SOIL CHARACTERISTICS IN SOME HUMAN IMPACTED AREAS AT KAMBURUPITIYA FOLLOWING THE NILWALA PROJECT

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The study involved characterization of physical, chemical, and biological properties of a severely disturbed soil in Kamburupitiya, which has been previously maintained under agroforestry.

The bulk density, true density, and porosity of the soil were 1.163 gcm^3, 2.14 gcm^3 and 45.6% respectively, with a water holding capacity of 28.5%. The per cent organic matter and N in the soil were 0.451 and 0.0088, respectively, whereas the corresponding values in an undisturbed neighboring site, were 1,214 and and 0.095. The cation exchange capacity of the degraded soil was 4.71 m.e. per 100g. of soil and had a H value of 4.2. The corresponding figures for the reference site were 7.4 and 5.43, respectively. Biological activity of the soil as measured by soil respirometry, amounted to 0.716 mg CO_2/1000g of soil/hr and 1.355 mg CO_2/1000g. of soil/hr in disturbed and undisturbed soil, respectively. No macro fauna was evident in the soil. Even after 12 years of disturbance, soil regeneration was extremely slow, thus agronomic interventions prove important to accelerate the soil restoration process