Disease Note

FIRST REPORT OF *PRUNUS NECROTIC RINGSPOT VIRUS* INFECTING BINDWEED IN IRAN

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Prunus necrotic ringspot virus (PNRSV) affects rosaceous plants worldwide. In 2011 and 2012, 50 symptomatic bindweeds (*Convolvulus arvensis*) were collected from rose gardens in Alburz, Mazandaran and Tehran provinces of Iran. Samples were tested for the presence of PNRSV using DAS-ELISA and dot-immunobinding assay (DIBA) with a polyclonal antiserum (Agdia, USA). PNRSV was detected in 38% of the samples with symptoms such as line pattern, mottle and marginal necrosis in all visited regions. Five isolates from bindweed plants were used for bioassays on cucumber (*Cucumis sativus*) after single lesion transfer on cowpea (*Vigna unguiculata*). Inoculated cowpea plants developed chlorotic spotting on the young leaves and cucumber plants reacted with systemic mosaic, vein banding, and malformations. To confirm the presence of PNRSV in diseased plants, total RNA was extracted from symptomatic bindweed and herbaceous plants with the RNeasy Plant Mini Kit (Vivantis, Malaysia) and analyzed by RT-PCR using the PNRSV-specific primers Ilar 1 and Ilar 2 (Moury *et al*., 2000). The expected 210 bp fragment was amplified by RT-PCR from samples of symptomatic tissues while no amplification products were obtained when water or total RNA from symptomless plants were used as template. In Iran, PNRSV was first detected in rose samples from Tehran province (Rakhshandehroo *et al*., 2006). To the best of our knowledge, this is the first report of PNRSV in *Convolvulus arvensis* in Iran.

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Disease Note

FIRST REPORT OF *GROUNDNUT BUD NECROSIS VIRUS* IN JASMINE

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Jasmine (*Jasminum sambac*) is a popular flower and oil-bearing plant in the family *Oleaceae*. India is the second producer and exporter of jasmine in the world. In April 2012, commercial jasmine fields in the Thiruvallur district of Tamil Nadu (India) showed mosaic and chlorotic spots on the young leaves. Based on symptomatology, the involvement in disease aetiology of *Groundnut bud necrosis virus* (GBNV, genus *Tospovirus*, family *Bunyaviridae*) was suspected. The presence of this virus in symptomatic jasmine leaves was firsrt ascertained by direct antigen coating (DAC)-ELISA (Clark and Joseph, 1984), using a polyclonal antiserum raised to GBNV and it was further confirmed by RT-PCR using primers designed in the nucleocapsid gene (Satyanarayana *et al*., 1996). The 830 bp amplicon was cloned in pTZ57R/T vector (Fermentas, USA) and sequenced. The nucleotide sequence was deposited in GenBank (accession No. JQ995170). Sequence analysis (BioEdit v. 7.05) showed 99.7% and 100% identity with the nucleocapsid gene of other GBNV isolates at the nucleotide and amino acid levels, respectively. Phylogenetic trees constructed using MEGA version 4.0 confirmed the close relationship of the GBNV isolate from jasmine with another isolate from groundnut (GenBank accession No. HM770020). The infected crop was removed to eradicate the infection. To the best of our knowledge, this is the first report of GBNV on jasmine.

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