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**USING REMOTE SENSING DATA TO IMPROVE RICE PRODUCTION IN KUTIGI NIGER STATE**

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***Abstract***

*This research work looked in the use of remote sensing to improve agricultural production in kutigi, Niger state. The aim of the study is to use remote sensing to improve rice farming activities in kutigi, Niger state. It is very important to identify such method to improve agricultural production because experts are always interested in new researches and findings to better the standard of living in any environment. In view of this, remotely-sensed data could be used or employed to elevate most of these agricultural problems in kutigi through the following objectives: using Landsat imagery to assess the present land use of the study area, to analyze the Landsat imagery to show the level of agricultural land use in the study area, to carryout soil analysis in order to know the suitability of un-used Land and to recommended the techniques to the relevant authorities on agricultural development. The materials collected and used for identification, mapping and classification of agricultural Land were topographic map, satellite imagery, journals and articles. This research work demonstrates the ability of remote sensing techniques in monitoring of agricultural phenomenon. Attempt was made to capture as accurate as possible. Except for the inability to accurately, map out farm land in the imagery, due to the afore mentioned limitations, field survey was carried out to physically assess the terrain of the area, and also identified the different types of the soil in the area and their respondent to crop yield. The classes were distinctly produced for the area but with more emphasis on farm land as it is a combination of anthropogenic activities that make up this class. However, the result of the work show that the level of agricultural practice in the area precisely rice production is increasing and equally shows the areas that are suitable for rice production in the study area. The result of the study shows kutigi area covering a total of 41.2sq.km was a well fertile agricultural Land, with a little stream passing across the eastern part of the areas, and settlement of about 44.3%, some scattered Fulani settlements within areas. Agricultural land covering about 50.5% of the total land, which prove it more suitable for agricultural production precisely rice production, considering the weather, soil type and the amount of rainfall within the area. The information on the state of agriculture is very essential for general planning and assessing crop yield. Part of the data used for this research was obtained from GIS Vendor. Thus the data acquired has exhibit great spatial and temporal variability. For the purpose of obtaining a standard information and representation on the state of agriculture in kutigi, a combined effort by government and private individual should be taken, to ensure efficiency and effectiveness in the analysis of agricultural phenomenon.*

***Keywords:*** *Rice, Satellite, Cultivated Land, Remote Sensing, GIS*