Abstract

Due to the rapid growth of population the food need also increases which is the center of focus for various researchers and governments. For this purpose crop information system has been made, the aim of crop information system is to monitor the crop health and estimate the needs for the next four to five years. Geographic information system plays an important role in crop estimation and identification. GIS uses remote sensing technique to identify various crops and their yield. In this paper novel approaches are used for the identification and estimation of tobacco. SPOT 5 imagery having resolution of 2.5m is used for the estimation and identification of tobacco. For post processing, statistics like kappa coefficients and Receiver operating curves are utilized. This study mainly focuses on the Mardan region in KPK Pakistan. Classification is done for four categories, these categories are then classified using state of the art machine learning classifiers and the accuracy of these various classifiers has been compared.

References
Relations between evaporation coefficients and vegetation indices studied by model simulations. Remote sensing of environment, 50(1), 1-17.


**Index Terms**

Computer Science

Information Sciences

**Keywords**

Remote sensing, Receiver operating curves, kappa coefficient, SVM, Maximum likelihood, Minimum distance, Mahalanobis distance.