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Analysis of production projections and factors that correlated with rice production in Indonesia

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Abstract

Introduction: Meeting rice needs is largely determined by the level of domestic rice production. However, the various dynamics that occur provide encouragement to provide an overview of the conditions for meeting food needs, namely in the form of rice, based on trends in rice production and how independent variables correlate with rice production. The aim of this research is to determine the projected rice production for 2023-2032 and determine the strength of the relationship between the dependent variable (rice production) and the independent variables in the form of harvested area, price of harvested dry grain, price of urea fertilizer and price. **Methods:** namely a quantitative descriptive method with secondary time series data from 1993-2022. Data analysis techniques for forecasting studies are by using Autoregressive Integrated Moving Average (ARIMA) analysis. Meanwhile, in the correlation analysis of rice production using the Pearson correlation. **Results:** Projections for rice commodity production in Indonesia from 2023 to 2032 using the MA1 model show a positive trend. Analysis of the relationship between the independent variable and the dependent variable, namely harvest area (X1), rice price (X2), urea fertilizer price (X3), and price of other food commodities, namely corn (X4) shows a significant positive relationship with rice production in Indonesia. **Conclusion:** Projections for rice commodity production in Indonesia from 2023 to 2032, which were analyzed using the MA 1 model, obtained data with a positive trend which states that based on past data, Indonesian rice production will continue to increase every year in line with domestic food needs.