Forecasting of Area, Production and Producitivity of Jowar in Andhra Pradesh Using Growth Models

V Nireesha, V Srinivasa Rao, DV S Rao and G Raghunadha Reddy
Department of Agricultural Statistics, Agricultural College, Bapatla 522 101, Andhra Pradesh

ABSTRACT

This paper attempted to identify the trend of area, production and productivity of Jowar(Sorghum) in Andhra Pradesh through fitting different Linear, Non-Linear Growth models. Influence of weather parameters on area, production and productivity of Jowar crop by using Karl Pearson's correlation and Multiple Linear Regression Analysis was also studied. From the best fitted model forecasting of area, production and productivity was also done. Cubic model was identified as the best model for the observed data and forecasting was done for the Jowar area, production and productivity up to 2020 AD. It was observed that there was an increasing trend in the productivity, but both area and production was in the decreasing trend during the study period.

Key words : Adj.R^2 and MAPE, Karl Pearson's correlation coefficient, Linear and Non-Linear growth models, Multiple Linear regression, Theil's U-Statistic, R^2.