

# MODERN VARIETIES FOR SELF SUFFICIENCY OF RICE PRODUCTION IN ASSAM – AN ECONOMETRIC ANALYSIS

Sanjoy Borthakur<sup>1\*</sup>, B.C. Bhowmick<sup>2</sup> and J.P. Hajarika<sup>3</sup>

<sup>1</sup>*KrishiVigyan Kendra, East Kameng district, Arunachal Pradesh-790102*

<sup>2</sup>*Department of Agricultural Economics and Farm Management, Assam Agricultural University, Jorhat-785013*

<sup>3</sup>*Department of Agricultural Economics and Farm Management, Assam Agricultural University, Jorhat-785013*

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**Abstract:** Rice is the principal crop of Assam, which alone occupies nearly 70 percent of gross cropped area and cover around 80 percent of total food production in the state. Although, the production of rice has increased over the years especially during the recent decades, the productivity is very low as compared to other rice growing states of India. Increase in production through increase in area is not far fetching. Change in productivity is basically technological and hence, more promising. Probit model revealed that in Nagaon district co-efficient of per cent clay soil area (ha.), non-farm income (Rs.) and dummy for extension visit were positively significant. i.e., these factors had significant influence towards adoption of modern varieties in the district. While, in Golaghat district dummy for extension visit and NPK use (kg/ha) had shown significant influence towards adoption of modern varieties. Tobit model estimates revealed that dummy for extension visit and size of household had significant influence towards adoption of modern varieties in both the sample districts towards adoption of modern varieties. Factor analysis showed that amongst the factors considered in Nagaon district, dummy for credit used for production purpose, dummy for extension visit and per cent loamy sand area (ha) were the variables of importance in determining the adoption of modern varieties. Likewise, in Golaghat district Coefficient of Variation of yield (t/ha), dummy for extension visit and number of years in school attended by the household head emerged out to be the important variables in determining the adoption of modern varieties in the district.

**Keywords:** Modern varieties, Probit, Tobit model, Factor analysis

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\*Corresponding Author