 indicates one and more than one occupations of the STG families. It is observed that 55% small tea growing families having two types of occupations and 25.5% respondents engaged in only tea cultivation. Members of 19.5% families were engaged with three or more types of occupations. One possible reason for adopting more than one enterprise might be the diversification of risks and uncertainty associated with traditional crop cultivation and maintenance of steady flow of farm income throughout the year which is also supported by Majumdar (2008).

Table 4. Socio-economic and Agronomic determinants of area allotment under tea

Independent variables	Pearson r-value
Age of the respondent	0.02NS
Education of the respondent	0.31***
No. of family members	0.00NS
Highest family education	0.35***
Occupation diversity in the family	-0.06NS
Organisational participation	0.21***
Outside contact	0.37***
Extension media contact	0.19**
Asset possession	0.42***
Self confidence	0.14*
Innovativeness	0.23***
Leadership	0.20**
Total land holding	0.83***
Irrigated land holding	0.81***
Dependant variable: Area under Tea	

Table 5. Stepwise multiple regression for identification of Socio-economic and Agronomic predictors of tea cultivation

Predictors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-3.301	1.280		-2.580	0.011
Land holding Class	6.658	0.585	0.513	11.390	0.000
Irrigated land holding	0.478	0.046	0.477	10.450	0.000
Extension media contact score	-0.339	0.150	-0.076	-2.265	0.025

Predictors
(Constant), Total Land holding, Irrigated land holding, Extension media contact
Dependent Variable
Area under tea

Model Efficiency: $R^2=0.799$; ANOVA F-ratio=260.41 (p=0.0000)

The asset possession was assessed from quality of house, sanitation and drinking water facilities and possession of productive assets. The above table shows the distribution of respondents according to their asset possession also. 50.5% of the families had medium level of assets, 43% had high and only 6.5% respondents had low level of economic status. The table also tried to generalize the picture with the help of statistical analysis. It is generalised from the table that the mean number of family members of small tea growers' families of North-Bengal (4.58) is found to be same as found in case of both the districts. In case of highest family education it is found that the mean family education status is 11.05 whereas in Jalpaiguri district highest family education status (11.35) was observed higher than Uttar-Dinajpur district (10.74).

From the table it is also found that the mean number of occupation found in the small tea growers in North-Bengal is 1.98 which is quite low than Jalpaiguri district (2.25) and much higher than Uttar-Dinajpur district (1.70) which also differ significantly. It revealed that the respondents of Jalpaiguri district are found to be more involved in other enterprises besides tea than Uttar-Dinajpur district. The asset possession of the families revealed from the table shows that the mean economic status score was measured as 17.41 which was slightly higher than the mean score of Jalpaiguri district (17.22). The mean economic status score of Uttar-Dinajpur district is observed to be high in compared to Jalpaiguri district. It means that the STGs of Uttar-Dinajpur district are economically more stable condition than the Jalpaiguri STGs.

Personal characteristics of the respondents

Table 2 represents the distribution of small tea-growers of North Bengal according to respondent's age, education, media and outside contact, mass media exposure and psychological characters like confidence, leadership and innovativeness. It is observed that 74% respondents or small tea growers were from the category of middle and younger age group and only 26% were falling in old age group, i.e more than 50 years. Here we may conclude that the small tea cultivation in North-Bengal is dominated by younger and middle age group which is one of the welcoming features in small tea sector as it has opened a new way of self employment opportunity for the working age group in North-Bengal area. If we consider the two districts it is clear that middle and young age tea growers are dominant in Uttar-Dinajpur district in comparison to Jalpaiguri district.

The analysis of data on educational profile of small tea growers of North-Bengal reveals that maximum respondents i.e 52% are educated upto high school level and 36% upto middle school level. Only 7% respondents had only upto primary level of education and 5% respondents were found having qualifications more than higher secondary level. The analysis therefore indicates that in respect of education also the small tea growers of North Bengal are dominated by moderately educated people and families. Almost similar result was found by Baruah (2003) in Assam. Although Majumdar (2008) showed that the small tea growers were mostly from low to medium level of educational groups. Extension media contact indicates contacts with different extension media and measured against scores assigned to these media in different extent. It is found that 30% of small tea growers of North Bengal had low extension media contact followed by 67% in medium and rest 3% had high level extension media contact. Outside contact is the contact and mobility to other places. It is also called cosmopoliteness. According to the character of outside contact it is found that 62% of the respondents had reported moderate level of cosmopoliteness status followed by low contact of 37 percent of small tea growers. Only one percent people had high levels of outside contact.

Formal involvement with any organization like Panchayet, SHG, NGO, Govt. Institution, Private Organization or Projects or Agency was taken into consideration to measure organisational participation. It was observed that 41.5% of the growers had no attachment with any type of institution and 44.50 percent had moderate level of contact that is only with one institution. Only 14 percent had high level contact with more than one institution. When we compare the two districts it reveals that the extension media contact score is quite high in case of Jalpaiguri district but the small tea growers of Uttar-Dinajpur district have more out side contact than jalpaiguri district. We can say the respondents of Uttar-Dinajpur District are more cosmopolite though they have poor extension media contact compared to Jalpaiguri district. It is also observed that the attachment with different type of organization is more in case of Jalpaiguri district compared to other district.

Self confidence, innovativeness and leadership are the personal characteristics which determine the extent of adoption of a technology or production system. Except innovativeness the small tea growers possess moderate to high level of these characters. It was found that 69% of the respondents possess medium level of self confidence followed by 26.5 percent possess high and only 4.5% respondents had low level of self confidence. Innovativeness is the criteria of adopting any new technology package of practice or concept. 62% of small tea growers of North-Bengal had been found with low level of innovativeness, followed by 33.5% with medium level and only 4.5% with high level of innovativeness. So far the leadership is concerned; small tea growers were dominated by the moderate level of leadership (75.5 %) followed by high level of leadership (19.5 %). It was also revealed from the study that these above mentioned characteristics were found high in Jalpaiguri district in comparison to Uttar-Dinajpur district.

When we generalize the picture with the help of statistical analysis, we find that most of the STGs of North-Bengal area are from middle age group with a mean age value of 45.16 yrs. The mean age of Uttar–Dinajpur respondents is lower (43.92 yrs) compared to Jalpaiguri district (46.39 yrs) which are also statistically differs from each other. The mean education score of the small tea growers of North Bengal is upto class nine (mean value 9.32) which is considered as moderate level in educational status. Although educational status of both the district are at par. In case of organizational participation, respondents of Jalpaiguri district are found to be more attached with different type of organization such as Panchayet, NGO, Govt. or private organizations, Farmers club etc compared to Uttar-Dinajpur district. It is revealed from the table that mean outside contact score is observed as 3.8 which is little higher than the score of Jalpaiguri district (3.58) and much lower than Uttar-Dinajpur district (4.02). We can say that the respondents of Uttar-Dinajpur district is more cosmopolite than Jalpaiguri district. Similarly extension media contact is observed higher in Jalpaiguri district (8.03) than Uttar-Dinajpur district (7.42). Like outside contact score, extension media score is observed to be higher in Jalpaiguri district in comparison to Uttar-Dinajpur district. The mean self confidence, innovativeness and leadership score as observed in North-Bengal area were 22.94, 17.79 and 5.85 respectively. The above table shows that mean score of these parameter of the respondents of Jalpaiguri district is higher than the mean score of the respondents of Uttar-Dinajpur district.

We can say that the respondents of Jalpaiguri district are more confident, more innovative and having more leadership capability than the respondents of Uttar-Dinajpur district. The findings in the previous section are at par with the findings of Baruah (2003) and Majumder (2008).

Agro-situational perspectives

Table-3 presented the comparative picture of different agro-economic characters of STG families. From the comparative analysis of mean values of agro-economic characteristics like total land holding, irrigated land holding etc. it is found that in Uttar Dinajpur district STGs possess significantly higher lands (3.87 ac per family) in comparison to Jalpaiguri STG families (2.68 ac per family), which is also more than the average land holding of STGs of North Bengal. But in possession of irrigated land holding the picture is just opposite viz. Jalpaiguri STG farmers had significantly more acreage of irrigated land holding than Uttar-Dinajpur. The estate orientation of tea industry where tea is grown in a large contiguous areas are now also reoriented in small scale tea production units.

As the farmers of North-Bengal resorted tea cultivation from traditional crop cultivation, tea plots are distributed in between traditional crop lands also. A common feature of land ownership scenario in West-Bengal is the ownership of fragmented land. The same picture is found in case of small tea growing system also. Small tea growing system of North-Bengal composed of small plots. From table-6.17 we can find that although the average area of tea cultivation in North Bengal is 2.99 acres ranging widely from only 0.42 ac of minimum area to as high as 22 ac of area (CV value 112.99% signifies a very scatter distribution) but these are distributed in 1 to 4 fragmentations with an average per capita fragmentation of 1.25 numbers. Age of the small garden as observed varied from 2 years to 14 years with a mean age of 7.08 years.

The table also presented a differentiated picture of districts which depicted that the mean number of plots where tea is grown is observed in Jalpaiguri and Uttar-Dinajpur district were 1.21 and 1.28 respectively which are statistically at par in nature. The mean total area of tea cultivation of Uttar-Dinajpur district (3.50 acre) was higher than in Jalpaiguri district (2.47 acre) From table 6.9 it is seen that the Uttar-Dinajpur farmers having significantly higher total land ownership (average 3.87 ac in UD against 2.68 ac in Jalpaiguri per capita) than Jalpaiguri farmers. And it is an astonishing fact that the small tea growers in both the districts had allotted more than 90 % of their total land holding under tea (90.43 % in UD and 92.16% in Jalpaiguri). In the study areas, it was found that the homestead lands were also allotted under tea in some of the cases. Average age of the small sector tea garden in Uttar-Dinajpur district (7.90 yrs) was quite higher than Jalpaiguri district (6.26 yrs) which are significantly different from each other.

Fig-2 depicts the physical perspectives of small scale tea plots of North Bengal. Fig-2A supports the phenomena that the small tea growers are converting their traditional land to tea which shows that 54% of STGs' plots had traditional crops in its adjacent plots. Texturally, 79% of the tea plots are sandy-loam, 20% are loamy and rest 1% are sandy in nature. The distribution of topography classes in this diagram shows that

61% area was observed as high land category whereas other 39% area was medium category. No area had been observed as low land in nature. The tea was first introduced in North Bengal in high, uncultivated areas and now spreading towards traditional crop lands distributed mostly in medium topography. However, due to being in high rainfall zone, low lands are not much suitable for tea cultivation in North Bengal. In low land higher rainfall may create water logging which is detrimental to tea cultivation.

Pie charts (2C to 2F) depict land physiography classification of STGs' plots, method and sources of irrigation they access. It is revealed from these diagram that 52% plots were flat in nature where as remaining portion is sloppy. Although tea grows well in sloopy land but in Dooars, tea is also cultivated in flat lands. It is revealed also that 42% plots of the respondents were covered with sprinkler system, 27% practiced flood method of irrigation and remaining portion is managed by both, i.e sprinkler and flood irrigation of which 59% had their own source of irrigation and 41% had to purchase from others.

Correlates and determinants of land allotment under tea

Table-4 represented the coefficient of correlation between percent land allotment under tea and different socio-economic and agro-situational factors. It is found that both the respondents' education and highest family education, organizational participation, outside contact, extension media contact, asset possession, self confidence, innovativeness, leadership and total & irrigated land holding size positively influenced the share of tea acreage over total land. Being a profitable venture over other land based enterprises tea had succeeded to attract higher stratum people in respect of all the socio-economic agronomic parameters. However, the result of stepwise multiple regression analysis (Table-5) shows that when all these factors play simultaneously, area allotment are influenced significantly only by total and irrigated land holding positively and extension media contact negatively. Actually, the farmers are not getting no objectives from land revenue department to convert the agricultural land to tea. So, all the extension channels have a negative campaign against conversion to tea; which may be a cause of such result. The Anova F-ratio (260.41; p=0.000) with associated R^2 value (0.799) declares that the model is good to predict the determinants of area allotment under small tea and it could explain around 79.90% of total variability associated with it.

Conclusion

On the basis of the study it can be concluded that relatively low capital investment, favourable climatic condition, high return status and locally available market attracted the younger and middle age group of North-Bengal to build small tea growing system. The maximum growers are from nuclear family and belonging to APL category.

Maximum respondents have medium to high level of economic status having two types of occupations on an average including tea; and had medium level of extension and outside contact (cosmopoliteness). Except innovativeness, they possess moderate to high level of self confidence and leadership characters; although in some of the characters like education, occupational diversity, age, outside contact, organizational participation and self confidence level the two districts under study differs significantly. The small scale tea challenged the estate orientation; is dominated by marginal and small holder who allotted more than 90% of their total land deployed over more than one fragmentation. Although area allotment under tea is correlated with many socio-economic and agro-situational factors but stepwise multiple regression analysis identified only three of them (total land holding, irrigated land holding and extension media contact) as crucial to determine the same. Policy makers and other stake holders may concentrate on these socio-economic factors when think about area expansion of small tea growers in North Bengal.

REFERENCES

ABP, 2014. Report by Ananda Bazar Patrika, a Bengali daily on 02.09.2014

Baruah, B P. 2003."Tocklai and Small Tea Growers". *Concourse* (Souvenir of World Tea Congress). Tea Research Association; Jorhat, Assam.

Baruah, S and Taparia, M. 2004. 'Small Tea Growers of Assam: Status and Strategies (Part I and II)', The Assam Review and Tea News, (December 2004 and January 2005), Kolkata, p.10-18 and 11-21.

Hannan, A. 2013. 'Organizational Innovations and Small Tea Growers in India', NRPPD discussion paper-25. [Accessed from www. cds.edu/ wp-content/ uploads/ 2014/ 07/ NRPPD25.pdf on July, 12, 2014]

Mansingh, P. and Johnson, L.T. 2012. 'Comparative Analysis Of Existing Models Of Small Tea Growers In Tea Value Chain In The Nilgiris',2012, NRPPD Discussion paper, vol-20.

Mazumdar, T. R. 2008. Land-Use Transformation through Small Tea Plantation as a Rural Livelihood Security Strategy: A Case Study of North Bengal. *Agrarian Crisis, Farmers Suicides, and Livelihood Security of Rural Labour in India: Livelyhood security issues and resolutions.* 2: 361.

Nandapurkar, C.G. 1981 A study of the entrepreneurial behavior of small farmers. Meteropolin Book, New Delhi

Pareek, Udai and Trivedi, G. 1965. Factor analysis of socio-economic status of farmers in India. Rural Sociology. 30:311-321.

Tea Board of India, 2007, 52nd Annual Report (2005-2006), Tea Board of India, Kolkata.

Tea-Board of India, 2011. Road Map For Small Tea Growers In North-East Region And West-Bengal.

****