Abstract

Crop production quality and quantity can be enhanced using precision agriculture. One of the major products in India is grape. Major threats for grape farming are downy mildew and meal bug which spreads instantly and are hard to control. As the grape is very costly, Farmer needs to be very careful from the initial stage to harvesting to avoid infection of fungal disease and pest. To prevent disease farmer has to apply fungicides and pesticides in huge quantity, it results in increased cost of production. Also another disadvantage is that grapes may carry toxins. To reduce cost of production and enhance the quality and quantity of the grapes, it is important to propose some mechanism that will help the farmer to detect the disease in early stage. Existing systems for forecasting the disease mostly depends on image processing technologies. Drawback of the existing system is that they wait till symptoms appear and then only the disease can be detected. That’s why such type of systems is unable to help treating the disease at an early stage. Grape diseases like downy mildew is mostly dependent upon weather based parameter like humidity, temperature and wind speed. When any favorable weather condition occurs zoospores in downy start generating spores that enters into the leaves of grape via stomata of the leaves. If favorable weather condition and the probability of disease is detected then it it very helpful for farmers to prevent infection of disease and reduce the cost of production.
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Index Terms

Computer Science

Wireless
Keywords

Wireless sensor network  GPRS  Downy Mildew  Disease  Pest  Vineyard  Pesticides  fungicides  Agriculture  grapes.