

Title: Impact of human activities on soil organisms in University of Embu.

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Abstract

Soil organisms are organisms that are present in the soil. They comprise less than 1% of the total mass of the soil and play a vital role in supporting all plants. They require certain conditions in the soil in order to survive and to perform their functions. Some organisms have the ability to survive in areas with high temperatures and some survive in areas with low temperatures. The soil PH and availability of oxygen in the soil are some of the factors that affect survival of soil organisms. Some of the roles these organisms play in the soil have not been studied within the University of Embu. Moreover, conditions that influence the survival of these organisms have not been fully addressed. This study sought to address the impact of land practices on soil organisms. Four sites were selected for sample collection and from each of the four sites; five samples were taken for analysis. From the samples visible macro-organisms were identified and counted in the lab and the resultant data processed using Microsoft Excel. The results showed that earthworms, beetles, ants and millipedes were the commonly encountered organisms in the studied sites. Ants were the most abundant organisms in all the studied sites while the millipedes were the least abundant. The farm and dam 5 (5.0 and 4.8 respectively) had highest mean values of organisms while the university paths had the least at 1.5. The presence of many ants in the farm and dam five is an indication that nutrient cycling is achieved as the ants breakdown the humus in these sites. Also these two sites receive a lot of inputs which continually offer suitable habitats for microorganisms to thrive. On the other hand university paths are continuously swept and this leaves them bare. In that case they are likely to support very few organisms as witnessed in this study. The study concludes that human activities alters the soil physical properties such as soil temperature, air, soil Ph, temperature and organic matter content and these factors are crucial to the growth and survival of soil organisms. These factors when altered they affect the abundance and distribution of the soil organisms.