Bangladesh Journal of Extension Education *ISSN 1011-3916*
Volume 20, No. 1&2, 2008:123-128 *Research Article*

Constraints Faced by the Banana Farmers of Kuliarchar Upazila under Kishoreganj District

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Abstract

The main purpose of the study was to determine the constraints facing by banana farmers in Kuliarchar upazila under Kishoreganj district. This study was mainly based on the primary data collected from 105 farmers selected randomly from a population of 525 of nine villages of Kuliarchar upazila under Kishoreganj district. The findings of the study reveal that the farmers faced various problems in banana cultivation. The comparative constraints facing by the banana farmers in the five selected aspects have been shown in the Problem Constraints Index (PCI). The PCI indicated the banana farmers had high constraints in disease. Extent of constraints facing in field management came next in the rank then marketing, improved sucker and agricultural credit respectively. Statistical tests showed that education, agricultural knowledge of banana farmers and extension contact of those banana farmers had significant negative relationships with their faced constraints in the five selected aspects of banana cultivation. The study also provided suggestions for the solution of the problems and some recommendations were also made for the improvement of the banana cultivation.

***Key words**: Constraint, banana cultivation, banana farmer*

Introduction

The banana (*Musa spp*.) is one of the oldest fruit cultivated by men from pre-historic times. In contempory situation, banana is the most important tropical fruit. It is the leading tropical fruit in the world market with a highly organized and developed industry (Anonymous, 2001). Banana occupies an important position among the fruits of Bangladesh not only for its highest production among the fruits but also for its increasing popularity to many farmers as a value added crop. In a survey by Banana project, BAU, it was found that there are more than 40 varieties available in Bangladesh, however, a particular variety is known by more than one name in different places. The important banana varieties grown in Bangladesh are *Amritasagar, Sabri, Champa, Kabri, Japkathli, Ganasundari etc*. Constrains in agriculture are multifaceted (Rahman, 1995). In spite of greater potentiality of banana cultivation, the farmers of Bangladesh are not free from problems in cultivating banana. The constraints in the scientific cultivation of banana as perceived by the farmers might be influenced by their personal, economics and social characteristics. Thus, it is essential to have an understanding about constraints faced by the banana farmers and the relationships between the constrains and their various characteristics for effective planning and execution of cultivating banana in Bangladesh. At present, banana production

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is a means of livelihood of many people or farmers in Bangladesh. Banana cultivation has been developing in Bangladesh on large scale commercial basis. People from different corners of the country adopted banana business as a profitable venture. For sustainable development of banana enterprise, it is necessary to remove these constraints in cultivating banana firstly. Therefore, the present study was undertaken to determine the constraints facing by banana farmers in banana cultivation.

Methodology

Out of 525 banana farmers, a sample of 105 (i.e. 20%) farmers was selected randomly. The researcher also prepared a reserve list of 20 banana farmers out of this list to use in case of non-availability of sampled farmers. Data were collected through interviewing the farmers, with the help of an interview schedule which contained both open and closed form questions. Scales were developed for computing suitable scores in respect of constraints in the cultivation of banana farmers. Data for this study were collected from the respondents of 9 villages by using the prepared interview schedule by the researcher himself. Before going to the respondents for interview, they were informed earlier, so that they would be available in their respective areas. Data obtained from the respondents were compiled, tabulated and analyzed according to the objectives of the study. Qualitative data were converted into quantitative form by means of suitable scoring whenever needed. Constraints faced by the farmers in banana cultivation were the dependent variable. Besides, the researcher shared the experiences of the local farmers, Upazila Agriculture Officer, Sub-assistant Agricultural Officer and other experts in this respect through discussion with them. Finally, 41 such common problems likely to be faced by the farmers in the study area under the five selected aspects were selected such as improved sucker, disease, credit, field management and marketing. Each of the constraints facing in banana cultivation was further categorized against a scale of 'low constraint' 'medium constraint' and 'high constraint'. The Problem confrontation score of a particular farmer was done by adding the scores obtained against all the possible 41 problems statement.

The following equation was developed to assess the rate of problem in percentage.

$$\text{Problem confrontation score in any aspect} = \frac{\text{Total observe score on any aspect}}{\text{Total possible score on that aspect}} \times 100$$

Constraints faced by the banana farmers in five selected aspects of banana cultivation were investigated in this piece of research. For this purpose, a Constraint Facing Index (CFI) was computed for each of the five aspects by using the following formula as used by Mansur (1989) and Raha (1989).

$$\text{Constraint Facing Index (CFI)} = P_l X_1 + P_m X_2 + P_h X_3$$

where,

P_l = percentage of farmers having low constraints facing

P_m = percentage of farmers having medium constraints facing

P_h = percentage of farmers having high constraints facing

Constraint Facing Index (CFI) for any one of the selected aspects could range from 100 to 300. However, CFI for the five selected

aspects of banana cultivation ranged from 195.2 to 237.1. Comparative pictures of the five selected aspects have been shown in Table 1.

The statistical measures used in the study were frequency distribution, range, mean, percentage, standard deviation and rank order. Tables and bar graphs were used to find out the meaningful result. In order to explore the relationships between the constraint of the banana farmers and the selected independent variables, co-efficient of correlation (r) was measured. Five percent (0.05) level of significance was used as a basis for rejecting any null hypothesis.

Findings and Discussion

Findings in respect of constraints faced by the farmers in each of the five aspects of banana cultivation, comparative constraints facing among the five selected aspects of banana cultivation and farmers' overall constraints in banana cultivation are described in Table 1.

Table 1. Constraints faced by the farmers in banana cultivation

Sl. No.	Description of the constraint facing	Extent of constraint facing (%)			CFI	Rank order
		Low	Medium	High		
1.	Constraints in improved sucker	9.6	77.1	13.3	203.7	4
2.	Constraints in diseases	14.3	34.3	51.4	237.1	1
3.	Constraints in credit	30.5	43.8	25.7	195.2	5
4.	Constraints in field management	9.5	58.1	32.4	222.9	2
5.	Constraints in marketing	15.2	62.9	21.9	206.7	3

The data in Table 1 indicated that the farmers faced highest constraint in diseases (CFI=237.1). Field management, marketing, improved sucker and agricultural credit ranked in orderly. Distribution of the banana farmers according to overall constraints facing has been visually presented in Figure 1.

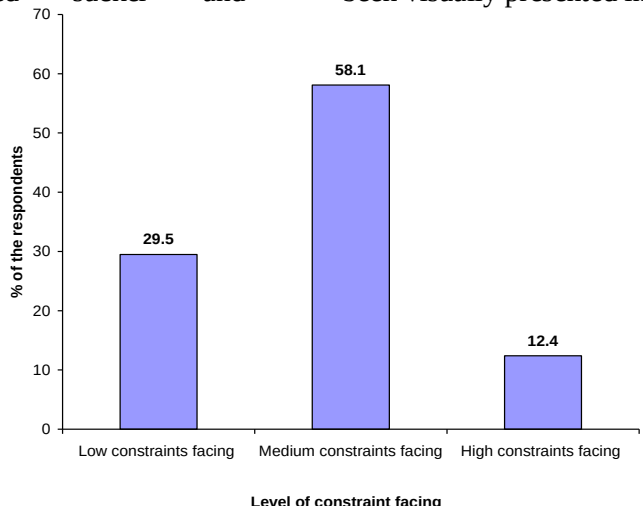

Figure 1: Distribution of the banana farmers according to overall constraints facing

of constraints. These facts indicate that the desired level of banana production will not be achieved if the different constraints faced by the banana farmers were not solved by the concerned authority. The findings indicate that the banana farmers faced considerable constraints in all the five aspects relevant to banana cultivation. However, the extent of constraint faced by them in disease was the highest. It may be concluded that farmers will continue to face constraints in banana cultivation unless arrangements are made for controlling the pests and disease of banana at least by reducing the cost of pesticides and sprayers.

The investigation was conducted with some selected characteristics of the banana farmers for exploring the relationships with the constraints in banana cultivation. The selected characteristics were: age, education, family size, knowledge in banana cultivation, farm size, area under banana cultivation, annual income, social participation and extension contact.

Table 2. Correlation analysis between the selected characteristics of the farmers and their faced constraints in banana cultivation

Dependent variable	Independent variables	Computed values of 'r' with n = 103 df	Table value for 'r' with 103 df
Constraints faced by the banana farmers	Age	0.228*	
	Education	-0.348***	
	Family size	-0.082	
	Farm size	-0.151	
	Area under banana cultivation	0.162	7.80
	Annual income	0.006	
	Knowledge in banana cultivation	-0.239**	
	Social participation	0.087	
	Extension contact	-0.229**	

** = Significant at 0.05 level of probability; ** = Significant at 0.01 level of probability*
**** = Significant at 0.001 level of probability*

In order to determine the relationships between selected characteristics of the banana farmers with their faced constraints in banana cultivation, hypothesis were advanced and tested. The results of the hypothesis testing are described below:

Age of the farmers had a significant relationship with their faced constraints in banana cultivation and the level of probability was 0.05. The relationship showed a negative direction between the banana farmers' education and their faced constraints in banana cultivation. The relationship was substantially significant at 0.001 level of probability. The relationship between the farm size and constraints in banana cultivation was insignificant but showed a negative trend. There were insignificant relationships among the area under banana cultivation and the annual income with their faced constraints in banana cultivation. There was insignificant relationship between the annual income of the farmers and their faced constraints in banana cultivation. However, the relationship was a positive trend. There was a significant negative relationship between knowledge in banana cultivation and their faced constraints in banana cultivation and the level of

probability was 0.01. There was no significant relationship between the social participation and their faced constraints in banana cultivation. However, the relationship showed a positive trend. Extension contact of the banana farmers had a significant negative relationship their faced constraints in banana cultivation and the level of probability was 0.01. Level of education of the respondents had a significant negative correlation with the constraints face in the selected aspects. It may be concluded that unless the literacy levels among the farmers are increased they will continue to face constraints in various aspects of banana cultivation. Knowledge of the farmers had significant negative correlation with the constraints faced in the selected aspects as well as in using credit. Probably due to low or poor knowledge in agriculture the banana farmers faced considerable problems in cultivating banana. Significant negative relationship exists between the farmer's extension contact and their constraints in banana cultivation. This indicates that banana farmers having higher extension contact faced lower constraints. This leads to the conclusion that increasing extension contact will give the farmers good opportunities to overcome their different constraints in banana cultivation.

Conclusion

The farmers were facing many problems in cultivation of banana. The majority (77.1%) of the farmers faced medium constraint in respect of improved sucker. Half of the banana farmers (51.4%) faced high constraint in respect of disease. Constraint facing in credit showed that about half (43.8%) of the farmers faced medium constraints in the respect of credit, 58.1% of the farmers faced medium constraints in field management and 62.9% of the banana farmers faced medium constraints in marketing. In view of the study, it may be concluded that farmers will continue to face constraints in banana cultivation unless arrangements are made for controlling the pests and diseases of banana at least by reducing the costs of pesticides and sprayers. Majority of the farmers (70.5%) faced medium to high constraints. From this fact, it may be concluded that until the farmers are free from different constraints in banana cultivation, they will not be in position to adopt better technology for banana cultivation. In the other hand, to remove the constraints in banana cultivation, sufficient number of labor, contact with expert persons, agricultural knowledge for better field management *etc.* should be taken when needed. Banana cultivation is a part of subsistence agricultural farming system in Bangladesh and plays a vital role in both rural economy and urban industrialization in our country. Banana cultivation provides not only food nutrients but also job opportunities for a large number of people in our country who are employed in industries and banana trades. The demand for banana cultivation is increasing with rapid increase in population. So, concerning authorities such as DAE, Ministry of Agriculture, NGOs and some private sectors should take necessary steps for ensuring better quality and quantity of banana by reducing present constraints in banana cultivation in Bangladesh.

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