

Evaluation of land suitability for the development of Hiyung cayenne pepper in Hiyung Village, Tapin Tengah District, South Kalimantan

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Abstract

Hiyung Village is one of the centers of agricultural production, especially cayenne pepper. The advantage of Hiyung cayenne pepper is its spiciness which has capcaisin compound of 94.5 thousand ppm. It is 17 times spicier than cayenne pepper in general. The success of agricultural cultivation is greatly influenced by the land suitability. Furthermore, soil and environmental conditions affect plant growth and development. This study aims to analyze the soil properties and land characteristics to evaluate their suitability for the development of Hiyung cayenne pepper. This study is a descriptive research, carried out using a land suitability evaluation survey method to obtain data on land characteristics and current land management. Soil samples were taken from five locations, each about 1 km apart. Three sample points were taken at a depth of 0 cm to 20 cm in each location. Observations were made on effective depth, slope, surface rocks, rock outcrops, flood hazard, coarse material in soil cross section, erosion hazard, temperature, mean annual precipitation, length of the dry season, and current land management. The results showed that the actual land suitability is included in the S3 (marginally suitable) with limiting factors of temperature, water availability (rainfall), and nutrient retention (pH and base saturation). Potential land suitability is still included in S3 class (marginally suitable) because the only limiting factors that may be improved are soil pH and base saturation.

Keywords

Hiyung cayenne pepper; Hiyung Village; land suitability