SOIL MORPHOLOGY AND CLASSIFICATION IN SEMILIR FORMATION AND WONOSARI FORMATION IN SAWAHAN SUB-DISTRICT, PONJONG DISTRICT, GUNUNGKIDUL REGENCY

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ABSTRACT

Semilir Formation and Wonosari Formation become the parent material in soil formation in Sawahan sub-village, Kapanewon Ponjong, Gunungkidul Regency. The purpose of this study was to determine the characteristics of the Semilir Formation and Wonosari Formation on morphological characteristics and soil classification in Sawahan Village. The research method used is survey method, data collection method by direct observation in the field and laboratory analysis. Determination of research locations and soil profiles is based on geological information, slope, land cover and contours. The parameters analyzed were texture by pipetting method, volume weight (BV) by ring sample method, C-organic by Walkey and Black method, exchangeable bases (Ca, Mg, K, Na) by NH_4OAc pH 7 extraction method, cation exchange capacity (KPK) by NH_4OAc pH 7 extraction method, H_2O pH, KCl pH and K_2SO_4 pH by pH meter potentiometric method and Sand Fraction Mineral by *microscopic* method. The results showed that the soils developed in the Semilir Formation have diagnostic horizons of ochric epipedon and argillic endopedon. Soils in the Wonosari Formation have diagnostic horizons of mollic epipedon and argillic endopedon. Soils in the Semilir Formation have a *Soil Taxonomy* classification of *Inceptic Hapludalfs Isohypertermic*. According to the *World Reference Base* it is *Ochric Clayic Chromic Luvisols*, and according to the National Soil Classification it is Orthoxic Mediterranean. The soil profile that develops in the Wonosari Formation with reef limestone parent material has a *Soil Taxonomy* classification of *Pachic Argiudolls Isohypertermic*. According to the *World Reference Base*, it is *Pachic Clayic Calcic Kastanozems*, and according to the National Soil Classification, it is Mollic Mediterranean.

Keywords: semilir formation, wonosari formation, morphology and soil classification