ABSTRACT

DECKY PRAYOGA. Land Suitability Evaluation Module Cultivation Using Fuzzy Logic. Supervised by HARI AGUNG.

Land suitability evaluation is the process of predicting land suitability class and land utilization potential for agriculture. Land suitability is evaluated by comparing the plant requirements with the available landscape characteristics related to climate, topography, texture, drainage, soil physics, soil fertility, salinity and alkalinity, as well as land preparation.

In this research, we develop a system based on fuzzy inference to determine the rating, threshold levels and land suitability class from land characteristics data obtained. The data given as input are a crisp value or a linguistic value. Land suitability is evaluated using a boundary method. The fuzzy inference method used is the max–min method and the defuzzification method used is the center average defuzzifier method.

Keywords: evaluation of land suitability, suitability class, fuzzy inference