

ABSTRACT

A horizontally and vertically the soil properties generally were varied. The coffee plantation soil physical and chemical soil properties in Gayo highland predicted is variation, and its information is scanly. This research was conducted on coffee plantation land in the Gayo highlands of Bener Meriah Regency. The research methods was used descriptive survey, by made soil profile in four elevation 700-715, 1000-1090, 1300-1351, and 1600-1616 meters above sea level. Vertically, clay fraction increase with depth, sandy and silt fraction were decreased with depth at elevation 700-715 m.a.s.l. Horizontally, soil clay fractions with tend low with the increasing of the slope position at elevation 700-715 m.a.s.l. Horizontally, bulk density and soil moisture tend to be high with the increasing slope position at elevation 700-715 m.a.s.l. Vertically, bulk density and soil moisture increase with depth at elevation 700-715 m.a.s.l. Horizontally and vertically, soil temperature tends to be low with increasing slope position and soil depth at elevation 1600-1616 m.a.s.l. Horizontally, P_2O_5 tend high with the increasing of slope position at elevation 1600-1616 m.a.s.l. Vertically, P_2O_5 decrease with depth at elevation 1600-1616 m.a.s.l. Horizontally, pH (H_2O), pH (KCl), capacity exchange cation (CEC) and organic-C were higher with increased slope position at elevation 1600-1616 m.a.s.l. Vertically, pH (H_2O), pH (KCl), CEC and organic-C were decreased with depth 1600-1616 m.a.s.l.

Keyword: Coffee land, Gayo highland, horizon and vertical distribution, soil characteristic.