

Reprint

ISSN 1997-2571 (Web Version)

# Journal of Innovation & Development Strategy (JIDS)

(*J. Innov. Dev. Strategy*)

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**Volume: 10**

**Issue: 2**

**August 2016**

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*J. Innov. Dev. Strategy 10(2): 26-29 (August 2016)*

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## PROBLEM CONFRONTATION OF THE FARMERS ON T-AMAN CULTIVATION IN THE SELECTED MANGA AFFECTED UPAZILLA

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Accepted for publication on 8 August 2016

### ABSTRACT

Kabir MJ, Ulla MS, Ali MS, Nurani NS (2016) Problem confrontation of the farmers on T-aman cultivation in the selected manga affected Upazilla. *J. Innov. Dev. Strategy*. 10(2), 26-29.

The main focus of the present study was to determine the problem confrontation by the farmers in T-aman cultivation and to explore the relationships between the problem confrontation by the farmers and their selected characteristics. The study was conducted at Rajabirat and Katabari of Gobindaganj Upazila under Gaibandha District. Data collection was done by a structured pretested interview schedule during the period from 01 to 30 October, 2012. The findings indicated that highest proportion (72.8 percent) of the respondents had medium problem in T-aman cultivation, while the rest 27.2 percent of the respondents had high problem. Pearson's Product Moment Correlation co-efficient ( $r$ ) was computed to explore the relationships between the problem confrontation by the farmers in T-aman cultivation and their nine selected characteristics. The correlation analysis indicated that educational level, knowledge on T-aman cultivation, extension media contact and innovativeness had significant negative relationships with the problem confrontation by the farmers in T-aman cultivation. Age, family size, experience in T-aman cultivation and T-aman cultivation area had non-significant relationships with the problems confrontation in T-aman cultivation.

**Key words:** *problem confrontations of T-aman farmers*

### INTRODUCTION

Bangladesh is an agricultural country with 158.5 million populations and an area of 1, 47,570 sq. kilometers. The cropping intensity of the country is very low and traditional methods are used for crop production. About 80% of the agricultural land of the country is used for rice cultivation (BBS 2009). Rice is grown in three seasons namely Aus (mid-March to mid-August), Aman (mid- June to November) and Boro (mid- December to mid- June). Transplanted Aman (T-aman) rice covers about 50.92% of the rice areas of Bangladesh of which modern T-aman varieties covers 60% (BBS 2005). T-aman is grown throughout Bangladesh and broadcast aman is grown mostly in the south and southeastern part of the country. The Northern Region of Bangladesh is situated in the Tista and Jamuna basin, and contains many tributaries of these. Topography and climate make the area ecologically vulnerable to destabilizing variations including floods, river erosion, drought spells and cold waves, all of which occur more frequently and intensely drought spells and cold waves. Amongst these compelling conditions, the local economy shows little diversification and is heavily dependent on agriculture – which yields only one or sometimes two annual harvests, in contrast with three crops per year in more fertile and favorable parts of the country. In this setting, local employment is limited from September through December – in average years. As the landless and poorest survive on agricultural wage labor, their opportunities and ensuing incomes drop in this period, and they become trapped in what is called *Manga* – a cyclical phenomenon of poverty and hunger (CARE 2008). In years with particular negative weather conditions –like drought, cold spells or floods, the period of seasonal unemployment expands to more than four months, for example when early floods in August–September destroy part of the recently sown aman rice crop. And whenever unexpected rainfall leads to swollen rivers and increased erosion or flooding, the implications are destroyed the transplanted aman of the poorer farmers. These entire adverse situations accelerate the manga because farmers confronted a lot of problems in their T-aman cultivation. Problem confrontation of the farmers may vary from one farmer to another to the influence of various factors. Behavior of an individual is greatly influenced by his characteristics. It is, therefore, likely that the agricultural problem confrontation of the farmers might be influenced by their personal, economic, social and psychological characteristics. An understanding of the agricultural problem confrontation of the farmers and its relationship with their various characteristics will be greatly helpful for planning and execution of programs for reducing manga in the northern part of Bangladesh farmers. Considering the above facts in view, the researcher become interested to carry out the present study on “problem confrontation of the farmers on T-aman cultivation in the selected *manga* affected upazilla” with the following specific objectives:

- to determine the extent of problems confronted by the *manga* affected farmers in T-aman cultivation,
- to determine and describe some selected characteristics of the *manga* affected T-aman farmers,
- to explore the relationship between the problems confronted by the *manga* affected farmers in T-aman cultivation and their selected characteristics.

### MATERIALS AND METHODS

Katabari of Gobindaganj is considered as the locale of the study. A questionnaire was prepared with the help of Sub-Assistant Agricultural Officers of the study areas. Data collection was done by this structured pretested

interview schedule during the period from 01 to 30 October, 2012. An updated list of 1029 T-aman farmers was collected from the locale of the study. Then ten (10) percent of the populations were proportionately and randomly selected as the sample of the study by using random sampling method. Thus, 103 T-aman farmers constituted the sample of the study. Age, educational level, family size, experience in T-aman cultivation, T-aman cultivation area, annual family income, knowledge on T-aman cultivation, extension media contact, innovativeness were the independent variables of the study. Problem confrontation of farmers on T-aman cultivation was considered as the dependent variable. Age of a farmer was measured in terms of actual years from his/her birth to the time of interview and score of one (1) was assigned for each year of age. Family size of an individual was measured in terms of counting total number of members of his/her family and score of one (1) was assigned for each member. Experience in T-aman cultivation of a respondent was measured by the period from the time he/she started to cultivate T-aman rice to the time of interview and it was measured in terms of completed years on the basis of their response. Annual family income of a respondent was measured on the basis of total yearly earning from agriculture and other sources (service, business, daily labor etc.) by the respondent himself/herself and other members of his/her family and score of one (1) was assigned for one thousand taka yearly income. Knowledge on T-aman cultivation referred to the knowledge gained by the farmers in T-aman cultivation. Twenty questions on different aspects of T-aman cultivation were asked to the T-aman farmers to ascertain their knowledge score. The score was assigned as 2 for full correct answer and zero (0) for incorrect or no answer for each question. The extension media contact of the respondent farmers was measured on the basis of their responses regarding the extent of contact with the selected media in receiving information on problems confrontation in T-aman cultivation during the immediate past year. Innovativeness is the degree to which an individual adopts an innovation relatively earlier than other members in a social system (Rogers 1983). Here, innovativeness of a respondent was measured on the basis of the adoption of ten agricultural technologies by the respondents and the score was assigned on the basis of time dimension which means how earlier a respondent used the technology continuously. Researcher generalized the problems confrontation of farmers in T-aman cultivation in twelve different statements. A four point's rating scale was used to measure problem confrontation of farmers. The problems score of a farmer was computed by adding all scores obtained by him/her on 15 selected items. The analysis was performed by SPSS software. Null hypotheses were formulated to test the relationship of independent variables with dependent variables as there is no relationship between problem confrontation of farmers and each of the independent variables. Descriptive analysis such as range, number, percentage distribution mean and standard deviation were used whenever necessary. Pearson's Product Moment Correlations Coefficient was used in order to explore the relationship between the concerned variables.

## RESULTS AND DISCUSSION

### Problems confrontation of the farmers in T-aman cultivation

Problems confrontation of the farmers in T-aman cultivation was found to range from 18 to 38 against a possible range from zero (0) to 45. The average score was 27 with a standard deviation of 5.80 and mean 23.03. Every T-aman cultivation farmers faces many problems in their field. In the study low problem confronted farmers were not found. Based on the score of problems confrontation in T-aman cultivation, the farmers were classified into two categories as 'medium problem' ( $\leq 30$ ) and 'high problem' ( $> 30$ ). The distribution of the respondents according to their problems confrontation in T-aman cultivation has been presented in Table 1.

Table 1. Distribution of the farmers according to their problems confrontation in T-aman cultivation

Categories (Scores)	Respondents		Mean	Standard deviation
	Number	Percent		
Medium problem ( $\leq 30$ )	75	72.8	23.03	4.93
High problem ( $> 30$ )	28	27.2		
Total	103	100		

Findings shown in table 1 indicates that the highest proportion (72.8 percent) of the respondents' confronted medium problem in T-aman cultivation, while the rest 27.2 percent of the respondents' confronted high problem in their T-aman cultivation. Table 1 showed that the whole portion (100 percent) of the farmers' confronted medium to high problems in their T-aman cultivation.

### Selected characteristics of the farmers

Selected characteristics of the farmers have been presented in table 2, which indicates that an overwhelming majority (72.8%) of the respondents faced medium problem and 27.2% respondents faced high problem. The salient features of farmers have been given in Table 2.

Table 2. Salient features of different selected characteristics

Characteristics	Possible range	Observed range	Categories	Respondents		Mean	Standard Deviation
				Number	%		
Age	Unknown	22-63	Young aged (up to 3 years)	56	54.4	36.13	8.97
			Middle aged (35-50)	41	39.8		
			Old aged (above 50)	6	5.8		
Educational level	Unknown	0-15	Illiterate (0)	11	10.7	4.04	3.54
			Can sign only (0.5)	20	19.4		
			Primary education (1-5)	45	43.7		
			Secondary education (6-10)	21	20.4		
			Above secondary education (above 10)	6	5.8		
Family size	Unknown	2-9	Small family size (<4)	79	76.7	3.62	1.58
			Medium family size (5-7)nos.	20	19.4		
			Large family size (>7nos.)	4	3.9		
Experience in T-aman cultivation	Unknown	7-48	Low experience (<12)	12	11.7	21.13	25.52
			Medium experience (12-30)	81	7.86		
			High experience (>30)	10	9.7		
T-aman cultivation area	Unknown	0.21hectare-2.03hectare	Small (<1.0ha)	76	73.8	0.84	0.45
			Medium (1.01-2.0ha)	23	22.3		
			Large (>2.0ha)	4	3.9		
Annual family income	Unknown	61-186 thousand taka	Low income (<100thousand taka)	49	47.6	104.60	26.52
			Medium income (>100 thousand taka)	54	42.4		
Knowledge on T-aman cultivation	0-40	14-38	Low knowledge (<20)	17	16.5	25.65	4.75
			Medium knowledge (21-30)	69	67		
			High knowledge (>30)	17	16.5		
Extension media contact	0-15	5-14	Low contact (<7)	14	13.6	9.02	2.11
			Medium contact (7-11)	78	75.7		
			High contact (>11)	11	10.7		
Innovativeness	0-40	7-21	Low innovativeness (<12)	31	30.1	13.95	3.45
			Medium innovativeness(>12)	72	69.9		

Table 2 indicates that the young aged T-aman farmers comprise the highest proportion (56 percent) followed by middle aged category (39.8 percent) and the lowest proportion were made by the old aged category (5.8 percent). It was found that young and middle aged farmers were more involved in T-aman production. Most of farmers had primary education. The findings of the study reveal that majority (96.1 percent) of the farmers have small to medium family size. Overwhelming majorities (89.3 percent) of the farmers had medium to high experience in T-aman cultivation. It was found that majority of the farmers had small to medium T-aman cultivation area. For this reasons income also medium. Farmers need adequate knowledge for T-aman cultivation. But the result shows that knowledge is medium. So highest proportion of the farmers confronted medium problem. Data contained in the Table 2 indicates that most of the farmers had medium innovativeness. Majority of the farmers had low to medium interest on extension media contact.

**Relationship of selected characteristics of farmers with their problem faced in T-aman cultivation**

Table 3 showing the relationship between selected characteristics of farmers and their problem faced.

Table 3. Pearson's product moment co-efficient of correlation showing relationship between problems confrontation of the farmers in T-aman cultivation and their selected characteristics (N =103)

Dependent variable	Independent variables	Value of co-efficient of correlation (r)	Tabulated value at 101 df	
			0.05 level	0.01 level
Problems confrontation of the farmers in T-aman cultivation	Age	-0.137 <sup>NS</sup>	0.194	0.253
	Educational level	-0.280**		
	Family size	-0.181 <sup>NS</sup>		
	Experience in T-aman cultivation	-0.137 <sup>NS</sup>		
	T-aman cultivation area	0.076 <sup>NS</sup>		
	Annual family income	-0.129 <sup>NS</sup>		
	Knowledge on T-aman cultivation	-0.498**		
	Extension media contact	-0.398**		
	Innovativeness	-0.376**		

<sup>NS</sup> Not significant

\*\*Significant at the 0.01 level

\*Significant at the 0.05 level

Table 3 indicates that educational level, knowledge on T-aman cultivation, extension media contact and innovativeness has negative highly significant relationship with problem confrontation of farmers and age, family size, experience in T-aman cultivation, T-aman cultivation area and annual family income has negative non-significant relationship with problem confrontation of the farmers in T-aman cultivation. It means an educated farmer gathers proper knowledge on T-aman cultivation technology. If educational level of a farmer increase problem decreases in T-aman cultivation. Use of extension media should become available for farmers so that they can take proper benefit on T-aman cultivation. If technology available farmers become motivated easily to adopt any technology. Here also be indicates that low innovative farmers confronted high problem in other words with the increase of innovativeness of the farmers tends to decrease their problems confrontation in T-aman cultivation.

**CONCLUSION**

On the basis of findings and their interpretation it was found that farmers confronted medium problem confrontation in T-aman cultivation. Farmers in the manga area faced severe problem. Low knowledgeable farmers in case of T-aman cultivation confronted high problems or with the increase of knowledge level of the farmers tends to decrease their problems confrontation in T-aman cultivation. Again with the increase in extension media contact of the farmers tends to decrease their problems confrontation in T-aman cultivation. Based on the severity among the problems. So, it may be concluded that farmers of the study area confronted the problems in T-aman cultivation to a variety of degree. To minimize problems there should be need more extension works for educating and training program for the farmers which will increase their knowledge and skills and will be supportive to solve their problems in T-aman cultivation. DAE also should take some motivational programs so that farmers become more innovative to adopt various new convenient technologies in T-aman.

**REFERENCES**

BBS (2005) Statistical Pocket Book. Bangladesh Bureau of Statistics, Statistical division, Ministry of Planning, Government of people Republic of Bangladesh, Dhaka.

BBS (2009) Statistical Year Book of Bangladesh, Bangladesh Bureau of Statistics, Ministry of Planning, Government of people Republic of Bangladesh, Dhaka.

CARE (2008) Report on "Manga" in Northern Bangladesh. Economic Development Unit, CARE Bangladesh.

Rogers EM (1983) Diffusion of Innovations. 3<sup>rd</sup> edn. New York: The Free Press.