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Paddy Production Forecasting in Assam, India: An Empirical Study

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Abstract: Rice or Paddy is one of the major staple agricultural crops grown in Assam, a North Eastern state of India. Hence, paddy production is significant not only for food security but also state economy. Forecasting paddy production is essential for ensuring food security, formulating policies and stabilizing the economy. But occurrence of many challenges like erratic weather condition, floods, soil erosion, inadequate irrigation coverage, and high production costs pose serious threat to sustainability of rice cultivation, in consequence to adverse effect on rural development in the state. Therefore, this study employed Autoregressive Moving Average (ARMA) and Autoregressive Integrated Moving Average (ARIMA) models to make a comprehensive analysis for forecasting of paddy production in Assam, considering time series data from 1994 to 2023. Data were obtained from different government sources such as Indiastat, Statistical Handbook of Assam and Director of Agriculture, Government of Assam, *among others*.

Keywords: ARMA, ARIMA, Forecasting, Paddy Production

JEL Classification Number: C01, C22, C53, Q10

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