CLIMATE VARIABILITY AND IMPACT OF SALINITY ON THE PROFITABILITY OF T.AMAN RICE PRODUCTION IN THE COASTAL REGION OF KHULNA

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ABSTRACT

The present study was undertaken with a view to i) determine the rate of change in acreage, production and yield of T.Aman rice in the coastal area, ii) to estimate the profitability of T.Aman rice production in saline and non saline areas, iii) to asses some climatic factors in T.Aman production in coastal area. A total number of 80 respondents were randomly selected by using stratified random sampling technique of which 33 were small, 25 were medium, and 22 were large. The field investigation was carried out in lasker, kopilmoni and godypur village in the same union of paikgacha upazilla under Khulna district. Data were collected from both primary and secondary sources. The Cobb-Douglas production function was used for the present study. The rate of change in acreage, production and yield were calculated applying the linear, compound and exponential growth models. The result show that the growth of acreage, production and yield of T.Aman rice were positive and significant. The results revealed that the yield of T.Aman rice was found lower in less saline area than that of more saline area. But gross return from T.Aman was Tk. 101150ton/ha in less saline area higher than the more saline area. Per hectare gross margin was the highest for non saline area (Tk 62540/ha) followed by saline area (Tk. 24500/ha). Net returns were calculated as Tk 7922/ha and Tk 45900/ha for saline and non saline area respectively. Per hectare return over per taka investment were Tk 1.22 and Tk 1.83 for saline and non saline area respectively, implying that non saline area were more profitable than saline area.. Among different constraints, high price of the production inputs like fertilizer and pesticide was the dominant one in case of both saline and non saline area Low yield and unstable market price were identified as other important constraints for T.Aman rice production. The average crop yield is very low in the region, which is obviously due to salinity problems. The government should take necessary steps to overcome these problems/constraints and to expand the production of T.Aman rice in coastal areas of Bangladesh.