Peramalan Harga Komoditas Pertanian Cabai Di Provinsi Jawa Timur Menggunakan Algoritma *Support Vector Machine* (*Forecasting of Chili Agricultural Commodity Prices in East Java Province Using Support Vector Machine Algorithm*)**
Pembimbing (1 orang).

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ABSTRACT

Chili is one of the important agricultural commodities for the people of Indonesia. As an agricultural country where many people work in the agricultural sector and the need for chili is great for both household and industrial consumption, chili has an important role in the community's economy. However, chili is also one of the agricultural commodities whose market prices are very volatile so that sometimes it is very difficult for both farmers as producers and society as consumers. In this study, an analysis of the price of chili plants and the factors that influence it was carried out, and then forecasted the price of chili using the support vector machine algorithm. The variables used in this study are data on chili prices, chili production, harvested area and rainfall with the data range used from 2015-2019. The algorithm used is support vector machine regression, by testing each kernel and the ratio of training data/test data to find out the best results. The results of this study indicate that the support vector machine algorithm can predict chili prices well. The best prediction results are obtained in the sigmoid kernel, on the ratio of training/test data = 57:3 with the parameter value of: cost = 27; epsilon=0.1; gamma=0.1, coef0=0.1 and resulting the rmse value at 0.01778.

Keyword: Forecasting, Support Vector Machine Regression, Chili