

B-13 Identification of tomato virus by host-range studies and Enzyme Linked immunosorbent Assay

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Since many viruses can affect tomato cultivation, it is necessary to identify the virus in order to apply prevention methods. Host-range test and a serological test, enzyme-linked immunosorbent assay (ELISA) can be used for virus identification.

Tomato plants infected with virus diseases were collected from Kandy and Matale district. Those viruses inoculated onto a host-range consists of *Datura stramonium*, *Capsicum* spp. *Nicotiana glutinosa*, tobacco, *Petunia hybrida*, and tomato of Solanaceae Family, bean and cowpea of family Leguminosae, *Chenopodium murale* of Family Chenopodiaceae, and *Gomphrena globosa* of Family Compositae.

No symptoms were observed on *Datura stramonium*, bean, and cowpea. Severe systemic mosaic symptoms and leaf distortion was clear on Yolo Wonder. Early Calwonder, Delray Bell, PI 152225, VR2 and Hungarian Yellow Wax. Cappritto and CA 8, *Petunia* and *Chenopodium* showed mosaic symptoms. Virus induced systemic necrosis on Tabasco, local necrotic lesions on *Gomphrena* and leaf roll on tomato, were observed.

The ELISA test was conducted using polyclonal antibodies against cucumber mosaic virus (CMV), potato virus Y (PVY), and tobacco etch virus (TEV) for the diseased plants collected from Matale and Kandy districts. ELISA test confirmed the presence of CMV and absence of both PVY and TEV in tomato samples collected from Matale district. CMV is serologically related to a range of viruses within the group. It was also confirmed that the tomato plants collected from Kandy district were not infected with CMV, PVY, or TEV.