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Molecular characterization and phylogenetic analysis of *Citrus Mosaic Badna Virus* (CMBV) associated with Sathgudi sweet orange

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Citrus mosaic disease is a potential threat to citrus production in southern part of India. The disease is caused by *Citrus Mosaic Badna Virus* (CMBV). During a survey of sathgudi sweet orange in the Nagri village of Chittor district of A.P. in October, 2006. Incidence of mosaic disease was observed up to 45-50% in 8-10 years old orchards of sathgudi sweet orange. The characteristic symptoms of the disease in the field infected sathgudi sweet orange tree were bright yellow mosaic leaves, twig was collected and grafted on one years old healthy sweet orange and acid lime citrus plant in the glass house. Electron microscopy showed bacilliform virus particles in the diseased leaf tissue identity the association of *Citrus yellow mosaic virus*, a badnavirus with the disease. Eights sets of overlapping primers were designs from the CMBV gene sequence available in Gene bank were used to amplify the whole genome or CMBV associated with sathgudi sweet orange. The amplified products were cloned and sequenced. The full genome sequence of CMBV showed variability ORF 3, 4 & 5 (87.1, 87.15, 75.7%) While ORF 1, 2, 6 were relatively conserved (98.6, 99.2, 96.1). The Phylogenetic of CMBVSONG indicated that CMBV were distinct from other species of CMBV which formed a separate group. Phylogenetic analysis indicated that CMBV was most closely related to *Cacao swollen shoot virus*. The intergenic region contained putative transcriptional similar to other badana virus.

Biography

Kailash N Gupta, graduated and post graduated from Faculty of Agriculture Plant Pathology, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur-482004. Dr. Gupta has completed his PhD from JMI, A Central University New Delhi. He worked as several ICAR institutes viz., Division of Plant Pathology, NRL, Indian Agricultural Research Institute, New Delhi, Central Institute for Cotton Research, Nagpur and Bihar Agricultural University Sabour and joined as Assistant Professor cum Scientist of Plant Pathology in Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur-482004, India. He has published more than 20 Research papers in reputed National and International journals, 35 abstracts, one book chapter, 10 technical bulletins and 30 popular articles during the tenure.

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