

RESEARCH ARTICLE

Detection, diagnosis of orchid virus and inactivation of cymbidium mosaic virus (CYMV) on plants

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SUMMARY

Floriculture is one of the disciplines of Horticulture which is dealing with growing of ornamental plants flowering plants and garden maintenance etc. orchids are one of the floriculture plant. It is a member of Orchidaceae family consisting of more than 25,000 species, which are distributed almost all over the world. Vanda Orchid plant is collected from different nurseries showing chlorotic and mosaic symptoms were observed and it was suspected to infect with virus. So the symptomatic plants were tested with Direct Antigen Coating- Enzyme Linked Immunosorbent Assay (DAC-ELISA) for Cymbidium Mosaic Virus (CYMV), Odontoglossum ring spot virus (ORSV), Poty virus and Tomato Spotted Wilt Virus (TSWV) and further confirmed by Transmission Electron Microscopy (TEM). With the two methods CYMV were detected positively from the samples and low positive results were observed for ORSV, Potex, Poty virus and Tomato Spotted Wilt Virus (TSWV). High incidence of Cymbidium Mosaic Virus (CYMV) was observed. Chemicals were evaluated for inactivation of CYMV on pruning tools for disease control. Skimmed milk was found to be effective, non caustic and inexpensive for inactivation of CYMV inoculated on local lesion indicator host plants. However, systemic host plants (Orchids) were used in evaluation.

Key Words : Orchids, ELISA and electron microscope, Cymbidium mosaic virus, Odontoglossum ring spot virus, Poty virus, Tomato spotted wilt virus, Skimmed milk

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