Land capability classification of Katsina Central, Nigeria using remote sensing and GIS techniques

ABSTRACT

The main objective of this research was to make the land capability classification of rained farming for major crops. The study was conducted in Katsina Central, Nigeria. In this study five land units were identified based on topography. Soil survey was conducted to each land units for exploration of physical and chemical characteristics of the soil. The results of soil analysis reveals that the study area is characterized by susceptibility to erosion and low in soil fertility which limit the land capability for multiple uses. The land capability classification was employed based on USDA classification system. The results depict that four land units were rated capable for rain fed farming of major crops under different management practices which account 75.26% of the total land covered of the study area While 24.74% is not capable no matter whatever management practice applied as such it is recommended for forestry. The land capability of the area can be improved through adapting appropriate measures.

Keyword: Land unit; Land capability; Rain fed farming; Major crops