A Comparison of different techniques in detecting Piper yellow mottle virus (PYMV) in black pepper

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Piper yellow mottle virus disease is one of the important diseases affecting black pepper (*Piper nigrum* L.) vines in Sri Lanka and other black pepper growing countries in the world. In order to control the disease, its correct identification in plant material is essential. Many methods have been tested to detect Piper yellow mottle virus disease and are, the symptoms, serology, electron microscopy and nucleic acid methods. Characteristic symptoms of Piper yellow mottle virus disease are useful to detect symptomatic plants but it failed to detect latent infections. Out of all the methods attempted, polymerase chain reaction was found to be the best to detect the virus. This technique is very sensitive as it amplifies the target DNA and enabling the detection of symptomatic and asymptomatc infections. Immunosorbant electron microscopy and electron microscopy methods were effective and have to be restricted to the places where transmission electron microscope facilities and virus purification facilities are available. Results confirmed that enzyme linked immunosorbant assay as an unsuitable method in detecting this black pepper viral disease.

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