Disease Note

**FIRST REPORT OF SCLEROTINIA SCLEROTIORUM ON BUTTERFLY LAVENDER IN ITALY**

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In the autumn of 2014, in a commercial farm at Albenga (northern Italy), a new disease was observed on 5-month-old potted plants of butterfly lavender (*Lavandula stoechas*). Initial symptoms consisted of stem necrosis, darkening and withering of the leaves followed by wilting of the plants. In the presence of high relative humidity, the lesions became covered with a whitish mycelium which produced irregular dark grey sclerotia 2.0-7.5 × 1.5-4.0 mm in size. From infected stem pieces placed on potato dextrose agar (PDA) whitish fungal colonies developed, which produced sclerotia measuring 0.6-3.0 × 0.6-2.7 mm. The internal transcribed spacer (ITS) region of rDNA was amplified using the primers ITS1/ITS4 and sequenced (GenBank accession No. KP792750). BLAST analysis (Altschul et al., 1997) of the 492 bp amplified sequence showed a 99% homology with the sequence of *Sclerotinia sclerotiorum* (JX442064). The pathogenicity of one fungal isolate was tested by placing mycelium and sclerotia grown on autoclaved wheat kernels at the base of three healthy plants of *L. stoechas*. Control plants were inoculated with autoclaved wheat kernels alone. All the plants were covered with plastic bags and maintained at 25 ± 1°C. First symptoms, consisting of stem necrosis and leaf withering, appeared on inoculated plants five days post inoculation. Whereas *S. sclerotiorum* was constantly reisolated from symptomatic plants, controls remained symptomless. To the best of our knowledge, this is the first report of *S. sclerotiorum* on *L. stoechas* in Italy as well as worldwide.


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Disease Note

**FIRST REPORT OF MIXED INFECTION OF ZUCCHINI YELLOW MOSAIC VIRUS AND TOMATO LEAF CURL NEW DELHI VIRUS IN BITTERGOURD IN INDIA**

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Cucurbitaceous members are cultivated in the plains of north-western India. Recently, bittergourd plants showing severe yellow mosaic, blistering and curling of leaves were observed at Research farms of Punjab Agricultural University, Ludhiana (India). Tender leaves of symptomatic plants were subjected to ELISA using commercial kits (Agdia, USA) against common cucurbit viruses such as *Cucumber mosaic virus* subgroups I and II, *Potato virus X, Potato virus Y (PVY)*, *PVYN*, and *Zucchini yellow mosaic virus* (ZYMV). Samples were only positive for ZYMV in ELISA. Total RNA from ZYMV infected samples was subjected to cDNA synthesis using oligo (dT) primers, and DNA amplification using primers ZY-2/ZY-3 designed in the coat protein (CP) and Nb genomic region (Thomson et al., 1995), yielding a product of approximately 1200 bp in RT-PCR. This amplicon was cloned in pGEM-T easy vector (Promega, USA) and sequenced. Sequence analysis indicated 99.5% nucleotide and 97.8% amino acid identities between the ZYMV isolate from bittergourd (KJ614229) and *Cucumis anguria* (GQ482976) in India. The presence of whiteflies during sampling suggested the presence of a begomovirus. To confirm the occurrence of a begomovirus, total DNA was isolated from symptomatic bittergourd leaves and subjected to PCR using universal degenerate primers AV494 /AC1048 designed in the core CP gene region (Wyatt and Brown, 1996). The 575 bp DNA product was cloned and sequenced. Sequence analysis showed that the begomovirus isolate from bittergourd in India (KJ44258) had 100% nucleotide and amino acid identity with *Tomato leaf curl New Delhi virus* reported from bittergourd in Pakistan (AJ854186). To our knowledge this is the first report of mixed infection of the aphid-transmitted potyvirus ZYMV and the whitefly-transmitted begomovirus ToLCNDV in bittergourd.
