INTISARI

Penelitian ini membahas tentang genesis tanah yang terjadi di katena barat Gunung Merbabu, mengkarakterisasi sifat fisik dan kimia tanah, serta mengindetifikasi mineral tanah. Titik pengamatan dan pengambilan sampel tanah didasarkan atas topogradi yakni perbedaan ketinggian, diambil diantara ketinggian 300-500, 500-750, 750-1.000, 1.000-1.250 dan > 1.500 meter diata permukaan laut (m dpl). Pada ketinggian 300-750 m dpl dilakukan pengamatan dan pengambilan sampel tanah didua lokasi yang berbeda. Untuk análisis fisika dan kimia tanah dilakukan di Laboratorium Fisika Tanah, Kimia dan Kesuburan Tanah, Departemen Ilmu Tanah, Fakultas Pertanian, Universitas Gadjah Mada. Sedangkan análisis mineral tanah dilakukan di Laboratorium Mineralogi Balai Penelitian Tanah, Bogor. Parameter penelitian yang dianalisis terdiri dari berat volume, berat isi, porositas, tekstur, pH H_2O, pH KCl, pH NaF, bahan organik, nitrogen total, fosfor tersedia, fosfor dan kalium potensial, kation tersedia, kapasitas pertukaran kation, kejenuhan basa, dan mineral tanah. Hasil penelitian menunjukan bahwa karakteristik dan klasifikasi yang berada pada lereng barat Gunung Merbabu diakibatkan oleh perbedaan iklim dan topografi, pada tanah yang berada pada ketinggian 300-750 m dpl berdasarkan klasifikasi soil taxonomy berkembang tanah Molik Endoaqualfs dan pada ketinggian 750-> 1.500 m dpl berkembang tanah Hapludands.

Kata kunci: genesis tanah, lereng barat gunung merbabu, perkembangan tanah, topografi, iklim

ABSTRACT

This study aims to examine the soil genesis in the western slope of Mount Merbabu, to observe the physical dan chemical soil characteristics, and identifying soil minerals. Observation points and soil sampling are based on topography, namely the difference in altitude, taken between 300-500, 500-750, 750-1,000, 1,000-1,250 and > 1,500 meters above sea level (m asl). At an altitude of 300-750 m asl, observations and sampling of soil were carried out at two different locations. Soil physics and chemical analyzes were carried out at the Laboratory of Soil Physics, Soil Chemistry and Fertility, Department of Soil Science, Faculty of Agriculture, Gadjah Mada University. Meanwhile, analysis of soil minerals was carried out at the Mineralogy Laboratory of the Soil Research Institute, Bogor. The research parameters analyzed consisted of bulk density, particle density, porosity, texture, soil reaction (actual and potencial pH), pH NaF, organic matter, total nitrogen, available phosphorus, potential phosphorus and potassium, available cations, cation exchange capacity, base saturation, and soil minerals. The results showed that the characteristics and classification on the western slopes of Mount Merbabu were caused by differences in climate and topography, on soils at an altitude of 300-750 m asl based on the soil taxonomy classification developed Molik Endoaqualfs soil and at an altitude of 750-> 1,500 m asl developed the land of the Hapludands.

Key words: soil genesis, wetern slope of Mount Merbabu, soil development, topography, climate