

COMPARISON OF ORGANIC MATTER CONTENT ON DIFFERENT LAND USES IN UNIVERSITI MALAYSIA SABAH

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ABSTRACT

This study was conducted to determine the organic matter, organic layer and moisture content on different land uses besides to compare organic matter, organic layer and moisture content between three difference land uses. Three different land uses categorized into forest, shrub and agroforestry site. Forest and shrub site were located in UMS Forest Hill, while agroforestry site located in forest surrounding Forestry Complex, Faculty Science and Natural Resources. Study plot for forest and shrub were divided into four cardinal directions (North, South, East and West) of the hill. Every cardinal plot direction contains 3 replicates of plots. While in agroforestry site, 3 replicates of randomized plots constructed as the representatives of the site. In each of the plots, three soil sampling were collected. Soil sampling includes soil organic layer and soil for each 0-20cm and 20-50cm depth. Soil sample were analyzed in the laboratory and hence analyzed by using SPSS statistic tool to determine descriptive statistics and significance difference at ($p < 0.05$). The result of study found that organic matter content was highest in shrubs followed by forest and agroforestry site. There were several factors that contribute to the organic matter content such as temperature, climate/whether, vegetation type, soil texture, salinity and acidity and soil depth. Soil moisture contents were found highest in forest followed by agroforestry and shrub site; soil organic and moisture content were related closely. Organic layer showed the highest percentage in agroforestry followed by forest and shrub site. It was possibly affected by variability of vegetation types and density in the site.