Abstract

In recent years, Crude Palm Oil (CPO) has become one of the greatest resources of Indonesia. Currently, palm oil industry plays an important role in Indonesia's trading exports. Therefore, knowing of how the palm oil price movements is very important to make Indonesia’s economic still ini stable condition.

According to those statements, then the application system was build to predict the price movement of CPO by using the combination of fuzzy-Mamdani and evolution strategies methods.

An evolution strategy is used to get the optimal fuzzy system for predicting the price of CPO. This optimization processes are coding the shape, number, and the boundaries of the membership function into a chromosome. After having the optimal fuzzy membership functions, then the data of the factors that influence the price of palm oil is processed through fuzzification, inference, and defuzzification to get the price prediction.

This system produces 95% accuracy on the learning system with the amount of data training is 50 data. While in testing, the system provides 91% accuracy with the number of data testing is 23 data.

Keywords: **crude palm oil, evolution strategies, fuzzy, chromosome**