

AN ECONOMIC ANALYSIS ON DIFFERENT CROPPING PATTERNS PRACTICED BY THE FARMERS IN RAINFED RICE ENVIRONMENT

Major Professor: Dr. Joynal Abedin

Research Supervisor: Md. Mainur Rahman Siddiqui

Author Name: Syed Md. Abdullah Shiblee

Reg. No.: 93-11-243

Defense Term: Summer, 1998

ABSTRACT

In Bangladesh, the demand for food will continue to increase, as its population increases by nearly 2.3 million every year. But a little scope is left to increase agricultural output by putting new land under cultivation. So, to enhance total food production in the country, immediate attention must be given to the improvement of existing cropping patterns by introducing new crops in a year or by adopting HYV under both rainfed and irrigated conditions. With this end in view, the objectives of this study were: i) to identify different cropping patterns practiced by the farmers under rainfed condition in a selected area, ii) to find out the extent of resource utilization according to cropping patterns, iii) to evaluate the performance of different cropping patterns for identification of the most productive / profitable cropping pattern, and iv) to find out the production constraints that the farmers confronted with. For this study, 50 farmers of a contiguous block falling partly in the village of Kathura and South Salna of Kaultia union were selected. There were four major cropping patterns detected in the study area, namely BR2-Pajam-Fallow, BR2- Sizershail-Fallow, BR2-BR11 -Fallow and BR2-Chandershail-Fallow. It was found that per hectare total human labor used in cultivation of aforementioned patterns were 282, 281, 292 and 274, respectively. Farmers responded to have applied the dose of 220, 216, 229 and 217 Kg Urea, 124, 115, 123 and 116 kg TSP, and 59, 56, 61 and 58 kg MP per hectare for the aforementioned patterns, respectively. Shortest turn-around time, high cost of production, less taste, etc. retarded the HYV-HYV from being widely adopted. In terms of economic viability, the BR2-BR11-Fallow pattern appeared to have the greatest potential as replacement for the farmers' other existing cropping patterns. The BR2-BR11-Fallow pattern had the highest net return of Tk. 10,408 per hectare when compared to the other cropping patterns and its marginal rate of return (MRR) and average rate of return (ARR) were 423 percent and 338 percent, respectively, which were highest in comparison with the other cropping patterns. In terms of returns to limiting factors, the pattern BR2-BR11-rFallow also gave the highest returns to labor costs of 1.79 and returns to material costs of 2.84. Based on these findings, the BR2-BR11-Fallow pattern should be recommended to the farmers. Respondent farmers viewed high wage rate, shortage of hired labor at the critical stage and high cost of fertilizers as the main constraints in production activities.