Abstract

Pest attack especially rodent can impact of reducing the production rice’s crop and also triggering harvest failure. Therefore, forecasting system which is able to be used as monitoring tools for the production of rice is considered to be needed. This research is aim to provide solutions of prediction and area’s mapping information of production using the Holt-Winters and Backpropagation methods. Utilized data are planting area, rainfall, rat attack area, intensity of rat attack, harvested area and production of rice for 4 years since 2014 to 2017 which each year has 3 periods. The application of Holt-Winters and Backpropagation methods resulted in the smallest MSE value of 0.02 with an accuracy of 99.8%. Based on these accuracy values, Holt-Winters and Backpropagation method calculations give the appropriate result as it approaches the actual value.

Index Terms

Computer Science

Applied Sciences
Keywords

Holt-Winters, Backpropagation, prediction, rice, rat.