

Comparison of Soil properties in three selected sites within the premises of University of Kelaniya, Dalugama, Sri Lanka

D.M.C.P. Dissanayaka, C.T.M. Dissanayaka*, D.M. Weerathunga, N.T.A Wijesekara., G.L.D.N. Perera, H.L.S.N. Abeykoon, B.M.C.J Ranasingha and S Kanagasabai.

Department of Zoology and Environmental Management, University of Kelaniya, Kelaniya

Corresponding author: mahanamadissanayakec@gmail.com

The soil physical and chemical properties largely determine the plant growth and it is a determinant of the composition of faunal communities. The objective of this study was to compare the soil physical and chemical properties in three selected sites within the premises of University of Kelaniya.

The study was conducted in three selected sites within the University of Kelaniya; botanical garden, university ground and in a construction area. A total of three soil samples were extracted from each site using soil corer to analyze the soil moisture content, organic matter content, soil pH, soil surface temperature, bulk density, particles density and porosity.

According to the results of present study the soil porosity is highest in botanical garden (81.6%) with relatively undisturbed soil whereas the soil moisture content and the organic matter content were highest in university ground (moisture content= 1.27; organic matter content= 6.27%). The construction site that subjected to severe disturbances due to heavy machinery usage, showed the highest bulk density (0.39 Mg/m³) and lowest porosity (78.7%) from all three sites.

This study reveals that the soil properties within the university premises shows a considerable variation which can be explained with the degree of disturbance to the area.

Keywords: Soil properties, University of Kelaniya, construction site