

DISEASE NOTE

CYNOSURUS CRISTATUS, A NEW HOST OF WHEAT DWARF VIRUS IN THE CZECH REPUBLIC

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Wheat dwarf virus (WDV, genus *Mastrevirus*, family *Geminiviridae*) has a wide host range among *Poaceae* (Vacke, 1961). Grass species such as *Briza media*, *Poa pratensis*, *Poa compressa*, *Bothriochloa ischaemum*, *Brachypodium pinnatum*, *Anthoxanthum odoratum*, *Agrostis capillaries*, *Phleum pretense*, *Dactylis glomerata*, *Lolium perenne*, *Trisetum flavescens*, *Cynosurus cristatus*, *Deschampsia cespitosa*, *Alopecurus pratensis*, *Arrhenatherum elatius*, *Poa trivialis*, *Apera spica-venti*, *Elymus caninus*, *Festuca arundinacea*, *Bromus inermis*, *Elytrigia repens* and *Echinochloa crus-galli* were tested for the evaluation of the host range of two WDV strains: WDV-W and WDV-B. Three seedlings of each grass species were exposed to adults of viruliferous leafhopper vector *Psammotetix alienus* which were removed from the plants after three weeks. Subsequently, non-viruliferous *P. alienus* were left for acquisition feeding on the infected grass species for seven days, and were then transferred to healthy wheat and barley plants. The leafhoppers from the grasses inoculated by the WDV-W and WDV-B were transferred to wheat and barley plants, respectively. Samples from grasses and cereals (wheat and barley) were collected 30 and 70 days post inoculation, respectively, for WDV detection by DAS-ELISA (Sediag, France). WDV was detected in two *A. spica-venti* and *C. cristatus* plants inoculated by each of the WDV strains and in one *L. perenne* plant inoculated by WDV-W, as well as in wheat and barley plants. The rest of the grass species remained virus-free. Hence, our results confirm two earlier reported WDV hosts, i.e. *L. perenne* (Vacke, 1971) and *A. spica-venti* (Vacke and Cibulka, 1999) and identify *C. cristatus* as a new WDV host. To the best of our knowledge this is the first report of *C. cristatus* as a host and potential reservoir of WDV in agroecosystems.

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DISEASE NOTE

FIRST REPORT OF TOMATO YELLOW LEAF CURL CHINAVIRUS INFECTING MALVA ROTUNDIFOLIA IN CHINA

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Malva rotundifolia L. is a common medicinal herb in China. In 2010, samples of 10 symptomatic *Malva parviflora* L. plants showing yellow vein and leaf crinkling, and of two symptomless plants were collected in Sichuan (China). A 500 bp DNA fragment was successfully amplified from the 10 symptomatic samples with the degenerate primers PA/PB specific to begomoviruses (family *Geminiviridae*) (Deng *et al.*, 1994). The fragment of isolate SC226 was randomly selected for cloning and sequencing (GenBank accession No. KP293739). Based on the sequence obtained, the specific primers Y6F1 (5'-ACCGATGTACAGAAGCCCTGA-3') and Y6R (5'-CTTC-CGATACATGGGCCTGTTTG-3') were designed to amplify the remaining DNA-A sequence. Sequence analysis showed that the full-length sequence of SC226 was 2738 nt long (JX679252) with the highest nucleotide sequence identity with isolate Y25 of *Tomato yellow leaf curl China virus* (TYLCCNV-[China:Yunnan 25:2002] (AJ457985)). Then, a 1200 nt long fragment specific to TYLCCNV was amplified from all symptomatic samples using primers Y10F1 and Y35+10R (Qing and Zhou, 2009). With the universal abutting primers (Bridson *et al.*, 2002) for betasatellite DNA, an amplicon of 1300 bp was obtained from 10 symptomatic samples. Sequence comparison showed that the betasatellite is 1335 bp long (JX679253) and has a 85.8% identity with Tomato yellow leaf curl China betasatellite (TYLCCNB-[China:Yunnan 149:2009] (GU058280)). An approximate 900 bp amplicon specific to TYLCCNB was detectable in all symptomatic samples using the primers Y10 β / β 02 (Qing and Zhou, 2009). Neither TYLCCNV nor TYLCCNB was detectable in symptomless samples. This is the first report of TYLCCNV associated with its betasatellite infecting *Malva rotundifolia*.

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