



Intisari

Penelitian mengenai analisis erodibilitas tanah lapisan bawah (*subsoil*) pada kemiringan dan tipe penggunaan lahan yang berbeda di Imogiri, Bantul, Yogyakarta, merupakan kajian mengenai ketahanan tanah terhadap ancaman erosi. Erodibilitas tanah dipengaruhi oleh beberapa sifat fisik dan kimia tanah. Pengukuran data primer dilakukan pada parameter yang mempengaruhi erodibilitas berupa tekstur, struktur, stabilitas agregat, bahan organik, dan permeabilitas tanah di lapangan. Penelitian dilakukan dengan survei di lapangan, pengambilan sample, dan pengukuran di laboratorium. Alat dan bahan yang digunakan dalam penelitian dapat berupa alat pengamatan lapangan, alat laboratorium serta khemikalia. Terdapat 12 satuan lahan yang didapatkan dari *overlay* peta geologi, kemiringan lereng dan penggunaan lahan. Teknik penentuan titik sampel dilakukan dengan metode *purposive sampling*, dan didapatkan 35 titik sampel. Pengambilan sampel tanah dilakukan pada kedalaman 20-40cm. Pendekatan analisis statistika pada penelitian ini menggunakan rancangan bersarang atau *nested design*, uji lanjut HSD Tukey dan analisis korelasi-regresi. Parameter sifat tanah yang dianalisis antara lain tekstur tanah, bahan organik, kadar lengas, berat volume, stabilitas agregat dan permeabilitas tanah. Indeks erodibilitas tanah didapatkan dengan penggunaan persamaan Wischmeier & Smith (1978). Hasil penelitian menunjukkan nilai erodibilitas pada penggunaan lahan didalam kemiringan lereng memiliki hasil yang beragam, faktor penggunaan lahan didalam kemiringan lereng memberikan pengaruh signifikan terhadap parameter %fraksi lempung. %fraksi pasir dan stabilitas agregat, tapi tidak memberikan pengaruh yang signifikan terhadap nilai erodibilitas tanah.

Kata kunci: erodibilitas tanah, kemiringan lereng, penggunaan lahan, sifat tanah



Abstract

This research about subsoil erodibility analysis on different slopes and land use types in Imogiri, Bantul, Yogyakarta, is a study of soil resistance to erosion. Soil erodibility is influenced by several soil physical and chemical properties. Primary data measurements were carried out on parameters that affect erodibility in the form of texture, structure, aggregate stability, organic matter, and soil permeability in the field. The research was conducted by surveying in the field, taking samples, and measuring in the laboratory. The tools and materials used in research can be in the form of field observation tools, laboratory tools and chemistry. There are 12 land units obtained from the overlay of geological maps, slopes and land use. The technique of determining the sample points was carried out by purposive sampling method, and obtained 35 sample points. Soil sampling was carried out at a depth of 20-40 cm. The statistical analysis approach in this study uses a nested design, HSD Tukey further testing and correlation-regression analysis. Parameters of soil properties analyzed included soil texture, organic matter, moisture content, unit weight, aggregate stability and soil permeability. The soil erodibility index was obtained using the Wischmeier & Smith (1978) equation. The results of this study are the erodibility value of land use on the slope of the slope has various results, the factor of land use on the slope of the slope has a significant influence on the parameter % clay fraction. % sand fraction and aggregate stability, but did not have a significant effect on soil erodibility.

Keywords: soil erodibility, slope, land use, soil properties