A Study on Arrivals and Prices of Red Chillies in Khammam Market Yard
–A Time Series Approach

B Venkataviswateja, V Srinivasa Rao, Sk Nafeez Umar and M Chandra Sekhar Reddy
Department of Statistics and Computer Applications, agricultural College, Bapatla, A.P.

ABSTRACT

The present study was conducted to forecast the arrivals and prices of Red Chillies in Khammam Market yard using the secondary time series monthly data of arrivals and prices of Red Chillies during April 2002 to December 2017(189 months). Different time series models were fitted to the data to capture the trend, seasonality and the best model was identified based on the highest R^2, and lowest Bayesian information criterion (BIC), Root Mean Square Error (RMSE), Mean Absolute Error (MAE) criteria. ARIMA (2,0,1) (2,1,0) and ARIMA (0,1,0) (1,1,1) were identified as the best models for arrivals and prices respectively. Based on the best models the Red Chillies arrivals and prices were forecasted for a period of two years i.e., 24 months. The forecasts of arrivals showed high during the month of March for both the years (2018 & 2019) and the forecasts of prices showed high during the monthsof January for both the years(2018 and 2019).

Key words: *ARIMA, R^2, RMSE, MAE, MAPE, BIC, Forecast*