

Rice yield prediction model with respect to crop healthiness and soil fertility

ABSTRACT

The main staple food for most people in the world precisely in Asia is rice also known as another name *Oryza sativa* L. This study aimed to establish a rice yield prediction model based on crop healthiness and soil fertility in Malaysia. Multiple linear regressions (MLR) model was used to develop a relationship between a dependent variable, Y (rice yield) and three predictor variables, X (crop healthiness and soil nutrient). A model was developed to predict rice yield based on crop healthiness and soil nutrient variability including all interaction variables with an overall $R^2 = 0.6403$. The information obtained from variability could assist farmers in making management decisions to improve cropping practices for succeeding rice crops. This study may aid in enhancing the rice yield and the profitability of Malaysia farmers.

Keyword: Rice yield; Crop healthiness; Soil nutrient; Multiple linear regressions