

## **Modeling Of Agriculture Crops in Malaysia**

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The agriculture sector plays an important role in Malaysia's economic development. Beyond its contribution to gross domestic product, it also provides job opportunities and elevates incomes in rural areas while helping to ensure national food security. The agriculture sector is full of uncertainties, thus reliable forecast provides vital and significant inputs for proper foresight and informed planning. However, in Malaysia, there are research gaps on sophisticated and quantitative crop production forecasting system although data is vastly available. The present study aims to identify suitable time series forecasting methods for main agriculture crops, specifically oil palm, paddy, rubber and cocoa. Yield forecasts using Multiplicative, Simple Exponential Smoothing, Double Exponential Smoothing, Trend Linear Exponential Smoothing, and ARIMA models are applied separately to each crop and compared. The results of this study indicate that the historical trend of each crop is unique and each is best represented by different forecasting model.

Key Words : Forecasting, Time Series, Oil Palm, Paddy, Rubber, Cocoa