

Prediction of hexaconazole concentration in top most layer of oil palm plantation soil using Exploratory Data Analysis

ABSTRACT

Ganoderma boninense is a fungus that can affect oil palm trees and cause a serious disease called the basal stem root (BSR). This disease causes the death of more than 80% of oil palm trees midway through their economic life and hexaconazole is one of the particular fungicides that can control this fungus. Hexaconazole can be applied by the soil drenching method and it will be of interest to know the concentration of the residue in the soil after treatment with respect to time. Hence, a field study was conducted in order to determine the actual concentration of hexaconazole in soil. In the present paper, a new approach that can be used to predict the concentration of pesticides in the soil is proposed. The statistical analysis revealed that the Exploratory Data Analysis (EDA) techniques would be appropriate in this study. The EDA techniques were used to fit a robust resistant model and predict the concentration of the residue in the topmost layer of the soil.