

SEROLOGICAL AND MOLECULAR IDENTIFICATION OF *Cucumber mosaic virus* (CMV) INFECTING BANANA CROPS IN ECUADOR

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Abstract

Cucumber mosaic virus (CMV) is an important viral pathogen in banana plants (*Musa* spp.) in the world. CMV is an aphid transmitted plant virus belonging to the genus *Cucumovirus* and family *Bromoviridae*. Ecuador is one of the major banana export countries in the world. The infection of banana crops by CMV is a major problem in Ecuador. Therefore, for this reason, in the present study, standardization of triple antibody sandwich enzyme linked immunosorbent assay (TAS-ELISA) and Reverse Transcription-PCR (RT-PCR) was carried out for the detection of CMV infected banana samples from the Ecuador. The CMV suspected banana samples (n=24) were collected in the major growing areas of Santa Elena, Los Rios, Santo Domingo and Guayaquil provinces from Ecuador. Among these collected banana samples, only four samples were confirmed as CMV infected by TAS-ELISA using the CMV specific antiserum. The RT-PCR was performed from CMV infected seven banana samples were DNA fragments of 500 bp were amplified by using the CMV-CP gene specific primers. Further, the standardized RT-PCR and TAS-ELISA can be used for the screening of CMV infected banana plant materials at any time during the growing seasons.

Keywords: Banana, *Cucumber mosaic virus*, TAS-ELISA, RT-PCR

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