DISEASE NOTE

DETECTION AND IDENTIFICATION OF CEREAL VIRUSES IN JORDAN

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Little is known about the incidence of cereal virus diseases in Jordan. More than twenty years ago, four serotypes of *Barley yellow dwarf virus* (BYDV) (MAY, PAY, RPV and RMV) were reported from Jordan (El Zoubi *et al*., 1992) and more recently, the SGV serotype of BYDV was detected in wheat plants (Aboul-Ata *et al*., 2010). In 2009 and 2010, a total of 64 wheat (*Triticum aestivum*), 98 barley (*Hordeum vulgare*) and 210 maize (*Zea mays*) leaf samples were collected from symptomatic plants in five regions of Jordan. Total RNA was extracted using the SV total RNA isolation system (Promega, USA) and cDNA was synthesized using the cDNA synthesis kit (Fermentas, USA). For RT-PCR, primers specific to 13 cereal-infecting viruses were used (Deb and Anderson, 2008). Sequence analysis of amplified products revealed that four wheat samples were mix-infected with the PAV, MAV and SGV serotypes of BYDV. One barley sample and 35 maize samples were infected with *Cereal yellow dwarf virus* (CYDV, RPV type species) and *Maize dwarf mosaic virus* (MDMV), respectively. Sequence analysis revealed that Jordanian BYDV-MAV (HM488003) and BYDV-PAV (HM488004) shared 91% and 100% nucleotide identity with BYDV-MAV-PS1 (D11028) and BYDV-PAV isolate 052 (EF521841), respectively, whereas identity between Jordanian BYDV-SGV (HM488005) and BYDV-SGV-NY (AY541038) and BYDV-SGV (Y541039) did not exceed 77%. Nucleotide identity between CYDV-RPV (HQ206716) from Jordan and other isolates ranged between 83% (with DQ988102) and 94% (with DQ988098), while MDMV (HM488006) had 96% identity with Sz0611 (FM883217). To our knowledge this is the first record of CYDV-RPV in Jordan.

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DISEASE NOTE

FIRST REPORT OF *BLUEBERRY RED RINGSPOT VIRUS* IN HIGHBUSH BLUEBERRY IN POLAND

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A virus survey was conducted in autumn 2010 in three commercial plantings of highbush blueberry (*Vaccinium corymbosum* L.) in the central part of Poland. Reddish ringspots and blotches were seen on the stems and the upper surface of old leaves of cvs Darrow and Herbert, while no apparent symptoms were shown by other 20 cultivars. Symptoms were similar to those induced by *Blueberry red ringspot virus* (BRRSV) (Caruso and Ramsdell, 1995), genus *Soymovirus*, family *Caulimoviridae*. To confirm BRRSV occurrence, total DNA was extracted from tissues of symptomatic leaves and stems with the DNeasy Plant Mini Kit (Qiagen, USA) according to manufacturer's instructions. For PCR, *Taq* PCR Core Kit (Qiagen USA) was used together with the primer set RRSV3/RRSV4, which amplifies a fragment of the transcriptional activator gene (Polashock *et al*., 2009). PCR products were analyzed by 1.2% agarose gel electrophoresis and sequenced. Sequence analysis of the 450 bp DNA amplicons of seven isolates from cv. Darrow and two isolates from cv. Herbert showed 93-96% nucleotide sequence identity with the putative transcriptional activator gene of BRRSV strain NJ (GenBank accession No. AF404509). The BRRSV sequences determined in this study were deposited in GenBank as accession Nos JF303673-JF303677 and JF303679-JF303682. To our knowledge, this is the first report of BRRSV in *V. corymbosum* in Poland.

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