

## Designing Price Stability Model of Red Cayenne Pepper Price in Wonogiri District, Centre Java, Using ARCH/GARCH Method

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**Abstract :** Food and agricultural sector become the biggest sector contributing to inflation in Indonesia. Especially in Wonogiri district, red cayenne pepper was the biggest sector contributing to inflation on 2016. A national statistic proved that in recent five years red cayenne pepper has the highest average level of fluctuation among all commodities. Some factors, like supply chain, price disparity, production quantity, crop failure, and oil price become the possible factor causes high volatility level in red cayenne pepper price. Therefore, this research tries to find the key factor causing fluctuation on red cayenne pepper by using ARCH/GARCH method. The method could accommodate the presence of heteroscedasticity in time series data. At the end of the research, it is statistically found that the second level of supply chain becomes the biggest part contributing to inflation with 3,35 of coefficient in fluctuation forecasting model of red cayenne pepper price. This model could become a reference to the government to determine the appropriate policy in maintaining the price stability of red cayenne pepper.

**Keywords :** ARCH/GARCH, forecasting, red cayenne pepper, volatility, supply chain

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