

Knowledge of women in activities related to farming system in agrarian community of Bangladesh

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Abstract

The study was mainly designed to determine the knowledge of women in activities related to agricultural farming system and to describe the selected characteristics of the women. The selected characteristics of the women were age, level of education, family size, farm size, family annual income, farming experience and training exposure. Two unions of sader upazila under Mymensingh district were the locale of the study. A sample of 100 women were selected randomly from a population of 1042. Data were collected from March 10 to April 9, 2009 using a structured interview schedule. Descriptive statistics was used in order to fulfill the objectives of the study. Majority of (71 per cent) the women had medium to high knowledge and 29 per cent had low knowledge on various aspects of farming system activities. As many as 10 problems were mentioned by the women and ranked in order to problem facing index ranged from 80 to 243. The main problems faced by the women in practicing farming system were: Less extension contact by SAAOs of DAE regarding farming system, lack of training facilities, lack of knowledge about farming system, unavailability of capital for farming system, unavailability of farming inputs, lack of marketing facilities, lack of coordination and consciousness among women regarding farming system, adverse weather condition, social barriers (norms, values *etc.*).

Keywords: Women, knowledge, farming system

Introduction

Bangladesh is a developing country where 76.47% of her total population lives in the rural areas (Agricultural Dairy, 2007). About half (48.6%) of the population are women and they are playing different role in economic and non-economic sectors (FAO, 2006). The fundamental requirement for the improvement of livelihoods of the household is to enhance people's strength and activities essential for the means of living. About 77 percent of its population lives in the villages and agriculture is the major occupation of the people. Agriculture is the principal means of livelihoods in Bangladesh. Rural women are intimately involved in all phases of agricultural activities in rural areas. Women, who primarily work as unpaid family worker, accounted for 45.6% of the total employment in agriculture (FAO, 2006). The daily life of rural women is characterized by search for water, fuel and inputs for agriculture or household production for maintaining their livelihoods. The future economic development of the country will depend on the progress made and goals achieved in agricultural sector during the next decade. Agricultural sector of Bangladesh contributes 21.77% of GDP (BBS, 2006) to its economic growth. So agriculture plays a vital role in creating employment, poverty alleviation, food security, standard of living and increase in earnings. The population of Bangladesh is about 150 million with a growth rate of 1.43% per annum and population density is currently about 941 persons per sq. km. The per capita income is about \$690 and its people have a life expectancy of only 64.9 years (BBS, 2008). Though agriculture constitutes the largest segment of the economy, Bangladesh has been facing food shortage since early fifties and moreover food problem is acute due to meet the demand of growing population at an alarming rate. In order to face chronic food shortage and to save the heavy drainage of foreign currency required for importing food grains, it is essential to

increase or preferably to maximize agricultural production.

Farming occupation includes owner cultivation as well as sharecropping. Wage labour is used in various agricultural operations. In some chars, fishing, rearing of cattle, trading of miscellaneous commodities is the primary occupation for many households. So, women of rural areas contribute in our national economy which is not negligible. Any economic strategy for agriculture and rural employment are linked to poverty alleviation and food security and for this gender equity and women's contribution in productivity and access to resources should be considered. In rural area, women's roles and constrains in contributing to household livelihood security should be viewed in the context of the ecological resource, access to technology and technical knowledge and input supply. Bangladesh farming systems are mixed and complex and consist of mainly crop, livestock, fisheries and forestry sub-systems. The farming systems are dominated by crop. In order to sustain life, most of the farmers have some subsidiary occupation like petty trading, off farm and non-farm activities. Systems approach of development is being tried to address the food security and overall improvement of farming community through different projects and programmes.

It should be obvious that farming systems are very complex. Individual farming system result from combining the resources and time available to managers (farmers) into a set of enterprises and activities that provide for the needs and desires of the farm families who control resources. The set of the enterprises that forms farming systems result from the environment within which the farms operate. On family farms, this environment is influenced as much by socioeconomic factors, e.g. competing family needs for available cash, as it is by biophysical factors, e.g. soils and climate (Hildebrand, 1990).

Women's role as the principle labour force has the prime importance for the resource poor household to survive. Rural women of Bangladesh are employed in a broad range of agricultural activities such as post harvest operation, kitchen gardening, caring animals, raising poultry, rice husking etc (Jaim and Rahman, 1988). They are also engaged in agricultural activities in other homestead and help their husband. Women from small farms are found to spend more time in homestead agriculture (Ahsan, 1986). Women have traditionally participated primarily as family labour in preparing fishnets and in some areas, in fish processing.

Table 1 Role performances of women in different sectors of development

Sl. No.	Role performed by the women in different sectors	% involvement of women in different activities
1	Shared in the total economy	39.0
2	Share of earned income	23.1
3	Total employment in agriculture and related industrial activities	65.0 (both men and women)
4	Involvement in agricultural and industrial activities	71.5
5	Unpaid family workers but employed in agriculture	45.6
6	Engaged in manufacturing	21.6
7	Engaged in food, beverage and tobacco industries	64.0
8	Total labour force	65.0

Source: ESCAP (1995)

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About 60 % to 70% of women from landless and near landless households work as agricultural wage laborers in field activities (Jahan, 1990). In Bangladesh women's contribution to the production of fruits and vegetables in the homestead, along with poultry and livestock raising, vegetable and fish cultivation, tree plantation and crop processing, brings in a substantial share of the total family income. Women more often than men are involved in cultivating vegetables and planting fruit trees (Safilos and Mahmud, 1989).

Agricultural Farming System is a process through which the agricultural activities can be improved up to certain limit to increase the efficiency of farmer's activity for optimum production. The integrated farming system is the characteristics of subsistent agriculture and age old practice all over the world especially for the developing countries like Bangladesh with small holdings. But unfortunately very little efforts have been made to develop this practice in a holistic way perhaps because of lack of systems approach for development of agriculture and the existing uncoordinated, non-integrated and discipline based extension activities. For constructing efficient farming systems the approach of development must aim at the integration of all the discipline based organizations and directed their activities towards the integration of farm enterprises at the household level to address the problems of the farming community with interdisciplinary zeal and spirit.

For improving livelihoods now-a-days many women involved themselves in the farming system and they work by heart and soul for bringing socio-economic progress. Farming system as well as the integrated farming system helps rural women to change their livelihood pattern.

Justification of the study

Bangladesh is an over-populated country and economy predominantly is agro-based. Maximum people live unfortunately under poverty level. The majority of the farmers are graded as poor and marginal, but still they are regarded as the heart of the agricultural production line and treated as the base of our national economy. By this time it has been established as a fact that 76.47 percent people of Bangladesh live in villages, where the prime means of managing their livelihoods is the agriculture (Agricultural Dairy, 2007).

Agricultural Farming system plays an important role in changing household pattern and socioeconomic environment of the farmers in Bangladesh. Like other countries of the World, Bangladesh is dominated by the adoption of modern farming system. Agricultural farming system has long been recognized as an important input to increase farm production and as a suitable strategy for overall agricultural development. The goals of farming system are to attain household food security through diverse food production, consumption and nutrition through enterprise diversification. It also helps to increase, land and labour productivity of poor farmers, landless and distressed women.

Bangladesh agriculture with its 8.16m ha cropland with 179% cropping intensity is not able to feed near about 150 million people by using the present level of technology. In order to live a decent life, technological break through is a must for Bangladesh agriculture to exploit and mobilize the very scarce resources of the farm family i.e. the land, the people, the animal and other natural resources. Integrated farming is one of the key approaches to address such resource poor farm holdings with or without crop land.

By searching the practical status of the frequency of our farmer's interest about farming system we can get an idea about the fact, and thus we can assume the present status and also predict about the probable solutions.

The major challenges for the women is to how they play their role in increasing the access of the household

to the livelihood assets and how they help their community to adjust with their livelihood condition and make it sustainable. As stated earlier that the people living in the rural area become more vulnerable and deprived of in comparison to other segment of the population of the country and who received inadequate support from the government. It is important to find out the knowledge of women in farming activities for the improvement of their living standard. Therefore, the present study has been undertaken to focus on “knowledge of women in activities related to farming system in agrarian community of Bangladesh”.

Specific objectives of the study

- i. To determine knowledge of women in activities related to agricultural farming system
- ii. To determine and describe the socioeconomic characteristics of the household women involved in agricultural farming system.
- iii. To identify the problems confronted by the women in practicing activities related to farming system for their livelihoods.

Methodology

The study was conducted in 2-unions under Mymensingh sader Upazila of Mymensingh district. The rationale behind selection of this Upazila is that it is one of the area of farming system conducted by Bangladesh Agricultural University Extension Centre (BAUEC) and Department of Agricultural Extension (DAE) and most of the women of that particular areas are engaged with farming activities. The physical, social and cultural heritage of the people of this area are similar in many cases with other areas of the farming activities. Mymensingh sader Upazila is mostly facilitated by Kutcha, semipucca roads and a few pucca roads therefore, communication facilities is well developed. According to the information of the Sub-Assistant Agriculture Officers who are working at BAUEC office, housewives those are engaged with farming activities related to production of crops, livestock, fisheries, agro forestry were the population of the study. Out of these purposively selected women, only 10% were selected as sample of the study through simple random method.

The Research instrument

In order to collect relevant information for the study, a structured interview schedule was prepared carefully keeping the objectives of the study in mind. The questions and statements contained in the schedule were simple, direct and easily understandable by the respondents. The schedule contained both open and closed form of questions with a test constructed for measuring knowledge of women in activities related to agricultural farming system in agrarian community of Bangladesh.. Knowledge of a woman in activities related to farming system was measured using a knowledge test, the test contained 15 of questions related to farming system activities. Each question contained 2 marks. A score of two was given for correct answer, one was given for partial answer and zero (0) for no or wrong answer. Thus, the total knowledge score of a respondent could ranged from 0-30, ‘0’ indicating no knowledge, while ‘30’ indicating the highest level of knowledge.

Data collection and analysis

Data were collected during March 10 to April 9, 2009, through face to face interview by using structured interview schedule. Descriptive statistics was used to interpret the collected data properly.

Data processing and analysis

Bogdan and Biklen (1992) suggested that data analysis is an on-going part of data collection. So, in this study data were gathered through survey method and following activities were done for necessary analysis of data.

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Compilation of data

Collected data were compiled, coded, tabulated, and analyzed according to the objectives of the study. In this process, all the responses in the interview schedule were given numerical code and were transferred to a master sheet to facilitate tabulation. Local units were converted into standard units.

Categorization of data

The respondents were classified into several categories for clear and easy description of the respondents. These categories were developed by considering the nature and distribution of data, general understanding prevailing in the social system and possible scores system. The procedure for categorization of data in respect of different variables will be discussed in table 2 & 3.

Statistical analysis

The SPSS (Statistical Package for Social Science) computer package was used to perform the data analysis. Descriptive analysis such as mean, range, number and percentage, standard deviation, rank order were used wherever applicable.

Results and discussion

Knowledge of farming system

Knowledge of farming system scores of the farmers ranged from 7 to 30 against the possible range of 0 to 30. The average and standard deviation were 18.43 and 5.74 respectively. Based on the knowledge scores, the respondents were classified into three categories as shown in Table2.

Table 2 Distribution of the women according to their knowledge of farming system

Categories (in score)	Number of women	Percentage of women	Mean	Standard deviation
Low knowledge (Up to 14)	29	29	18.43	5.74
Medium knowledge (15 -23)	46	46		
High knowledge (above 23)	25	25		
Total	100	100		

Data furnished in Table2 indicates that near about half (46 percent) of the women fell in medium knowledge category while 29 percent fell in low category and 25 percent fell in high knowledge category. It can be interpreted that different knowledge level held by the women may be attributed due to their difference in literacy rate, training exposure, extension communication exposure, innovativeness, cosmopolitaness etc. However, intervention undertaken by the different GOs and NGOs might help their beneficiaries specially women to gain knowledge of different farming practices. Knowledge and education are interlinked. Education helps an individual to gain more knowledge and to be more rational which in tern increases his/her involvement in farming system.

Selected characteristics of the respondents

According to the objectives of the study, data were collected from a sample of 100 women. The salient findings of eight selected socioeconomic characteristics of the respondents have been presented in Table 3.

Table 3 Salient features of the selected characteristics of the women (N = 100)

Characteristics	Possible range	Observed range	Categories	Number (N=100)	Percent	Mean	Standard deviation
1.Age (years)	-	20-80	Young- aged (up to 35 years)	45	45	38.51	9.86
			Meddle-aged (36-50 years)	45	45		
			Old-aged (>50years)	10	10		
2.Level of Education (Years of schooling)	-	0-14	Illiterate	14	14	4.52	4.02
			Can sign only (0.5)	23	23		
			Up to Primary (1-5)	28	28		
			Up to secondary (6-10)	30	30		
			Above secondary(>10)	5	5		
3. Family size (Number)	-	2-30	Small family (Up to 4)	25	25	6.28	3.25
			Medium family (5-7)	54	54		
			Large family (above 7)	21	21		
4. Farm size (Hectare)	-	0.04-7.63	Marginal (Up to 0.2 ha)	20	20	0.86	1.16
			Small (0.21 -0.99 ha)	55	55		
			Medium (1.0 -2.99ha)	20	21		
			Large (above 2.99 ha)	5	5		
5.Annual family income (Taka)	-	40000.00-900000.00	Low income (Up to TK.70000)	15	15	139047.95	113953.05
			Medium income (TK. 70001-130000)	49	49		
			High income (above TK.130000)	36	36		
6.Farming experience (Years)	-	2-40	Low experience (Up to 15)	37	37	19.81	9.14
			Medium experience (16-28)	39	39		
			High experience (above 28)	24	24		
7.Training exposure (Days)	-	0-180	No exposure (0)	50	50	13.23	33.23
			Short exposure (1- 15)	31	31		
			Medium exposure (16 -30)	9	9		
			High exposure (above 30)	10	10		

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Majority of the women (90 percent) of the study area were young to middle aged compared to old aged (10 percent). The level of education of the respondents varied from 0 to 14 with an average of 4.52. Sixty three per cent of the women had either primary or secondary and higher education. Three-fourths of the respondents had medium to large family size while only 25 percent had small size family. Farm size of the respondents ranged from 0.04 to 7.63 hectares with an average of 0.865 hectare. More than half (55 per cent) of the women had small farm size and only 5 per cent had large farm size. Most of the women (49 percent) had medium income followed by 15 percent and 36 percent having low and high annual family income respectively. The largest proportion (63 per cent) of the women had medium to high farming experience while 37 per cent of the women had low farming experience. Just half (50 per cent) of the women had no training exposure, while 31 per cent, 9 per cent and 10 per cent had short, medium and high training exposure respectively.

Problems confronted by the women in practicing farming system for their livelihoods

As many as 10 problems regarding farming system have been identified and 4 point rating scale was used to find out the problem confrontation. Women were asked to give their response as 'not at all', 'low', 'medium', and 'high' and the scores assigned to these responses were 0, 1, 2 and 3 respectively. Rank order of problem items for all women has been presented in Table 4.

Table 4 Rank order of the problem confronted by the women

Problems	Extent of opinion				PCI	Rank
	High	Medium	Low	Not at all		
1. Lack of knowledge about farming system	34	42	22	2	208	3
2. Lack of training facilities	54	28	15	3	233	2
3. Unavailability of capital for farming system	36	39	17	8	203	4
4. Lack of marketing facilities	31	27	30	12	177	6
5. Less extension contact by SAAOs of DAE regarding farming system	64	22	7	7	243	1
6. Non cooperation of family members (specially husband)	6	14	34	46	80	10
7. Lack of coordination and consciousness among women regarding farming system	13	39	30	18	147	7
8. Unavailability of farming inputs	16	56	22	6	182	5
9. Adverse weather condition	3	44	34	19	131	8
10. Social barriers (norms, values <i>etc.</i>)	9	28	34	29	117	9

The women confronted some problems in operating farming system activities. An attempt was made to identify the problems faced by the women in practicing farming system activities. As many as 10 problems were mentioned by the women and ranked in order to problem facing index ranged from 80 to 243. The

main problems faced by the women in practicing farming system were: Less extension contact by SAAOs of DAE regarding farming system, lack of training facilities, lack of knowledge about farming system, unavailability of capital for farming system, unavailability of farming inputs, lack of marketing facilities, lack of coordination and consciousness among women regarding farming system, adverse weather condition, social barriers (norms, values etc.).

Conclusion

Women of the study area had moderate to high level of knowledge in activities related to farming system moreover education level of the women had also found moderate level. So that women are willing to involve in farming system. This was so observed because of the development efforts undertaken by both GOs and NGOs especially in Bangladesh Agricultural University Extension Center (BAUEC). Thus, it would be easier for a development organization to take specific programme to ensure sustainability of the farming system in study area. On the other hand the socioeconomic characteristics of the women such as family size, farm size, annual family income, farming experience and training exposure have influenced to involve the women in farming system activities. However, there are some problems confronted by the women in practicing farming system activities but, proper training, motivational tour, proper supervision, etc. made by the extension agent would be minimized of those problems.

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