



Research Paper

Impact of modern technologies on rice production in Thane District (M. S.)

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ABSTRACT : High yielding varieties have been the main component of modern technology for increasing production in rice. The improved HYV's observed in the Thane district of Maharashtra area were Jaya, Karjat-184, Palghar-1 and Hybrid was Sahyadri. In the study area, 18 per cent, 55 per cent and 26 per cent farmers were found to be in low, moderate and high adoption level of modern technology in rice cultivation, respectively. The per hectare group return obtained in rice by adopting different modern technologies were Rs. 47440, Rs. 57636 and Rs. 58575 in respective categories of adoption level of technology. The benefit cost ratio was observed to be 1:0.90 and 1:1.04 in low and moderate adopter while it was 1:1.14 in high adopter. However, most of the input were observed to be used in excess quantity as their marginal value producing was far below to response factors cost. In all the three categories of adoption, more or less constant return to scale were observed in the production of rice.

KEY WORDS : Technology adoption, Labour utilization, Cost of cultivation, Yield and return

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INTRODUCTION

Rice (*Oryza sativa* L.) commended recognition as a supreme commodity to mankind, because rice is truly life, culture, a tradition and a means of livelihood to millions of people all over the world. It is not only a cereal crop but also a way of life in Asian countries. It contributes about 40 to 70 per cent of the population total calorie intake. Hence, sustained production and increased productivity of rice crop is critical for food and nutritional security in Asia. As per the estimate of International Rice Research Institute (IRRI), rice was cultivated on an area of about 148 million hectares in the world with total production of around 591 million tones during the year 2003-2004. Asian countries occupy an important position in rice production. Nearly 91 per cent of the total rice is produced in Asian countries. China and India are the major rice producing countries in the world together contributing 55 per cent of rice production.

of 14 Tahsils. Two Tahsils namely, Palghar and Murbad were selected randomly. A list of villages in each of the selected Tahsils along with the area under rice crop was prepared with the help of revenue records. Four villages were selected randomly from each Tahsil. Thus, total eight villages were selected for this study. Then a list of rice cultivators from each selected village was obtained from the revenue records maintained at village level. Fifteen cultivators from each village were selected randomly. Thus, final sample consisted of two Tahsils, eight villages and 120 cultivators from Thane district. The primary data were collected from the selected cultivators by survey method. The sample farmers were interviewed personally with the help of pretested schedule specially designed for the purpose. The collected data were analysed for accessing technological adoption index of farmer in study area as under.

Analysis of data :

For accessing the impact of technology following parameters were used :

- Proportion of area under HYV and hybrid rice.

MATERIALS AND METHODS

The study was conducted in Thane district consisting