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ADOPTION OF HOMESTEAD VEGETABLE PRODUCTION TECHNIQUES BY THE RURAL WOMEN IN SOME SELECTED AREAS OF BANGLADESH

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ABSTRACT

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The main purpose of the study was to determine the extent of adoption of homestead vegetable production techniques by the rural women. It has further explored the relationship between the selected characteristics of the rural women and their adoption of homestead vegetable production techniques. The study was conducted in five randomly selected villages of Feni District. Pearson's product moment correlation co-efficient was used to explore the relationship between the selected characteristics of the respondents and their adoption of homestead vegetable production techniques. Findings revealed that the majority of the respondents are medium adopters (40 percent) of the homestead vegetable production techniques, while 35.79 percent of the respondents are low adopters. Only 24.21 percent of the respondents are high homestead vegetable production adopters. Among the ten selected characteristics, extension contact, organizational participation, farm size and agricultural knowledge had significant positive relationship with the adoption of homestead vegetable production techniques. The other selected characteristics such as age, level of education, training exposure, decision making ability and problem faced in homestead vegetable production had no significant relationship with the adoption of homestead vegetable production techniques.

Key words: adoption, homestead, vegetable production, rural women

INTRODUCTION

Women have been involved in agriculture since the habitation of human on this earth particularly from the dawn of civilization. They are called the pioneer in plant domestication and planned agriculture (Childe 1971). The most important strategy to improve the social life of the farming community is to engage more women in agricultural development. Agriculture activities in Bangladesh broadly classified into two types, namely field production based agriculture activities and the homestead based agriculture. As defined by Ninaz (1986) homestead is refers to home and adjoining land occupied by a family for the purpose like small scale agricultural production, home-up keeping, sanitation, health and nutrition. Homestead gardening can play a very important role to improve the nutritional level in the country which is almost overlooked. The weather, climate and soil condition of Bangladesh are very much suitable for growing vegetables round the year. But vegetable production is not up to the mark as the availability is hardly 112 gm per capita/day whereas the requirement is estimated to 400 gm. (FAO 2003). Vegetables are remarkable for quick growing and comparatively cheaper sources of vitamins and minerals. The total production of vegetable during the period in 2003-04 was 5.62 million metric tons whereas in 2010-2011 it was 10.52 million metric tons in Bangladesh (BBS 2011).

As the vegetable production is increasing day by day, there is a great scope for increasing the production of vegetables throughout the year in the country. Vegetable production may be benefited by using different production techniques including use of high level of external inputs like agrochemical, hybrid seed, fuel based mechanization and also integrated pest management, integrated nutrient management, modern cultivation procedure etc. Halim (1987) reported that the women are potential producer of the agricultural product and through their participation in intensive agricultural production they increase the GDP coming from agriculture. So, homestead vegetable production by rural women not only create employment opportunity for the rural women, but also the adoption of production techniques will help to combat overall food shortage, malnutrition and also boost up economic development of the country. Therefore this study was undertaken to accomplish the following objectives: to assess the extent of adoption of homestead vegetable production techniques by the rural women, to assess and describe the selected characteristics of the rural women, and to explore the relationship between the selected characteristics of rural women and their extent of adoption of homestead vegetable production techniques in homestead farming.

METHODOLOGY

Dhaganbhuiyan upazilla of Feni district was selected as the locale of this study. Out of 8 unions of the upazilla 5 union were selected randomly. From the 5 unions 5 villages were selected randomly. From the selected five villages namely Purbochadrapur, Alaeapur, Chandipur, Jogotpur and Momarijpur 502 rural women constituted the population of the study who are the homestead vegetable growing women. Through random sampling method 95 rural women (19% of the population) were selected as the sample of the study. Interview schedule was prepared for collection of data keeping in view the objectives and variables to be studied. Data collection was done from 3rd May, 2013 to 10th June 2013. The researcher sought help from the local leaders, Sub-Assistant Agriculture Officers (SAAO) and Agriculture Extension Officers (AEO) for this purpose. The

dependent variable of the study is “adoption of homestead vegetable production techniques” and independent variables were: age, education, farm size, annual family income, training exposure, decision making ability, organizational participation, agricultural knowledge, extension contact and problems faced in homestead vegetable production. The collected data were coded, tabulated, and analyzed employing different statistical techniques. Descriptive statistical measures such as frequency, percentage, range, mean and standard deviation were used. Karl Pearson Product Moment Correlation Co-efficient (r) was used to the relationship between dependent and independent variables.

Regarding the aspects of vegetable production, three techniques containing 18 items were selected for the measurement of dependent variable. Those are adoption of modern variety, adoption of Integrated Pest Management (IPM) and Integrated Nutrient Management (INM). The extent of overall adoption of respondents was measured on the basis of frequency of adoption. Five frequencies of adoption are regularly, often, occasionally, rarely, not used which was scored as 4, 3, 2, 1 and 0, respectively. The score could range from 0 to 72, where 0 indicating “no adoption” and 72 indicating “highest adoption” in vegetable production techniques. Age of a respondent was measured by counting the actual years from birth to the day of interview. Education of a respondent was measured by the number of years of schooling. A score of one (1) was given for each year of schooling completed. If a respondent didn’t know how to read and write, his education score was zero, while a score of 0.5 was given to a respondent who could sign her name only. Farm size was measured as farm on which rural women continued her farming operations during the period of study of the area was measured by hectare. Annual income of the respondent was measured in thousand taka on the basis of yearly earnings. Training exposure of the respondents was calculated by duration of the training course in days taken in her entire life. Decision making role of respondents was measured by 4 options of 6 items, which are no decision making role, taking decision by discussing with family members, taking decision discussing with husband and taking decision solely and scored by 0, 1, 2 and 3, respectively. The overall decision making role score ranged from 0 to 18. Organizational participation of a respondent was measured by computing 4 organizations participating, where 3 nature of participations was also considered such as no participation, participation as an ordinary member and participation as an executive member and the assigned scores are 0, 1 and 2, respectively. Agricultural knowledge of the respondents was measured by asking 15 selected questions and 2 score assigned to each of the questions. The total score could range from 0 to 30. To compute the extension contact a scale was developed with 5 options of 11 items. Here the scores were measured as 0 for not at all, 1 for rarely, 2 for occasionally, 3 for frequently and 4 for regularly contact. The extension contact score could range from 0 to 44, where 0 indicating no extension contact and 44 indicating the highest extension contact.

RESULT AND DISCUSSION

Extent of adoption of homestead vegetable production techniques by the rural women:

Adoption of homestead vegetable production technique was categorized into 3 categories. These were adoption of modern variety, adoption of Integrated Pest Management (IPM) and Integrated Nutrient Management (INM). During investigation it was observed that most of the respondent women of the study area were found to be medium adopters (40 percent) of homestead vegetable production techniques. Frequency, percentage, mean and standard deviation (SD) of the overall score of the adoption of homestead vegetable techniques of the rural women are showed in Table 1.

Table 1. Distribution of rural women according to their overall adoption of homestead vegetable production techniques

Category	Rural Women’s		Mean	SD
	No.	Percent		
Low adoption(0-17)	34	35.79	20.75	8.53
Medium adoption(18-25)	38	40.00		
Higher adoption(>25)	23	24.21		
Total	95	100.00		

Source: Author’s estimation

Selected characteristics of the rural women

Characteristics with category, percent, mean and standard deviation of the rural women are showed in Table 2.

Selected characteristics of the rural women have been presented in Table 2 which indicates majority (49.50%) of them were middle aged with secondary level of education (46.32%). Majority (46.30%) of the rural women of the study area owns marginal farm size and among them 67.40% have medium income level. It is also revealed that most of the rural women had no training (62.10%), medium decision making ability (52.60%) and low organizational participation (68.42%). Overwhelming majority of the rural women had medium agricultural knowledge (81.05%) and about half of the rural women of the study area have medium extension contact (50.53%).

Table 2. Different characteristics of the rural women

Characteristics	Category	Rural Women's		Mean	SD
		No.	Percent		
Age (years)	Young (Up to 30)	32	33.70	38.07	13.02
	Middle (31-50)	47	49.50		
	Old (> 50)	16	16.80		
Education (schooling years)	No education (0)	28	29.47	4.05	3.573
	Primary (0-5)	21	22.10		
	Secondary (6-10)	44	46.32		
	Higher (>10)	2	22.11		
Farm size (hectares)	Marginal (0.02-0.2)	44	46.30	0.512	0.69
	Small (0.21-1.0)	38	40.00		
	Medium (1.01-2.00)	8	8.42		
	Large (>2)	5	5.30		
Family income (000' taka)	Low (Up to 75)	19	20.00	144.62	112.27
	Medium (76-244)	64	67.40		
	High (>244)	12	12.63		
Training exposure (number of days)	No training (0)	59	62.10	8.06	10.42
	Low training (1-22)	36	37.89		
Decision making ability (score)	Low (Up to 6)	19	20.00	11.01	4.47
	Medium (7-12)	50	52.60		
	High (>12)	26	27.40		
Organizational participation (score)	No participation (0)	30	31.58	1.28	1.25
	Low participation (1-6)	65	68.42		
Agricultural knowledge (score)	Low (0-10)	11	11.58	15.58	3.88
	Medium (11-20)	77	81.05		
	High (21-30)	7	7.37		
Extension contact (score)	Low (Up to 8)	34	35.79	10.92	5.74
	Medium (9-17)	48	50.53		
	High (>17)	13	13.68		

SD= Standard deviation

Source: Author's estimation

Relationship between selected characteristics of the rural women and their adoption of homestead vegetable production techniques:

The summary result of correlation analysis has been presented in Table 3.

Table 3. Correlation co-efficient between the selected characteristics of the rural women and their adoption of homestead vegetable production techniques

Dependent variable	Independent Variables	Correlation Co-efficient	Tabulated Value of 'r' at 93 degree of freedom	
			0.05	0.01
Adoption of homestead vegetable production techniques by the rural women	Age	-0.036 ^{NS}	0.202	0.281
	Level of education	0.122 ^{NS}		
	Farm size	0.292 ^{**}		
	Annual family income	0.187 ^{NS}		
	Training exposure	0.154 ^{NS}		
	Decision making ability	0.014 ^{NS}		
	Organizational participation	0.375 ^{**}		
	Agricultural knowledge	0.239 [*]		
	Extension contact	0.289 ^{**}		
	Problem faced in homestead vegetable production	0.098 ^{NS}		

NS= non-significant

*correlation coefficient is significant at the 0.05 level of significance

**correlation coefficient is significant at the 0.01 level of significance

The data revealed that among the ten selected characteristics four characteristics such as extension contact, organizational participation, farm size and agricultural knowledge had significant positive relationship with the

adoption of homestead vegetable production techniques. The other selected characteristics had no significant relationships with adoption of homestead vegetable production technologies.

CONCLUSION

Exact two-fifths of the respondent women's of the study area were medium adopters (40.00 percent) in vegetable production techniques, while 35.79 percent of the respondents were fall into low adopters. Age, level of education, training exposure, decision making ability and problem faced in homestead vegetable production had no significant relationship with the adoption of homestead vegetable production techniques. On the other hand farm sizes, organizational participation, knowledge about agriculture and extension contact are positively significant with the adoption of homestead vegetable production techniques. This also indicate that the enhance knowledge and contact with the extension personnel will help the rural women to adopt the homestead vegetable production techniques straightforwardly. Therefore, it is highly recommended to take proper initiative by the Government of Bangladesh to promote knowledge extension among the rural women. The Department of Agricultural Extension (DAE) and different Government Organizations (GOs) and Non-Government Organizations (NGOs) may take necessary steps for strengthening extension services in order to improve adoption behavior of the rural women for homestead vegetable cultivation.

REFERENCES

- BBS (2011) Statistical Year Book of Bangladesh. Bangladesh Bureau of Statistics. Statistics Division, Ministry of Planning, Government of the People's Republic of Bangladesh.
- Childe L (1971) Origin of Agriculture. In: Prehistoric Agriculture Garden City, New York: National History Press.
- FAO (2003) Data taken from FAO Website. [http: 1/1/www.FAO.org](http://1/1/www.FAO.org).
- Halim A (1987) Intensive Homestead Production Plant in Bangladesh. An unpublished Report of World Bank Consultancy. The World Bank Resident Mission in Dhaka, Bangladesh.
- Ninaz VK (1986) Food Production for Home Consumption: Nature and Function of Garden in Household Economy. International Potao Centre, Lime, Peru.