DISEASE NOTE

FIRST REPORT OF A BEGOMOVIRUS INFECTING MIMOSA PUDICA IN INDIA

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Mimosa pudica L. (family Fabaceae) is an invasive species with ornamental and medicinal uses (Nayagam et al., 1999), native to Brazil and widespread in tropical and sub-tropical parts of the Americas, Africa and Asia, including India. The vernacular English name (touch-me-not) originates from the fact that the leaves fold inward when touched or shaken and reopen after a few minutes (seismonastic movement). During an extensive survey for whitely-transmitted geminivirus-sequences, samples were collected in Rajasthan (India) from stunted M. pudica plants with small and yellow leaves. The association of a geminivirus with the disease was suspected due to the presence of Bemisia tabaci (Genn.) on the plants. PCR assays using begomovirus coat protein gene-specific primers (forward 5’-ATGGCGAAGCGACCAG-3’ and reverse 5’-TTAATTTGTGACCGAATCAT-3’) (Hallan, 1998), amplified a fragment 771 bp in length from symptomatic, but not from symptomless samples. The amplicons were cloned in pGEMT vector (Promega, USA), selected clones were sequenced in both orientations, and a sequence was deposited in GenBank (accession No. HQ876467). The highest nucleotide sequence identity (97%) was found with both Ageratum yellow vein virus-Guangxi (AYVV-Gx[CN:Gx13;Tom:02], AJ558120) and [CN:Gx68;03], AJ849916) and Ageratum yellow vein virus-[G129] (AM940137). A nucleotide identity of 92% was found with both Tomato yellow leaf curl virus [CN:Gx22;Tom:02], AJ704604). The sequences showed lower sequence identity (80%) with both Tomato yellow leaf curl Mindanao virus and (EU487046) and Stachybarfeta leaf curl virus (StaLCuv [CN:Gx4;01], AJ564743). The sequences showed lower sequence identity (80%) with both Sida yellow vein virus (StyVTV [VN:Han:05], DQ641696) and Papaya leaf curl China virus (PaLCuCNV: Pap [CN:Gx22;Tom:02], AJ704604). To the best of our knowledge this is the first published report of a begomovirus associated with Mimosa pudica in India.

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DISEASE NOTE

FIRST REPORT OF CYTOSPORA ROSARUM ON ROSA CANINA IN TURKEY

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Dog rose (Rosa canina), that grows in the wild in eastern Anatolia (Turkey), is also cultivated as an ornamental in this country. In summer 2009, a disease of dog roses was observed in the Turkish provinces of Erzurum and Ardahan, with an incidence of 70% and 40%, respectively. Branches and twigs were yellowish-brown, the inner bark was black, and dark pycnidia were present on necrotic bark. Tissue fragments from symptomatic branches and twigs were surface-disinfested for 2 min in 2% NaOCl and plated on potato dextrose agar (PDA) at 25°C. Isolations consistently yielded a fungus that was grown in pure culture. Single-spore colonies were exposed to daylight for 3 to 4 weeks to induce pycnidial development. Conidia were hyaline, aseptate, slightly curved and measured 4.5-6.7 x 0.9-1.1 μm (n = 100). Based on these morphological traits the fungus was identified as Cytospora rosarum Greville (Fotouhifar et al., 2007). Inocula for pathogenicity tests were conidial suspensions prepared from 21-day-old cultures, adjusted at a concentration of 2.2 x 106 conidia/ml using a haemocytometer. Inoculum was sprayed onto wounded twigs of healthy dog rose plants. Control plants were wounded and sprayed with sterile water. Inoculated and control plants were covered with plastic bags for 72 h in a glasshouse at 23±2°C. Necrosis of twigs was observed three weeks after inoculation. Control plants remained symptomless. C. rosarum has previously been recorded on R. canina from Iran (Fotouhifar et al., 2007), Armenia, Poland and Ukraine (Farr and Rossman, 2011). To our knowledge, this is the first report of C. rosarum infections on R. canina in Turkey.


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