

EVALUASI KESESUAIAN LAHAN UNTUK TANAMAN JAGUNG MENGGUNAKAN METODE ANALISIS SPASIAL

Land Suitability Assessment Of Corn (*Zea mays* L.) Using Spasial Analysis Method

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ABSTRAK

Evaluasi kesesuaian lahan diperlukan untuk perencanaan penggunaan lahan yang produktif dan lestari. Tujuan penelitian adalah untuk menyediakan data dan informasi tentang evaluasi kesesuaian lahan bagi tanam jagung menggunakan model analisa spasial. Penelitian dilaksanakan mulai bulan Juli 2007 sampai bulan Januari 2008. Lokasi penelitian dilaksanakan di Blitar, Jawa Timur. Data yang diperlukan meliputi data spasial berupa peta kontur dan peta jenis tanah skala 1:25000 serta data atribut berupa data klimatologi wilayah dan hasil pengamatan lapangan terhadap sifat fisik, morfologi dan kimia tanah. Parameter kesesuaian untuk tanaman jagung yang ditetapkan meliputi temperatur, curah hujan, kondisi drainase, tekstur, pH, kelembaban relatif, C-organik, KTK Liat, kemiringan, ketinggian tempat dan kondisi erosi. Kelas kesesuaian lahan terdiri atas kelas "sangat sesuai", "cukup sesuai", "sesuai marginal" dan "tidak sesuai". Analisis spasial memanfaatkan fasilitas *Map calculator* dalam *Software Arc View GIS*. Hasil penelitian menunjukkan, di Blitar memiliki tiga kelas kesesuaian untuk tanaman jagung yaitu "sangat sesuai" 85%, "cukup sesuai" 10% dan "sesuai marginal" 5% dari 150961 ha luas wilayah. Kelas "cukup sesuai" umumnya terletak di wilayah Blitar Utara dan kelas "sesuai marginal" terletak pada ketinggian di atas 1200 mdpl di sebagian kecil wilayah Kecamatan Wlingi (10 ha), Gandusari (117 ha), dan Doko (52 ha).

Kata Kunci: Kesesuaian lahan, Sistem Informasi Geografis (SIG), Jagung

ABSTRACT

Land suitability assessment was needed to plan productive and sustainable land use. The aim of this research was to deliver an informative data about land suitability of corn using spatial analysis model. The research was conducted from July 2007 to January 2008, located in Blitar district. The land survey and analysis covered several parameters needed for suitability assessment for corn such as temperature, rainfall, soil drainage, soil texture, pH, effective depth of soil, organic-C, soil content, Cation Exchange Capacity of clay, slope, altitude, and erosion endangered. The land suitability classes were classified into four classes, those were very suitable, suitable, marginally suitable, and not suitable. The data were finally analyzed using *Map Calculator* in *Arc View GIS Software*. The results showed that there were three classes of land suitability for corn i.e. very suitable, suitable and marginally suitable which accounted for 85%, 10%, and 5% of 150.96 hectare areas in Blitar. The suitable class mainly located in the northern of Blitar district, while the marginally suitable class mostly located in more than 1200 meters height above sea level covered 10, 117, and 52 hectares area of Wlingi, Gandusari, and Doko county area respectively.

Keywords: Land suitability, Geographical Information System (GIS), Corn