

Comparative Performance of Time Series Models on Maize in North Coastal Zone of Andhra Pradesh

G Srinivas, V Srinivasa Rao, D Vishnu Sankara Rao, and G Raghunadha Reddy

Department of Agricultural Statistics, Agricultural College, Bapatla -522 101

ABSTRACT

The present study was carried out to the “*Comparative performance of time series models of area, production and productivity of maize in North coastal zone of Andhra Pradesh*”. It has been undertaken to estimate the future trends and to fit the adequate model for the future projections by 2020 AD. The study was carried for North coastal zone of Andhra Pradesh using time series data from 1971 to 2011. Different linear, non linear and time series models were fitted to the area, production and productivity of maize and the best-fitted model was chosen based on least Mean Absolute Percent Error (MAPE) value and highest R^2 value for future projections. The result also shows that maize area, production and productivity would be 34.75 thousand hectares, 140.75 thousand tonnes and 4048 kg ha⁻¹ respectively by 2020 AD. The conclusion from the study is that, ARIMA model indicated that there would be substantial increasing in the area, production and productivity of the maize crop in the future.

Key words : ARIMA, ARCH, GARCH, Exponential smoothing, Linear trend, MAPE, R^2 .