Abstract

Bangladesh is an agricultural country. Paddy is a principle crop of it. Millions of people depend for their living on paddy by way of its farming and processing. Blasts in paddy leaves are the most predominant disease which appears as brown spots on the leaves. If not treated on time, it may cause the great loss. Excessive use of pesticide for treatment of plant diseases increases the cost, environmental pollution and decreases the production. So their use must be optimized. This can be achieved by targeting the disease places, with the appropriate quantity and concentration of pesticide by estimating disease severity using image processing technique. In this paper K-means clustering method has been used to segment the image into three images based on color. Among these images unaffected leaf regions and disease affected regions are used to calculated percentage of affected pixels. By calculating percentage of affected pixels disease severity can be observed which leads to take appropriate measure for treatment.
4. Ross, J., Ross, V., Phytometrical characteristics of the willow plantation at Toravere”, joint Swedish–Estonian seminar,

Index Terms
An Image Processing Technique to Calculate Percentage of Disease Affected Pixels of Paddy Leaf

Computer Science

Image Processing

Keywords

K-Means clustering, Segmentation, Binary image, Matlab.