DISEASE NOTE

FIRST REPORT OF LITTLE CHERRY VIRUS 1 IN TURKEY

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Little cherry (LChD) is a serious virus disease of sweet (*Prunus avium*), sour (*P. cerasus*) cherry and several ornamental cherry trees. *Little cherry virus 2* (LChV-2), a species of the genus *Ampelovirus*, and *Little cherry virus 1* (LChV-1), an unassigned species in the family *Closteroviridae*, are associated with LChD. Symptoms shown by infected trees consist of small, pale-colored fruits with reduced sweetness and discolourations of the interveinal areas of the upper leaf surface that turn red-violet or become bronze coloured, while the midrib and the main veins remain green. In July-August 2007-2008 bronzed leaves were observed on the upper shoots of fruitless sweet cherry trees in an orchard located in Osmaniye (Turkey). Out of season flowering was also observed in October 2008, with flowers exhibiting pink petals and bronze sepals. Flowers were collected from seven cherry trees of cv. Napoleon and leaves of suckers from *Prunus mahaleb*, on which cv. Napoleon was grafted. Total nucleic acids from these samples were extracted as described (Foissac *et al.*, 2001) and used as template for reverse transcription. PCR assays were performed using primer sets specific for LChV-1 and LChV-2, respectively (Rott and Jelkmann, 2001). Whereas all samples were negative for LChV-2, two of them (one cherry cv. Napoleon and the *P. mahaleb*) amplified the expected 419 bp fragment of LChV-1. The PCR product amplified from *P. mahaleb* was sequenced showing 89% identity at the nucleotide level with two LChV-1 isolates (GenBank accession Nos. Y10237 and X93351). To our knowledge, this is the first report of LChV-1 in Turkey.

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DISEASE NOTE

FIRST REPORT OF *IMPATIENS NECROTIC SPOT VIRUS* INFECTING FLUE-CURED TOBACCO IN YUNNAN, CHINA

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Flue-cured tobacco fields were surveyed in 2010 for tospoviruses in Yunnan in areas where *Impatiens necrotic spot virus* (INSV) and *Tomato zonate spot virus* are known to occur (Cheng *et al*., 2010; Dong *et al*., 2008). Tobacco plants showing foliar necrotic ring symptoms were collected and indexed by electron microscopy and serological assays. The presence of tospovirus-like quasi-spherical particles with a diameter of 80-100 nm was observed in the sap of symptomatic tobacco leaves of 25 samples. Crude extracts of diseased tobacco leaves of 57 samples reacted to INSV antibodies (Agdia, USA) in ELISA. To confirm the occurrence of INSV, total RNA was extracted from four ELISA-positive samples using TRIzol reagent (Invitrogen, USA) and tested by RT-PCR with primer pair derived from the 32- terminal sequence of the S RNA (forward: 5'-CTTTGCTTT TTAGAACTGTGCA-3', reverse: 5'-AGAGCAATTGTGTCACGAATAT-3'). PCR products of the expected size (762 bp) were obtained from ELISA-positive samples, cloned into pGEM-T vector (Promega, USA), and sequenced (accession No. HQ612175). Sequence analysis showed a 99.6% identity at the amino acid level with INSV isolate Phal from *Phalaenopsis* in Yunnan (GQ336989) and isolate J from verbena in Japan (AB109100). INSV has rapidly become a serious problem for the cultivation of ornamental plants in Yunnan due to the widespread distribution of western flower thrips (*Frankliniella occidentalis*) (Cheng *et al*., 2010) and our findings suggest that this virus poses a threat to flue-cured tobacco. To our knowledge, this is the first report on the occurrence of INSV on flue-cured tobacco in Yunnan.

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