

PHYSICO-CHEMICAL STUDY OF SOIL FROM SELECTED MAIZE FARMS IN KAMELILO, KERICHO COUNTY

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ABSTRACT:

This Physico-chemical study of soil was performed to determine the levels of different physical and chemical parameters in seven selected maize farms. A total of 21 samples were collected in ploughed maize farms in Kamelilo Village in Kericho County for the study. The physical parameters that were studied are pH and organic carbon by use of pH metre and titration method respectively, while the chemical parameters; phosphorus, sulphur were determined by UV-Vis spectrophotometry and Nitrogen was determined titrimetrically. From the study, 71% of the soil samples had a low pH of below 5, which makes the soil unsuitable for maize farming. The percentage organic carbon was rated as high in 90% of the soil samples with a minimum value of 1.03% organic carbon to a maximum value of 2.85% except in two sampling sites, sample 3a with 0.45% and sample 5a with 0.49% respectively exhibiting a low organic carbon value. The level of available nitrogen ranged between 247.74 kg/Ha and 1680.9 kg/Ha. Available Sulphur was found to range from 1.04 kg/Ha and 1.15 kg/Ha. The highest level of phosphorus was recorded in sample 7c with 208.32 kg/Ha while sample 6c recorded a lowest of 1.48 kg/Ha.

Key Words: *Physico-chemical, Kamelilo, Soil, Maize.*