



FARMER'S ATTITUDE TOWARDS AROMATIC RICE CULTIVATION AS AN INDIGENOUS PRACTICE

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ABSTRACT

The main objective of the study was to determine the attitude of the farmers towards aromatic rice cultivation. Data for the study were collected from a sample of randomly selected 56 farmers through personal interviewing during 05 to 30 December 2010. The findings revealed that majority (57.1%) of the farmers showed moderately favorable attitude towards aromatic rice cultivation. Among eight selected characteristics of the farmers only four such as education, family income and experience in aromatic rice cultivation had positive and significant relationship with their attitude towards aromatic rice cultivation. In addition, the top three problems faced by the farmers in cultivating aromatic rice were i) lower yield of aromatic rice, ii) lack of proper technology and iii) unavailability of aromatic rice seed.

Key words: Attitude, aromatic rice cultivation, indigenous practice.

INTRODUCTION

Bangladesh is a densely populated country in the world where rice is the staple food of the people. Out of the total cropped area 1, 12,700 thousand hectares are covered by rice alone and its total production is 32356 thousand metric ton (BBS 2010). The land and climate of the country offer a highly favorable environment for the growth of rice plant. Consequently a huge number of rice cultivar is suited to varied agro-ecological condition. That is why rice can be seen standing year round everywhere of the country. Rice is a major crop which provides one-third of the total carbohydrate for the world's population, especially in Asian countries. It is the staple food for more than 3 billion people and provides 50 to 80% daily calorie intake (Khush 2005).

Unlike modern coarse rice, aromatic rice have demand both in internal and external trade markets. The price of aromatic rice is much higher compared to modern coarse varieties. It is also preferred by some consumer despite of their high price and lower yield. However, their yield potentials are low as compared to modern rice varieties. Lodging is one of the prime factors of yield in local aromatic rice especially tall varieties with long and droopy leaves, weak culms which cause a great reduction in rice

yield. Most aromatic rice cultivars are highly photosensitive and a slight change in day length causes adverse effect on their growth and development. As a result, the cultivation of aromatic rice is decreasing day by day due to lack of advance research and technology. So, to keep up the sustainability of indigenous aromatic rice, it is necessary to determine the attitude of the farmers who have cultivated it in their fields. However, very few research studies have so far been reported in Bangladesh in this context. It was therefore, felt necessary to undertake this research study. The followings are the objectives of the study to: a) To determine the attitude of the farmers towards aromatic rice cultivation, b) To determine and describe some of the selected characteristics of the farmers, c) To explore the relationship between selected characteristics of the farmers and their attitude towards aromatic rice cultivation and d) To ascertain the problems faced by the farmers in aromatic rice cultivation.

MATERIALS AND METHODS

The study was conducted in four villages of Chiribondor upazila under Dinajpur district. The total population consisted of 168 farmers in the study area. Of them, 56 respondents were selected for interview by following simple random sampling

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method. Data were collected from the sampled respondents through personal interview. Eight characteristics of the farmers namely age, education, family size, annual income, extension contact, training received, organizational participation and experience in aromatic rice cultivation were considered as independent variables of the study. Attitude of farmers towards aromatic rice cultivation was the dependent variable. The dependent variable was ascertained through 5-point Likert type scale having 10 statements (5 positive and 5 negative). Farmers agreement on 10 statements were ascertained as 'strongly agree' 'agree' 'no opinion' 'disagree' and 'strongly disagree' with corresponding scores of 4, 3, 2, 1 and 0. Thus, for a respondent the attitude score could vary from 0 to 40. Problem confrontation of rice growers were measured through a scale containing 10 statements based on aromatic rice cultivation. The SPSS (Statistical Package for Social Sciences) computer program was used to perform data analysis.

RESULTS AND DISCUSSION

Characteristics Profile of the Farmers

Findings in Table 1 revealed that majority (76.8%) of the farmers were middle to old aged. The highest proportion of the farmers (48.2%) had education at primary level. Majority (69.7 %) of the farmers had medium to large family size followed by 30.4% small. A large portion (83.9) of the farmers had low to medium annual income. Majority (73.2 %) of the farmers had low to medium extension media contact. Half of the farmers have received low level of training course while 28.6% and 21.4% had received medium and long level training respectively. More than fifty percent (53.6%) of the farmers had low to medium organizational participation while 21.4% farmers had no participation with various organizations. Majority (35.7%) of the farmers had medium to high aromatic rice cultivation experience.

Table 1. Salient feature of the farmers with their characteristics

Characteristics	Category	Respondents		Mean	Standard Deviation
		Number	Percent		
Age	Young (up to 35)	13	23.2	39.16	11.992
	Middle (36-50)	26	46.4		
	Old (>50)	17	30.4		
Education	Illiterate (0)	3	5.4	6.17	3.099
	Primary (1-5)	27	48.2		
	Secondary (6-10)	26	46.4		
Family size	Small (Up to 3)	17	30.4	5.21	1.317
	Medium (4-6)	22	39.3		
	Large (>6)	17	30.4		
Annual income	Low (up to 49)	28	50.0	56.69	28.073
	Medium (50-90)	19	33.9		
	High (>90)	9	16.1		
Extension media contact	Low (up to 11)	22	39.3	16.10	5.522
	Medium (12-20)	19	33.9		
	High (>20)	15	26.8		
Training received	Short (<20)	28	50.0	42.87	86.765
	Medium (21-50)	16	28.6		
	Long (>50)	12	21.4		
Organizational participation	No participation (0)	12	21.4	5.55	5.246
	Low (1-8)	17	30.4		
	Medium (9-16)	13	23.2		
Experience in aromatic rice cultivation	High (>16)	14	25.0	16.08	10.602
	Low (0-9)	17	30.4		
	Medium (10-20)	20	35.7		
	high (>20)	19	33.9		

Farmers Attitude towards Aromatic Rice Cultivation

Observed attitude scores of the farmers ranged from 18 to 39 against the possible range of 0 to 40 having the average 29.17 and standard deviation 4.973. Based on attitude score, farmers were classified into three categories, such as unfavorable, moderately favorable and favorable attitude as shown in Table 2. The highest proportion (57.1 %) of the respondents

had moderately favorable attitude towards aromatic rice cultivation compared to 33.9 % favorable and 8.9 % unfavorable. It meant that more than three fourths (91.0 %) of the respondents had moderately favorable to highly favorable attitude towards aromatic rice cultivation. So, the overall situation in terms of farmer’s attitude towards aromatic rice cultivation was favorable in the study area because of their long experience in doing the practice.

Table 2. Distribution of farmers according to their attitude towards aromatic rice cultivation

Categories	Farmers		Mean	Standard deviation
	Number	Percent		
Unfavorable (up to 21)	5	8.9	29.17	4.973
Moderately favorable (22-30)	32	57.1		
Favorable (above 30)	19	33.9		
Total	56	100.0		

Relationship between Dependent and Independent Variables

Among eight (8) characteristics of the farmers, four (4) namely education, annual income, extension media contact and experience in aromatic rice cultivation showed significant relationship with their

attitude towards aromatic rice cultivation (Table 3). It could be said that these characteristics of the farmers had a great influence regarding the attitude towards aromatic rice cultivation. On the contrary, the rest of the characteristics had no significant relationship with the farmers’ attitude towards aromatic rice cultivation.

Table 3. The coefficient of correlation (r) between dependent and independent variables (N=56).

Dependent variable	Independent variables	‘r’ value
Farmers’ attitude towards aromatic rice cultivation	Age	-0.134
	Education	0.320**
	Family size	0.051
	Annual income	0.198*
	Extension media contact	0.282**
	Training received	0.074
	Organizational participation	0.015
	Experience in aromatic rice cultivation	0.292**

** Significant at 1% level of probability, *Significant at 5% level of probability

Problems Faced by the Farmers in Aromatic Rice Cultivation

There are several kinds of problems in the cultivation of aromatic rice. In order to measure the extent of problem in connection with the cultivation of aromatic rice, each problem was rated by each farmer. Their rating was noted by putting a tick mark in any one of the three columns and was quantified by high, medium and low. In order to ascertain the intensity of problems in aromatic rice cultivation, Problem Confrontation Index (PCI) was computed.

The PCI was computed by using the following formula:

$$PCI = P_h \times 3 + P_m \times 2 + P_l \times 1$$

Where,

PCI=Problem Confrontation Index

P_h=Percent rice growers having high problem

P_m= Percent rice growers having medium problem

P_l= Percent rice growers having low problem

The problem confrontation scores of rice growers ranged from 2 to 22, the average being 11.23 and standard deviation 4.53. Data in Figure 2 revealed that the highest proportion (37.5 percent) of the growers faced high while 32.1 % low and 30.4 % facing medium problems in cultivating aromatic rice.

Data in Table 4 indicated that the problem which ranked first on the basis of PCI was “low yield of aromatic rice with a PCI of 220. It is true that cultivation of aromatic rice was low due to its indigenous genetic characteristics. Lack of proper technology related to production of aromatic rice is ranked 2 with PCI of 210. Inadequate fertilizer supply is ranked 10, i.e., at last position with a PCI of 150.

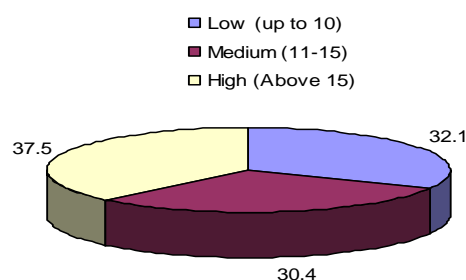


Figure 1. Pie graph showing farmers distribution according to their problems confrontation

Table 4. Ranks order of problems faced in aromatic rice cultivation

Sl. No.	Statement of problems	Extent of problem			PCI	Rank order
		High	Medium	Low		
1.	Low yield of aromatic rice	40	40	20	220	1 st
2.	Lack of proper technology	30	50	20	210	2 nd
3.	Unavailability of aromatic rice seed	30	40	30	200	3 rd
4.	Price of seed is high	20	46	34	186	4 th
5.	Unavailability of credit	10	60	30	180	5 th
6.	Inadequate extension service	4	71	25	179	6 th
7.	Insect pest attack	10	50	40	170	7 th
8.	Marketing problem	24	20	56	168	8 th
9.	Consumers number limited	2	50	48	154	9 th
10.	Inadequate fertilizer supply	4	48	42	150	10 th

CONCLUSION

The findings of the study showed that most of the rice growers (91 percent) had moderate favorable to favorable attitude towards aromatic rice cultivation. In respect of problem confrontation, the findings revealed that the highest proportion (37.5 percent) of the rice growers faced high problems in cultivating aromatic rice. Education, annual family income, extension media contact and experience in aromatic rice cultivation showed significant relationship with their attitude towards aromatic rice cultivation. It is true that lower yield of aromatic rice is generally a great problem in aromatic rice production. So, it should be recommended that policy makers of different government and non-government research organization should be undertaken appropriate research strategies in order to development high yielding aromatic rice.

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