

## Leaf Disease Identification using Image Processing – A Survey

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**Abstract**—Agriculture is one field that has a high impact on the life and economic status of nation. Improper management leads to a huge loss in agricultural field. Plant leaf diseases and destructive insects are a major challenge in the agriculture sector. KISAN call centers are available but do not offer service 24\*7. Farmers who are unable to explain the disease properly on call need to analyze the image of the affected area of disease. Though video and pictures of leaf provide a better insights and researchers can provide a better solution to resolve the issues related to healthy crops, yet it not been informed to farmers. It is required to note that if the productivity of the crop is not healthy, it has a high risk of providing good and healthy nutrition. Due to the development and improvement in technology where devices are smart enough to recognize and detect leaf diseases. Recognizing disease can prompt faster treatment in order to lessen the negative impacts on the harvest. This paper, therefore, focus upon plant leaf disease identification using an image processing and machine learning approach with detail discussion of plant leaf diseases ,symptoms and challenges while disease detection and identification process. Finally with some current techniques discussion and providing future guidelines in this area.