Abstract

Successfully predicting agricultural economy leads to maximum benefit and best effort utilization for farmers. It is very important and challenging to make correct agricultural decisions for a future stable price and yield balance. For the failure of this prediction, knowledge from historical data could not be used properly for managing agricultural revenue affecting factors. The objective of this research work is to develop an advance and efficient system for predicting future price and yield of agricultural crops considering inflation which is affected by climate conditions and other situational factors. At first, the Auto Regressive Moving Average (ARMA) Model was used for the work but the best estimates would always show a sudden and steep drop in the yield for every crop and would not show an increase until years later. Then the Weighted Linear Regression model was used by giving more weight to recent data which results 78.75% and 83.55% correct prediction for price and yield respectively after comparing the actual and predicted values over previous three years. Initially three types of rice of Bangladesh (Aus, Aman and Boro) are analyzed and there is scope for extensive use of this method.
References


Index Terms

Computer Science

Information Sciences

Keywords

Agricultural Economy, Price, Weighted Linear Regression, Yield, Prediction