Forecasting cotton yield in Maharashtra using Season Time Series Model

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ABSTRACT : The paper describes an empirical study of modeling and forecasting time series data of cotton yield in Maharashtra. Yearly cotton yield data for the period of 1964-65 to 2007-08 of Maharashtra were analyzed by time-series methods. Autocorrelation and partial autocorrelation functions were calculated for the data. The Box Jenkins ARIMA methodology has been used for forecasting. The diagnostic checking has shown that ARIMA (2, 1, 1) is appropriate. The forecasts from 2008-09 to 2019-2020 were calculated based on the selected model. The forecasting power of autoregressive integrated moving average model was used to forecast cotton yield for twelve leading years. These forecasts would be helpful for the policy makers to foresee ahead of time the future requirements of cotton seed, import and/or export and adopt appropriate measures in this regard.

Key Words: Season Time Series Model, ACF - autocorrelation function, ARIMA - autoregressive integrated, moving average, PACF - partial autocorrelation function, Cotton.