**Suggested Topics**: Remote sensing Applications (agriculture & Crops)

**Paper Title:** Remote Assessment & Change Detection in GreenLAI by using different

Vegetation Indices.

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**Abstract**

This present the method fuzzy C-means clustering and neural network for agriculture and crop area identification. The main objective of this work is to find the different vegetation indices and Green leaf area index (GreenLAI) for identification of spectral characteristics of the crop and agriculture area by comparing the different vegetation indices with GreenLAI we find out which vegetation indices will give the good result for cotton crop identification and the growth of the crop. In the method, at first Fuzzy C- means clustering method is used to make the cluster of the similar pixel and second the neural network method is applied to find out the agriculture area in to that cotton crop for that purpose the different six vegetation indices has been applied that are different quantitative indices of vegetation conditions four spectral indices are SR (Simple Ratio), NDVI (Normalized Difference Vegetation Index), EVI (Environmental Vegetation Index), GARI(Green Atmospherically Resistant Vegetation Index), WDRVI(Wide Dynamic Range Vegetation Index) and CL\_Green(chlorophyll Green). And also use the Green LAI for comparing the different vegetation index with it for identification of agriculture area and cotton crop.The investigation was performed with LISS-III satellite images through the classification accuracy. The results showed that CL-Green index is better for finding the agriculture area and crop classification in LISS-III image as compared with other indices. The classification accuracy reached in CL-Green is 97.0% as compared with other indices achieved the values of 91.93%, 91.45%, 91.93%, 96.96 and 90.26%.by using this result we compare that with GreenLAI & conclude that the crop growth is in good manner or not.

**KEY WORDS:**  Fuzzy-c means clustering, neural network, LISS-III, Vegetation Index (VI)

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