

## ABSTRACT

*As an agricultural country, most of Indonesian people work in the agricultural sector. The farmers divide planting time easily because Indonesia has only two seasons, rainy and dry seasons. The rainy season usually occurs around October until March while dry season occurs around April until September. Recently, the farmers take disadvantages of the uncertain weather, for instance they couldnt determine the cropping time for sure. Forecasting is needed to make a planting calendar so that the farmers do not experience large losses due to uncertain weather.*

*Double Moving Average Forecasting Method and Evolving Fuzzy Genetics Algorithm are used in this research. The Evolving Fuzzy is a combination method between Evolutionary Algorithm and Fuzzy System, otherwise The Genetic Algorithm is used to optimize fuzzy rule and member function. The optimized Fuzzy Result then can be useful to predict rainfall as well as planting time.*

*Based on Fuzzy training results obtained using Genetic Algorithms Fuzzy parameters resulting from population size 50, probability of crossover 0.9, probability of mutation 0.1, and the number of individuals evaluated the training as much as 20000 with accuracy training 89,9102 %,and 84,8774 % accuracy testing.*

*Based on a forecasting that has been done and with a comparison with actual data, have obtained the result that potato plants are not suitable to be planted on the period of October 2014 until October 2015. The fluctuating rainfall rate makes the planting calendar for potatoes was hard to make. Potatoes will not be living well in a high rainfall rate condition, it makes the potatoes easy to get rotten and influence by many plant disease. The high rainfall rate cannot support the growing of a potato in a first place.*

*Keywords : forecasting, double moving average, Evolving Fuzzy, Genetic Algorithm*