FARMERS CHARACTERISTICS ASSOCIATED WITH THE PARTICIPATION IN COTTAGE INDUSTRY ACTIVITIES OF BAUEC

M.A. ALAM[1], F. NUR[2], H.Q.M. MOSADDEQUE[3], M. L. RHAMAN[4] AND M. H. RASHID[5]

[1]Scientific Officer, Jute Research Regional Station, BJRI, Kishoreganj, [2]MS student, Bangladesh Agricultural University, Mymensingh, [3]Scientific Officer, Pest Management Division, Bangladesh Jute research Institute, Dhaka-1207, [4]Senior Scientific Officer, Jute Research Regional Station, BJRI, Faridpur, [5]Scientific Officer, Bangladesh Jute research Institute, Dhaka-1207, Bangladesh

ABSTRACT

Alam M.A., Nur F., Mosaddeque H.Q.M., Rhaman M. L. and Rashid M. H. 2008. *Farmers Characteristics Associated with the Participation in Cottage Industry Activities of BAUEC.* **j. innov.dev.strategy 2(3): 36-41**

The study was undertaken to assess the influence of the farmer's characteristics on their participation in cottage industry activities of BAUEC. Random sampling method was used to collect data through personal interview method from 120 farmers of nine villages of Mymensingh district. Significant positive relationship was found between age, family size, attitude towards BAUEC and agricultural knowledge of the respondents and their participation in cottage industry program. About one seventh (16.70%) of the respondents had low participation, one third (32.5%) had medium and more than half (50.80%) of the respondents had high participation in cottage industry activities of BAUEC.

Key words: Farmers, participation, cottage industry, BAUEC

INTRODUCTION

Cottage industry once formerly applied to manufacturing that took place in people's homes, prior to the industrial revolution. For example farmers might take in extra sewing or make cloth, which was then sold to a larger retailer, in order to earn a few extra dollars during the slow month of winter. Today, the manufacturing of goods is largely done in big manufacturing plants, thus eliminating the individual textiles or sewing worker at home. A few of cottage industry business still exist, like home assembly or stuffing envelopes. Most often today's cottage industry involves using advanced technology to work from home, via fax, internet and telephone. At all stages of such an endeavor, as in most human activities these days, good, timely information is absolutely essential (Aina *et al.*, 1995). In this regard Bangladesh Agricultural University Extension Center (BAUEC) village development society programmes can be considered as playing a crucial role in generating income and self-employment opportunities for the rural area.

BAUEC have to motivate, educate and help farmers to make all-round development by their local and own resources through six development components such as crop development, livestock development, fish development, adult education, health and family planning and cottage industries (BAUEC, 2001). Participation is an essential component of successful and lasting development. Success in rural development can be achieved only if all groups are fully integrated into, and actively support, the developmental process (Ullrich, 1981). Successful BAUEC village development programme depend crucially on the degree of rural farmers participation in different development activities.

The main focus of this paper is to examine the role of rural farmers participating in BAUEC cottage industry activities in improving their socio-economic status.

METHODOLOGY

Sources and collection of data: Field level data were collected from nine villages of BAUEC farmers' societies under Mymensingh sadar upazila. From this Upazilla nine villages Daribhabokhali, Bhabokhali, Suhila, Char Raghurampur, Char Kalibari, Sutiakhali, Boyra, Mirzapur and Char Ishwardia were selected using random sampling technique (Table 1).

A list of the farmers of nine villages was made and found to be 481. Twenty five percent of the farmers were selected from each of the nine villages by using a table of random number as per and Blalock (1960). A total of 120 farmers out of 481 were selected as shown in Table 1. These 120 farmers constituted the sample for this study.

Table 1. Distribution of population and sample of farmers in nine purposively selected BAUEC villages

Sl. No.	Selected villages	Total number of farmers	Sample	Reserve
1	Daribhabokhali	51	13	1
2	Bhabokhali	76	19	2
3	Suhila	30	8	1
4	Char Raghurampur	25	6	1
5	Char Kalibari	60	15	1
6	Sutiakhali	84	21	2
7	Boyra	105	26	2
8	Mirzapur	25	6	1
9	Char Ishwardia	25	6	1
	Total	481	120	12

A reserve list of farmers was also prepared so that the farmers of this list could be used for interview if any farmers included in the original sample were not available during the collection of data.

Interview schedule was used for data collection. The content validity of the interview schedule was established by a panel of experts and its reliability and suitability were also determined for pertinent data.

Measurement of the variables

*Age***:** Age of respondent referred to the period of time from his birth to the time of interview.

Education: Education was measured on the basis of the level of formal schooling. If a respondent passed the final examination of class five, his education score was taken as 5. If some one can not write, or can not sign, his education score was taken as 0.

Family size: Family size was measured by the number of the members in the family of a respondent including himself, his wife, children and other dependents.

Farm size: Farm size was operationalized in terms of area cultivated land owned or occupied by individual in hectare. The farm size was measured in terms of hectares by using the following formula.

$$\text{Farm size} = a+b+c-d+1/2(e+f)+g$$

Where,

a = Homestead area including vegetable plots.
b = Cropped area (owned)
c = Cropped area leased in.
d = Cropped area leased out.
e = Cropped area shared in (borga).
f = Cropped area shared out (borga)
g = Own pond.

*Annual income***:** Annual income of a respondent was determined on the basis of his total earnings from agriculture, service, business and other sources.

*Organizational participation***:** Organizational participation was measured on the basis of the nature of one's participation in different organization. The respondents were asked to mention the nature of participation i.e. no participation, ordinary member, executive committee member, officer of the executive committee. Score assigned to these responses were 0, 1, 2 and 3, respectively. And also asked the duration of participation i.e. nil period, upto 5 years, 6-10 years and 11 years or above. Score assigned to these responses were 0, 1, 2 and 3, respectively.

Organizational participation score of the respondents were measured by the following formula.

Organizational participation score = Position score (P) X Duration score (D)

Extension service contact: Extension service contact score of a respondent was calculated on the basis of his extent of contact with four sources of information. The respondents were asked to mention the number of contact made with different individuals, media and activities on daily, weekly, monthly, yearly or not at all basis. Weights assigned to these responses were 4, 3, 2, 1 and 0, respectively. Score obtained for use of 16 selected extension media by a respondent farmer were summed together to compute his extension exposure score.

Cosmopoliteness: Cosmopoliteness scores of the respondents were determined on the basis of visit by them to eight different places. Farmers indicated whether they visited those places frequently, occasionally, rarely or not at all. Weights assigned to these responses were 3, 2, 1 and 0, respectively. The cosmopoliteness score of an individual was determined by adding the weights for his responses to all eight places as shown in interview schedule.

Agricultural knowledge: Agricultural knowledge of scores of respondents was determined on the basis of their responses to 10 questions related to agricultural. A weight of 2 was assigned for each question. The agricultural knowledge scores could range from 0 to 20; 0 indicate no agricultural knowledge and 20 indicated very high level of agricultural knowledge.

Attitude towards BAUEC: An attitude may be defined as predisposition to act towards an object in a certain manner. Attitude of a farmer towards BAUEC was used to refer to his belief, feeling and action tendency towards the various aspects of BAUEC. It was measured by constituting of 12 statement was considered positive if it is possessed an idea favourable towards the BAUEC. On the other hand, a statement was considered negative if it was unfavourable towards the BAUEC. The respondent were asked to express their opinion i, e fully agree, agree, no comments, disagree, fully disagree. Scores assigned to these responses were 4, 3, 2, 1 and 0 respectively if the statement was positive. A reverse scoring method was followed in case of statements considered negative. Attitude score of a respondent was determined by summing the scores obtained by him self for all the items in the scale.

Descriptive statistics such as number, frequency distribution, range, average and standard deviation were calculated to explore the relationship between selected farmer's characteristics and the cottage industry related activities of BAUEC.

RESULTS AND DISCUSSION

Characteristics of the farmers

Analysis of the data furnished in Table 2. Age of the farmers ranged from 18-50 years with an average of 33.58 indicating that the study group was moderately heterogeneous. More than 50% respondents had young aged group, this leads to understanding that the phenomena with regard to the health and family planning program of BAUEC would be reflected more in the present study by the young aged group. A major proportion 48.30 farmers had secondary education and one third i,e 34.30% of the farmers had primary education. As regard to farm size it ranged from 2 to 8 with an average 4.34. Majority of them (43.40%) had medium family. The farm size of the respondents of the study area ranged from 0.10 – 2.0 hectare with an average 0.98 hectare. Highest proportion (50 %) of the respondent family had medium farm, while marginal and small farm were 6.70% and 43.70% respectively. No large farm family was found but average farm size (0.98 ha) of the respondents is greater than national average (0.514 ha).

Analysis of the respondent characteristics also revealed that a large proportion (51.70%) of the farmers was in medium income group and only 15.80 % were in high income group. The average income of the respondents is higher (69.74 thousand taka) than the average per capita income of the country i, e 400 US dollar which is approximately 24 thousand taka. This might be due to the fact that the respondents of the study area were not engaged in agriculture only. They also earned from other sources such as service, business etc. which facilitate them for higher income.

Majority of the respondent (35.80%) had low organizational participation followed by medium organizational participation (31.50%) and high organizational participation (32.70%). More than two-third of the respondent had high and medium extension contact with different activities, agents and media. Highest proportion (43.50%) of the respondent had high cosmopoliteness compared to 35.70% having medium and 20.80% low cosmopoliteness. About half of the respondent (45.90%) had low knowledge while 38.30% had medium and only 15.80 % had high level of agricultural knowledge.

Attitude of the respondent towards BAUEC activities was found to range from 18-50 with a mean attitude score was 32.84. Majority (40.80%) of the respondents had moderately positive attitude towards BAUEC crop development activities and 26.60 % respondents respondent showed highly positive response towards BAUEC activities. Existence of highly positive attitude among the farmers indicates that they were well benefited by participation in BAUEC activities.

Table 2. Selected characteristics of the farmers of BAUEC

Characteristics	Scoring rank	Range	Mean	Categories	Farmers	
					Number	Percent
Age	Number of Year	18-50	33.58	Young 18-32 yrs	61	50.80
				Middle age 33-49	51	42.50
				Old >50	8	6.70
				Total	120	100
Education	Years of schooling	0-11	5.16	Illiterate (0)	10	8.30
				Sign literate (0.5)	8	6.60
				Primary edu. (1-5)	41	34.30
				Secondry edu. (6-10)	58	48.30
				Higher secondry and above (>10)	3	2.50
				Total	120	100
Family size	Number of members	2-8	4.34	Small (<4)	46	38.30
				Medium (4-6)	52	43.40
				Large (>6)	22	18.30
				Total	120	100
Farm size	Area in hectares	0.1-2.0	0.98	Marginal (<0.5)	8	6.70
				Small (o.51-1.0)	52	43.30
				Medium (1.01-3.0)	60	50.0
				Total	120	100
Annual income	Total earnings (taka in thousand)	20-120	69.74	Low (<53)	39	32.50
				Medium (53.01-98)	62	51.70
				High (>98)	19	15.80
				Total	120	100
Organizational participation	Nature of participation in different organization	1-50	25.18	Low (<17)	43	35.80
				Medium (18-34)	38	31.50
				High (>34)	39	32.70
				Total	120	100
Extension service contact	Number of contacts	2-43	24.76	Low (2-15)	29	24.30
				Medium (16-29)	45	37.50
				High (>29)	46	38.20
				Total	120	100
Cosmopoliteness	Number of visits to eight places	1-20	12.27	Low (1-7)	25	20.80
				Medium (8-14)	43	35.70
				High (15-20)	52	43.50
				Total	120	100
Agricultural knowledge	Number of response to question	12-17	14.69	Low (12-14)	55	45.90
				Medium (15-17)	46	38.30
				High (>17)	19	15.80
				Total	120	100
Attitude towards BAUEC activities	Number of response to positive or negative	18-50	32.84	Slightly positive (18-28)	29	32.60
				Moderately positive (29-39)	49	40.80
				Highly positive (>39)	32	26.60
				Total	120	100

Participation of farmers in cottage industry activities of BAUEC

The participation scores on the basis of cottage industries activities of the farmers ranged from 10 to 19 with an average 15.43. From the Figure 1 revealed that 16.7% of the respondents had lower participation in cottage industries activities of BAUEC. 32.5% of the respondent had medium participation in cottage industries activities of BAUEC as compared to 50.8% had high participation. Finding indicates that more than half of the respondents had high participation in cottage industries activities of BAUEC.
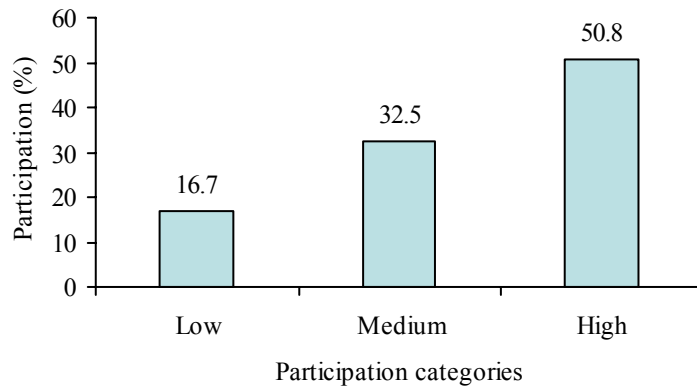

Figure1. Distribution of respondents according to their participation in cottage industry activities of BAUEC

Relationship between selected characteristics of the respondents with the participation of health and family planning activities

Both dependent and independent variables were analyzed in ordinal scales. Spearman rank order correlation co-efficient were computed to determine the strength of association between the respondents characteristics and their participation in health and family planning activities of BAUEC.

Table 3. Relationship between the characteristics of farmers and their participation in health and family planning activities

Dependent variable	Independent variable	Correlation co-efficient (r values)
Participation in cottage industries activities of BAUEC	Age	0.623***
	Education	-0.285**
	Family size	0.548***
	Farm size	0.099 NS
	Annual income	0.148 NS
	Organization participation	0.111 NS
	Extension service contact	0.015 NS
	Cosmopoliteness	0.159 NS
	Agricultural knowledge	0.653***
	Attitude towards BAUEC	0.608***

NS = Not significant, * = Significant at 0.05 level, ** = Significant at 0.01 level, *** = Significant at 0.001 level

From the Table 3 revealed that there was a significant positive relationship between age of the respondents and their participation in cottage industry activities. That is level of farmer age had great influence in accepting the cottage industry related technology. A negative significant relationship was found between education of the farmers and their participation in cottage industry programme. This means that the farmers with lower levels of education had more participation in cottage industry activities of BAUEC. Family size had significant and positive relationship with the participation in cottage industry programme of BAUEC. It indicates that the farmers with higher family member had higher tendency to adopt or participation in cottage industry activities. Participation or adoption of cottage industry activities had no statistically significant relationship with the farm size, annual income, organizational participation, extension service contact and cosmopoliteness of the

respondent. Higher level of agricultural knowledge, greater could be the adoption of cottage industry technology. Positive and significant relationship was found between attitude towards BAUEC of the respondents and the adoption of cottage industry technology (r = 0.608).

CONCLUSION

Disseminate an innovation or a new technology among the farmers the characteristics of them should be considered by the introducer of the technology. If the introducer, are aware about the influence of characteristics of farmers will help them to motivate farmers to adopt improved cottage industry technology. Knowing this information about the farmers on their adoption behavior would result in easy access to them by the introducer. Based on the findings of this study following conclusions are drawn.

1. Higher proportion (50.8%) of the respondents had high participation in cottage industry activities of BAUEC.

2. Majority of the respondents of BAUEC was young to middle aged group and young aged members were more involved in cottage industry activities. Significant positive relationship were found between age of the respondents and their participation in cottage industry programme indicating that it may be necessary for the extension to work more with the younger farmer.

3. Significant negative relationship was found between the education of the farmers and their participation in cottage industry programme. It indicates that the participation become more with the lower levels of education rather than higher.

4. Positive significant relationship was existed between the family size, agricultural knowledge and attitude towards BAUEC of the respondents and their participation in cottage industry programme of BAUEC.

REFERENCES

Aina, L.O, Kaniki A. M. and Ojiambo, J.B. 1995. *Agricultural information in Africa.* Ibadan: Third World Information Services Ltd., P-VI.

BAUEC. 2001. *Annual Report 1999-2001.* Bangladesh Agricultural University Extension Center, BAU, Mymensingh

Blalock, M. 1960. *Social Statistics,* Mc Graw-Hill Book Company, New York, P. 437-440

Ullrich, G. (ed.) (1981) *Evaluation of Cooperative Organizations, report of international conference* (West Berlin: German Foundation for International Exchange).