

Determination of the draft forces required by draught animals

A collaborative initiative between Agricultural Engineering Services Directorate, State Department of Agriculture, and Department of Environmental and Biosystems Engineering, University of Nairobi. The research was conducted in two counties namely Machakos and Makeni.



It entailed determination of the draft forces required by draught animals to pull a Mouldboard plough, Subsoiler and Ripper in different soils type, depth, chain length and the animal weight. The data was collected using a digital dynamometer, which records resistance in Kilo Newton (KN) after every 3 seconds and digitizing of the results on a laptop.

Soil tests carried out include Penetration resistance, the shear strength, soil colour and the soil structure. Soils were also collected for laboratory analysis of bulk density and moisture content. The position of the hardpan was put into consideration.