Determination of Types and Doses of Rice Fertilizer

Using Fuzzy Inference System

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ABSTRACT

Fertilizer is a material that contains one or more plant nutrients, both organic and inorganic, to meet the nutrient needs of plants. In the farmer group of Ajung Village in the selection of fertilizers only using a reference for rice planting age, only using age as a reference does not describe the nutrient needs of rice plants and the dose is the same in every season which results in problems with more costs and production results that are not as desired. In addition, the availability of a single type of fertilizer which is often incomplete requires farmers to convert single and compound fertilizers manually and takes time. Therefore, a system for determining the type and dose of fertilizer was built using a fuzzy inference system by taking the values of BWD, PH, Height and Plant Conditions as input. The results obtained from the *White Box testing* show that main features in the system are running as needed and the system can display recommendations for types and doses of rice fertilizers.

Keywords: Fertilizer, Rice, dose, *Fuzzy, White Box*.