

## **Abstract**

**Indonesia as a country with a high agricultural level because it has a wealth of natural resources. Many Indonesian farmers plant crops for food needs that are needed by the community, but the crops from farmers are not always as expected because the commodity prices on the crop are fluctuating. Fluctuation is an unstable price that makes farmers lose money. Fluctuating prices are determined by the quality of growth in which the quality of growth is affected by the weather, especially rainfall. Therefore, in this final project solve the problem of forecasting commodity price on chilli and rainfall by using Autoregressive Integrated Moving Average (ARIMA) method, Radial Basis Function Neural Network (RBFNN), hybrid Autoregressive Integrated Moving Average (ARIMA) and Radial Basis Function Neural Network (RBFNN). The result of forecasting analysis shows that the smallest price of pepper based on RMSE is obtained from ARIMA method where the RMSE value is 10486.8. While in rainfall data based on RMSE from RBFNN method where RMSE value equal to 162.2.**

**Keywords: prices of agricultural commodities, weather, ARIMA, and RBFNN.**