

## *ABSTRACT*

*Indonesia is known as an agrarian country because most of its population has jobs in farm sector, such as rice. But the main problem in farm sector is pest attack problem. In order to reduce the risk of crop failure because of pest, a prediction for pest spreading is made. This final project us NEFPROX architecture for prediction of stem borer pest in the district of Bandung based on weather information and attack area. NEFPROX is an algorithm based on Artificial Neural Network with Fuzzy system. From the result that is gained from prediction using NEFPROX testing, average RMSE value for data using PCA is 20,315 for training and 20,250 for testing, while for data not using PCA is 13,411 for training and 13,265 for testing. The performance result can be concluded that from RMSE value is not accurate enough for a prediction, because the abundance of missing values and few amount of records in the data.*

*Key : NEFPROX, pest spread, crossvalidation, prediction.*