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Farmers' Perception of Quality and Marketing System of RDRS Seed

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Abstract

The main objective of the study was to determine perception of the farmers in respect to quality and marketing system of RDRS seed. Data for the study were collected from a sample of randomly selected 100 farmers (50 from each of Sadar Upazila of Thakurgaon and Lalmonirhat districts) through personal interview during February to March 2008. Fifty eight% of the farmers had favorable perception in respect of quality and marketing system of RDRS seed followed by 39% moderately favorable and 3% less favorable perception. Among twelve characteristics of the farmers of Thakurgaon district, seven *viz*. level of education, farm size, annual family income, innovativeness, contact with extension media, experience in the use of RDRS seed, and knowledge on seed and seed production showed significant positive relationship with their perception of quality and marketing system of RDRS seed. On the other hand, for Lalmonirhat farmers, seven *viz*. level of education, innovativeness, training exposure, organizational affiliation, contact with extension media, experience in the use of RDRS seed and knowledge on seed and seed production showed significant positive relationship with their perception of quality and marketing system of RDRS seed. Further, the findings showed that the farmers mostly confronted the problem "lack of credit facilities" and their best suggestion regarding solution to the problems in the use of RDRS seed was "timely seed supply".

Keywords: *Perception, seed quality, marketing system, RDRS.*

Introduction

Agriculture is the basic foundation of the economic development of Bangladesh. While, seed is the fundamental input of agricultural crop production. The effective performance of seed influences the minimum use of other costly inputs like fertilizers, irrigation and pesticides. Without quality seed, high crop yield cannot be expected even taking intensive care and using other inputs. It is estimated that good seed alone can increase the crop production about 20% (Ahmed and Uddin, 1992).

Generally, farmers of Bangladesh produce seed in traditional system by keeping a small portion of their crops at the corner of the field and rest of the crop is harvested for consumption or selling purpose. After harvesting the seed crop, proper processing and preservation techniques are not followed. As a result, most of the farmers of our country produce low quality seed and use this seed in the next season for crop cultivation. So, the average production of crop in our country is lower than that of other countries of the world (Ahmed, 2002).

Men and animals directly or indirectly depend on seed for their survival. Seed plays a significant role for agricultural crop production towards human food supply. But, use of quality seed by the farmers is only 6% of the total requirement (Huda, 2001). The government realizes that it is impossible to meet the demand of quality seed by Bangladesh Agricultural Development

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Corporation (BADC) alone. Considering the above facts, the governments of Bangladesh declared its new national seed policy in 1991 wherein provisions were made to involve private sector in production, processing and distribution of quality seed to the farmers. According to the mandate of National Seed Policy, RDRS Bangladesh initiated its rural enterprise development program in 2001 while implementing seed uptake sub-project of the PETRRA (Poverty Elimination Through Rice Research Assistance) project with the support of Bangladesh Rice Research Institute (BRRI) and International Rice Research Institute (IRRI) sponsored by the Department for International Development (DFID). The rice seed uptake project of RDRS created a significant demand of the local farmers for making quality seed available at grassroots level. This project also helped the farmers to develop their capacity in the field of seed production technology, quality control, preservation and marketing management. RDRS had directly involved in quality seed production, storage and marketing since January 2004 under "RDRS Enterprise Private Limited" (Anonymous, 2006). However, most of the farmers are not aware about quality seed production and proper marketing system. But increasing the production of available quality seed and their proper marketing system can play a significant role in producing higher yields of crop. In view of the foregoing discussions, the researcher conducted the study with the following specific objectives: a. To determine the perception of farmers in respect of quality and marketing system of RDRS seed; b. To explore the relationship between the selected characteristics of the farmers and their perception regarding quality and marketing system of RDRS seed; and c. To identify the problems confronted by the farmers in using of RDRS seed.

Methodology

The study was conducted in two sadar upazilas of Thakurgaon and Lalmonirhat districts where quality seed uptake, preservation and marketing activities have been implemented by RDRS since 2001. Three unions namely Jagannathpur, Nargun, Begunbari of Thakurgaon sadar upazila and two unions namely Mohendranagar and Barabari of Lalmonirhat sadar upazila were selected as the study area for conducting the study. All the farmers related to production and utilization of RDRS seed were the population of the study. The total population of the study was 231 farmers. Eventually, sample consisted of 43.29% of the total population. Thus, 100 respondents (50 respondents from each upazila) were selected for interview by random number. Data were collected from the sampled respondents through personal interview during 17 February to 25 March 2008.

Farmers' perception of quality and marketing system of RDRS seed was the dependent variable of the study. The farmers were asked to give their agreement on 20 selected statements related to quality and marketing system of RDRS seed. A four-point scale namely 'strongly agree', 'agree', 'disagree' and 'strongly disagree' was used for taking the agreement of the respondents and the scores assigned to these agreements were 3, 2, 1, and 0 respectively. Twelve characteristics of the farmers namely age, level of education, farm size, family size, annual family income, innovativeness, social cooperation, training exposure, organizational affiliation, contact with extension media, experience in the use of

RDRS seed, and knowledge on seed and seed production constituted independent variables. Pearson's Product Moment Correlation Coefficient (r) was computed to explore the relationships between the dependent and independent variables. Student t-test for difference of means was computed to measure difference between the farmers' perception of different study area.

Problems confrontation of the farmers in the use of RDRS seed were measured by applying closed form questions. The farmers were asked to give their opinion on 10 selected problems regarding the use of RDRS seed. A four-point scale was used for computing the problem score of a respondent. For each problem, score of 3, 2, 1 and 0 was assigned to indicate extent of problem confrontation as serious, moderate, less and not at all respectively. The possible range scores of problems could be 0 to 30, '0' indicated no problem faced by the farmers in the use of RDRS seed while '30' indicated serious problems faced by the farmers in the use of RDRS seed.

To ascertain the comparison among the problems, Problem Confrontation Index (PCI) was computed by using the following formula:

$$PCI = (P_s \times 3) + (P_m \times 2) + (P_l \times 1) + (P_n \times 0)$$

Where,

PCI= Problems Confrontation Index

P_s= Frequency of the farmers having serious problem

P_m= Frequency of the farmers having moderate problem

P_l = Frequency of the farmers having less problem

P_n = Frequency of the farmers having no problem at all

At the end of the interview, the respondents were requested to give their suggestions to overcome the constraints in the use of RDRS seed.

Findings and Discussions

Perception of Quality and Marketing System of RDRS Seed

Farmers' perception of quality and marketing system of RDRS seed was the main focus of the study. Perception of quality and marketing system of RDRS seed was determined by considering two dimensions viz. perception of RDRS seed quality and perception of RDRS seed marketing system. The findings, therefore, have been presented in three subsections with a view to have clear understanding of the farmers' perception of quality and marketing system of RDRS seed.

Farmers' Perception of RDRS Seed Quality

The observed perception scores regarding RDRS seed quality of the Thakurgaon and Lalmonirhat ranged from 10 to 29 individually against the possible range of 0 to 30. Based on their perception of RDRS seed quality, the respondents were classified into three categories such as less favorable, moderately favorable and favorable that has been presented in Table 1.

Table 1. Distribution of the farmers according to their perception of RDRS seed quality

Categories (Score)	Farmers' number and (percentage)			Farmers' mean and (Standard deviation)		Computed t-value (df=98)
	All	Thakurgaon	Lalmonirhat	Thakurgaon	Lalmonirhat	
Less favorable (up to 10)	3 (3)	1 (2)	2 (4)	21.88 (3.75)	20.42 (4.41)	1.783*
Moderately favorable (11-20)	40 (40)	20 (40)	20 (40)			
Favorable (above 20)	57 (57)	29 (58)	28 (56)			
Total	100 (100)	50 (100)	50 (100)			

* Significant at 5% level of probability

The mean and standard deviation regarding RDRS seed quality of the farmers of Thakurgaon were 21.88 and 3.75 respectively. Data furnished in the Table 1 show that highest proportion (58%) of the farmers of Thakurgaon had favorable perception in respect of RDRS seed quality while 40% had moderate favorable and only 2% had less favorable perception.

On the other hand, the mean and standard deviation regarding RDRS seed quality of the farmers of Lalmonirhat were 20.42 and 4.41 respectively. Data furnished in the Table 1 show that highest proportion (56%) of the Lalmonirhat farmers had favorable perception in respect of RDRS seed quality compared to 40% had moderately favorable and only 4% had less favorable perception. Again, in the case of all farmers, highest proportion (57%) of the farmers had favorable perception regarding RDRS seed quality while 40% had moderately favorable and only 3% had less favorable perception of quality of RDRS seed. Majlish (2007), Islam (2005), Chakraborty (2002) and Sarker (1999) also found that highest proportion of the respondents had favorable perception in respective to their perception issues.

Mean regarding RDRS seed quality perception of Thakurgaon farmers was more than that of Lalmonirhat farmers and statistically different at as the t value was significant at 5% level of probability (Table 1). Thus, it could be concluded that more than half of all farmers had favorable perception regarding RDRS seed quality followed by 40% had moderately favorable perception. It meant that farmers of the study area were hardly motivated by RDRS personnel as well as they had desirable perceptual awareness related to the usefulness of quality seed.

Farmers' Perception of RDRS Seed Marketing System

The observed perception scores regarding RDRS seed marketing system of the Thakurgaon and Lalmonirhat farmers ranged from 10 to 28 and 9 to 27 respectively against the possible range of 0 to 30. Based on their perception of RDRS seed marketing system, the

respondents were classified into three categories *viz.* less favorable, moderately favorable and favorable that have been shown in Table 2.

Table 2 Distribution of the farmers according to their perception of RDRS seed marketing system

Categories (Score)	Farmers' number and (percentage)			Farmers' mean and (Standard deviation)		Computed t-value (df=98)
	All	Thakurgaon	Lalmonirhat	Thakurgaon	Lalmonirhat	
Less favorable (up to 10)	3 (3)	1 (2)	2 (4)	21.22 (3.39)	19.24 (4.04)	2.644*
Moderately favorable (11-20)	50 (50)	24 (48)	26 (52)			
Favorable (above 20)	47 (47)	25 (50)	22 (44)			
Total	100 (100)	50 (100)	50 (100)			

* Significant at 5% level of probability

The mean and standard deviation regarding RDRS seed marketing system of the Thakurgaon farmers were 21.22 and 3.39 respectively. Data furnished in the Table 2 show that highest proportion (50%) of the farmers of Thakurgaon had favorable perception in respect of RDRS seed marketing system while 48% had moderately favorable and only 2% had less favorable perception. Islam (2005) and Chakraborty (2002) found similar categories findings in their respective issues of perception.

On the other hand, the mean and standard deviation regarding RDRS seed marketing of the farmers of Lalmonirhat were 19.24 and 4.06 respectively. Data presented in Table 2 show that highest proportion (52%) of the farmers had moderately favorable perception in respect of RDRS seed marketing system compared to 44% had favorable and only 4% had less favorable perception. Again, in the case of all farmers, highest proportion (50%) of the farmers had moderately favorable perception in respect of RDRS seed marketing system while 47% had favorable and only 3% had low perception of quality of RDRS seed. Therefore, it could be interpreted that more than half of the farmers had moderately favorable to less favorable perception regarding RDRS seed marketing system. It meant that farmers of the study area were still existed regarding RDRS seed marketing system. Because, the farmers were not capable of understanding the complex phenomenon of marketing system. Sharmin (2006), Uddin (2004), Kabir (2002), Chowdhury (2001) and Hossain (2000) also found that highest proportion of the respondents had medium or moderately favorable perception in respective to their perception issues of the studies.

Average perception regarding RDRS seed marketing system of Thakurgaon farmers was more than that of the farmers of Lalmonirhat and statistically

different as the t value was significant at 5% level of probability (Table 2).

Overall Perception of Quality and Marketing System of RDRS Seed

The observed perception scores regarding RDRS seed quality and marketing system of the farmers of Thakurgaon and Lalmonirhat ranged from 20 to 54 and 19 to 55 respectively, against the possible range of 0 to 60. Based on their overall perception of RDRS seed quality and marketing system, the respondents were classified into three categories such as less favorable, moderately favorable and favorable that has been shown in Table 3.

The mean and standard deviation regarding quality and marketing system of RDRS seed of the farmers of Thakurgaon were 43.08 and 5.80 respectively. Data presented in the Table 3 show that highest proportion (62%) of the farmers of Thakurgaon had favorable perception in respect of RDRS seed quality and marketing system while 36% had moderately favorable perception and only 2% had less favorable perception.

Table 3. Distribution of the farmers according to their overall perception of quality and marketing system of RDRS seed

Categories (Score)	Farmers' number and (percentage)			Farmers' mean and (Standard deviation)		Computed t-value (df=98)
	All	Thakurgaon	Lalmonirhat	Thakurgaon	Lalmonirhat	
Less favorable (up to 10)	3 (3)	1 (2)	2 (4)	43.08 (5.80)	39.70 (7.98)	2.422*
Moderately favorable (11-20)	39 (39)	18 (36)	21 (42)			
Favorable (above 20)	58 (58)	31 (62)	27 (54)			
Total	100 (100)	50 (100)	50 (100)			

* Significant at 5% level of probability

On the other hand, the mean and standard deviation regarding quality and marketing system of RDRS seed of the farmers of Lalmonirhat were 39.70 and 7.98 respectively. Data furnished in the Table 3 show that highest proportion (54%) of the farmers of Lalmonirhat had favorable perception in respect of RDRS seed quality and marketing system while 42% had moderately favorable and only 4% had less favorable overall perception.

Overall perception mean regarding RDRS seed quality and marketing system of Thakurgaon farmers was more than that of the Lalmonirhat farmers and statistically different because the 't' value was significant at 5% level of probability (Table 3). It could be said that there was significant difference between the farmers of Thakurgaon and Lalmonirhat in respect of their perception of quality and marketing system of RDRS seed.

In the case of all farmers, highest proportion (58%) of the farmers had favorable perception in respect of RDRS seed quality and marketing system while

39% had moderately favorable perception and only 3% had less favorable perception. Majlish (2007), Islam (2005), Chakraborty (2002) and Sarker (1999) also found that highest proportion of the respondents had favorable perception in respective to their perception issues.

Relationship between Dependent and Independent Variables

The coefficient of correlation (r) between the selected characteristics of the farmers and their perception of quality and marketing system of RDRS seed is presented in Table 4.

Table 4. Coefficient of correlation (r) showing the relationship between farmers' selected characteristics and perception (N=50)

Farmers' selected characteristics	Computed r value for farmers (48 d.f.)	
	Thakurgaon	Lalmonirhat
Age	0.042	-0.228
Level of education	0.616**	0.845**
Family size	0.030	0.147
Farm size	0.294*	0.217
Annual family income	0.315*	0.230
Innovativeness	0.466**	0.436**
Social cooperation	0.130	0.065
Training exposure	0.264	0.316*
Organizational affiliation	0.120	0.365**
Contact with extension media	0.429**	0.403**
Experience in the use of RDRS seed	0.360*	0.516**
Knowledge on seed and seed production	0.639**	0.742**

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

Among twelve characteristics of the Thakurgaon farmers, seven namely level of education, farm size, annual family income, innovativeness, contact with extension media, experience in the use of RDRS seed and knowledge on seed and seed production showed significant and positive relationship with their perception of quality and marketing system of RDRS seed. On the contrary, among twelve characteristics of the Lalmonirhat farmers, level of education, innovativeness, training exposure, organizational affiliation, contact with extension media, experience in the use of RDRS seed and knowledge on seed and seed production showed positively significant relationship with their perception of quality and marketing system of RDRS seed (Table 4). It could be said that these characteristics significantly associated to the farmers' perception to a great extent. The characteristics *viz*. age, family size, social cooperation of the farmers of both districts had no significant link to their perception.

Problem Confrontation of the Farmers in Using of RDRS Seed

Ten problems regarding different aspects of RDRS seeds production and utilization have been identified and selected in problems confrontation scale. Farmers were asked to give their response as serious, moderate, less and not at all and the scores assigned to these responses

were 3, 2, 1, and 0 respectively. The problems were ranked on the basis of the value of Problem Confrontation Index (Table 5).

Table 5. Ranked order of the problems faced by the farmers in using of RDRS seed

Problems	Problem Confrontation Index (PCI)	Rank order
Lack of adequate credit facilities	249	1
Lack of information about RDRS seed	219	3
Inability to purchase quality seed	223	2
High price of seeds during sowing period	187	5
Low supply of seeds by RDRS in sowing time	210	4
Few number of dealers for selling seed	174	6
Biasness of RDRS agents in seed distribution	146	7
Impurity of RDRS supplied seed	103	8
Lack of personal interest to use RDRS seed	94	9
Low germination % age of RDRS seed	75	10

"Lack of adequate credit facilities" was ranked 1st by the farmers in production and utilization of RDRS seed. To get high yield necessary inputs related to production like seed, fertilizers, pesticide, modern agricultural machineries are required. Majority of the farmers confronted a great difficulty in that respect, as they do not have enough deposits for all the year round. Therefore, they have to need to take credit from different sources. They claim that personnel of the credit sources (especially government banks) make delay and favor rich farmers while disbursing government credit.

Conclusion

More than 90% of the farmers had moderately favorable to favorable perception regarding quality and marketing system of RDRS seed. Thus, it would be easier to take specific program by RDRS for production, preservation and distribution of quality seed of different crops through proper marketing system. Among the ten problems, "lack of credit facilities" was mostly faced by the farmers in the use of RDRS seed. More than half of the farmers of Lalmonirhat had low annual family income. So, there is further scope to take necessary steps to involve farmers in the production of high value crops and vegetables by providing high yielding seed varieties. Adequate credit offered by government and non-governmental organizations can play a significant role in higher production and consumption of RDRS quality seed. Majority farmers in the study areas had received short-term training. Thus, regular training should be arranged by concerned authorities on different aspects of crop seed production. Involvement of different extension media by the Department of Agricultural Extension might be helpful about planned communication campaign for motivating farmer concerning RDRS seeds.

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