First report of citrus yellow mosaic virus from sweet oranges in Pakistan

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Citrus fruits are one of the most important fruits in term of consumption as well as nutritional value. However, being such an important crop, it is infected by many diseases. One of the important diseases that can cause significant loss is citrus yellow mosaic virus disease. Citrus yellow mosaic virus causes severe mosaic disease in sweet oranges and has been reported earlier from India. In 2016, mosaic symptoms were observed in sweet oranges orchards in the Okara district at Punjab province of Pakistan. Leaf samples were collected from the 50 trees with symptoms. DNA was extracted by using sodium sulphite method. Conserved region of CYMV was amplified with PCR using primer pair (5GTGGCTTTCATCAGGTAGC, forward and 5CATGCATCCATCCGTTTCG, reverse). Approximately 640 bp Product was obtained. The PCR product was sequenced and BLASTn was performed and 96% similarity was found with the Indian isolate (GenBank accession no. AF347695). CYMV particles were propagated and transmitted to five healthy sweet orange trees through grafting. CYMV symptoms appeared after 65 days of grafting. After 80 days of transmission DNA was isolated from leaves and PCR for CYMV was conducted as described earlier. A Product of 638 bp was obtained. Thus, fulfilling Koch's postulates. To our knowledge this is the first report of CYMV in citrus in Pakistan.

Speaker Biography

Shazia Mannan from the city of Sahiwal which is located in the south of Punjab province of Pakistan. After completing her graduation from Baha-ud-din Zakariyya University, Multan, Pakistan. She got her post graduate degree in Biochemistry/Molecular biology from Quaid-i-Azam University Islamabad, Pakistan in 2001. Then she did her Doctorate from the same university in Biochemistry/Molecular Biology in 2007. After that she won Charles Wallace Fellowship of British Council and did her post doctorate research at Central Sciences Laboratories Yorkshire, UK in 2008. Then she joined department of Biosciences, COMSATS Institute of Information Technology Sahiwal campus in 2008 as Assistant Professor. Her research interest subjects are Molecular Phytopathology and drug designing. She has been working on plant pathogens including Xanthomonas Oryze pv. Oryze, phytoplasma, cotton leaf curl viruses and maize dwarf mosaic virus. She is also working on computational drug designing against cancers. She is supervising research of undergraduate and post graduate students at COMSATS Sahiwal campus

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