

New Isolate of Cucumber Mosaic Virus Infecting Banana

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Abstract : Banana plants showing typical mosaic and yellow stripes on leaves as symptoms were collected from Assiut Governorate in Egypt. The causal agent was identified as Cucumber mosaic virus (CMV) on the basis of symptoms, transmission, serology, transmission electron microscopy and reverse transcription polymerase chain reaction (RT-PCR). Coat protein (CP) gene was amplified using gene specific primers for coat protein (CP), followed by cloning into desired cloning vector for sequencing. In this study the CMV was transmitted into propagation host either by aphid or mechanically. The transmission was confirmed through Direct Antigen Coating Enzyme Linked Immuno Sorbent Assay (DAC-ELISA). Analysis of the 120 deduced amino acid sequence of the coat protein gene revealed that the EG-A strain of CMV shared from 97.50 to 98.33% with those strains belonging to subgroup IA. The cluster analysis grouped the Egyptian isolate with strains Fny and Ri8 belonging sub-group IA. It appears that there occurs a high incidence of CMV infecting banana belonging to IA subgroup in most parts of Egypt.

Keywords : banana, CMV, transmission, CP gene, RT-PCR

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