IT 201

LOW COST AUTOMATED RICE BLAST DISEASE ASSESSMENT MODEL

Abstract

Detection of plant diseases and estimation of the level of infection is usually done by visual observation of plant leaves. At present the research officers detect diseases by observing leaves of different plants and quantifying the level of damage based on their previous experience and sample pictures. In scientist conventionally use variety-screening method by using Standard Evaluation System for Rice (SES) has been prepared to enable rice scientists from around the world to speak a common language on evaluation of rice characters. This method of visual estimation does not provide consistent results and also depend on personal characteristics of the observer. Objective of this study could be achieved by developing automated cost effective and flexible rice blast disease analysis system for cultivators to identification of rice blast disease and assessment of the damage.To solve the above problem, computer based model can be built effective and reliable manner to provide growers. For this purpose computers can be used by the help of Digital Image Processing Techniques to automate the rice blast disease identification process. As a result, the use of rice blast disease analysis system would be easy and applied widely. Therefore, it is hypothesized that image processing can be used for this purpose very effectively. In this study 200 digital images which had infected Rice Blast disease captured using digital camera and analysed with the help of the image processing and image processing software MATLAB.

Keywords:
Digital image processing, Image enhancement, Assessment, Visual observation, Rice blast

VK Nimal Gamini - *Faculty of Management Studies, Rajarata University of Sri Lanka, Mihintale, Sri Lanka. E-mail: vkngamini@yahoo.com*