VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI

A
Project Synopsis
On
"SUGARCANE CROP SUPPORT SYSTEM"

Submitted in the partial fulfillment of the requirement of VII Semester
Bachelor of Engineering

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TITLE OF THE PROJECT:SUGARCANE CROP SUPPORT SYSTEM.

ABSTRACT:

Matching with long diversity of conditions under which sugarcane is grown in the world, there is wide spectrum of pests and diseases which have come to acquire a place of priority for control on regional or inter-regional bases due to agro-climatic management conditions associated with the area. In addition the susceptibility of the variety to the diseases and pests aggravates the situation and creates additive problems. To overcome the problem, sugarcane disease detection and prevention is required. A system is proposed wherein the farmer, just by clicking a picture of plant can detect the disease and receive related solutions for the same.

INTRODUCTION:

Plant diseases are generally caused by pest, insects, pathogens and decrease the production to large scale if not controlled within time. To detect the plant diseases a fast automated way is needed. The proposed system mainly deals with detection and prevention of sugarcane diseases. The work proposes an efficient system for identification and classification of 6 major sugarcane diseases. After detecting the disease,the name of disease with its remedies will be provided to the farmer.

The soft computing techniques are helpful in developing the knowledge based systems, may be effectively utilized to develop the expert system. The proposed system will be helpful for farmers to find the solutions to their farming problems.

The complete system can be processed in two different phases. The first phase is about getting the input from farmers that is images of their crop, processing the image, segmenting the image, extracting the features from image and then comes the detection and classification of plant disease. The second phase is about providing the service to the end user that is to the farmer.

STATEMENT OF THE PROBLEM:

To design and develop a system for detection and prevention of six major sugarcane diseases.

WHY IS THE PARTICULAR TOPIC CHOSEN?

Agriculture being the backbone of our country, sugar industry is the second largest Agro-based industry in India. As it is one of the main socio-economic contributors, the sugarcane sector has to be taken care so as to minimize the crop loss due to disease during production.

OBJECTIVE AND SCOPE OF THE PROJECT:

The objective is to design an efficient system which identifies the disease in sugarcane crop through image processing, classify the disease, and provide accurate remedy.

The proposed system can replace the traditional way of manual detection which may yield miscalculated results, and increase the quality and quantity of the crop production.

METHODOLOGY:

Image acquisition: It is the principle phase which incorporates uploading the image of the crop.

Image pre-processing: The aim of pre-processing is improvement of image data to enhance its quality.

Image segmentation: It is an important step in disease detection which is used to extract the infected regions of the plant from the images uploaded.

Feature extraction: The goal of feature extraction is to classify a set of features representing characters, which maximizes the disease recognition rate.

Detection and classification of plant disease: A classifier is used to detect the kind of disease. Classification deals with matching the given data vectors with one of the trained data of different classes.

POSSIBLE OUTCOMES:

Accurate prediction of disease in sugarcane plant and provide counter remedies.

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