



USING MUNICIPAL WASTE TO IMPROVE SOIL FERTILITY IN JOS AREA, NIGERIA

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ABSTRACT

Many of the farmers practising arable agriculture within and around Jos believe that the soils in the area are declining in productivity as a result of annual application of mineral fertilisers. It has been noted that some of the mineral fertilizers being applied have acidifying effects on the soils. Therefore, the application of organic fertilizers is now gaining popularity. Farmers now apply more of town waste in combination with poultry droppings and/ or cow dung. Therefore, the objectives of this study are: to identify the various management practices and soil types used; and to determine the effects of municipal waste application on soil properties. Field observations and measurements, as well as administration of well structured questionnaires were employed in capturing qualitative land use and soil management data while standard procedures were applied in soil data gathering. Crops grown include: lettuce, cabbage, carrots, onion and spinach, among others. Hand tools are used for land preparations. Both local and improved seed varieties are sown. Mixed cropping and crop rotation are common while monoculture is seldom practised. Though the farmers apply inorganic fertilizers, much more attention is paid to the application of town waste with poultry droppings and / or cowdung. The types of soil found are Inceptisols, Alfisols and Mollisols. The results of soil analysis show that application of town waste has really modified the soil conditions. The surface soils in some areas have become very dark, classifying the soil as Mollisols. The levels of organic matter, total nitrogen, exchangeable bases and CEC have been greatly enhanced. However, the levels of some of the trace elements have also increased too.

Key words: .