

## DISEASE NOTE

**FIRST REPORT OF VERTICILLIUM WILT,  
CAUSED BY *VERTICILLIUM DAHLIAE*,  
ON *PHLOX PANICULATA* IN ITALY**

**A. Garibaldi, D. Bertetti, G. Ortu and M.L. Gullino**

*Centre for Agro-Environmental Innovation (AGROINNOVA),  
University of Torino, Largo Braccini 2, 10095 Grugliasco, Italy*

During summer 2013, several plants of *Phlox paniculata* growing in gardens located in the Biella province (Northern Italy) showed symptoms of vascular wilt. Symptoms were yellowing of the leaves and brown streaks in the vascular tissue. Eventually, plants wilted and died. A fungus was consistently isolated on potato dextrose agar (PDA) from symptomatic vascular tissues. Dark, irregular microsclerotia, 24-101×14-68 (average 58×26) µm in size developed in hyaline hyphae and elliptical single-celled conidia, 2.8-4.7×1.2-3.0 (average 3.8×2.2) µm in size developed on verticillate conidiophores. The fungus was identified as *Verticillium dahliae* (Pegg and Brady, 2002). The Internal transcribed spacer (ITS) region of rDNA was amplified using the primers ITS1/ITS4 and sequenced (GenBank accession No. KM000048). BLASTn analysis (Altschul *et al.*, 1997) of an amplified product 496 bp in size showed 100% homology with the sequence of *V. dahliae* AB551206. Three healthy plants of *P. paniculata* were inoculated by root immersion into a conidial suspension ( $0.4 \times 10^7$  CFU/ml) of one isolate of the pathogen. Three non-inoculated plants served as controls. First wilt symptoms and vascular discoloration developed 40 days post inoculation only on inoculated plants and *V. dahliae* was readily reisolated. *V. dahliae* on *P. paniculata* was reported in USA and Canada. To our knowledge, this is the first report of *V. dahliae* on *P. paniculata* in Italy.

Altschul S.F., Madden T.L., Schaffer A.A., Zhang Z., Miller W., Lipman D.J., 1997. Gapped BLAST and PSI-BLAST: a new generation of protein database search programme. *Nucleic Acids Research* **25**: 3389-3402.

Pegg G.F., Brady B.L., 2002. *Verticillium* wilts. CABI Publishing, Wallingford, UK.

Corresponding author: M.L. Gullino  
Fax: +39.011.6709307  
E-mail: marialodovica.gullino@unito.it  
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**FIRST REPORT OF *LASIODIPLODIA*  
*THEOBROMAE* CAUSING CANKER AND  
COLLAR ROT DISEASES OF PHYSIC NUT  
(*JATROPHA CURCAS*) IN EGYPT**

**W.M. Haggag**

*Department of Plant Pathology, National Research Center,  
Dokki, Cairo, Egypt*

In February 2012, several plants of physic nut (*Jatropha curcas*) growing in Assiut Governorate (Egypt) showed shedding of the leaves, blackening and decaying of the collar region of the stem and necrotic lesions on branches. A fungus was consistently isolated on potato dextrose agar (PDA) from symptomatic branches. Single-spore fungal cultures produced white, aerial mycelium that became dull gray after a week in culture. The mycelium was fast spreading, branched and septate. Pycnidia from 30-day-old pure cultures produced dark brown, oval conidia that were two celled, thin walled, and oval with longitudinal striations. The average size of the conidia was 23.64×12.73 µm with a length/width ratio of 1.86. Conidia were initially unicellular, hyaline, thick-walled with granular content. Based on conidial morphology, the fungus was identified as *Lasiodiplodia theobromae*. To confirm the identity of the mycete the internal transcribed spacer (ITS) region was amplified with ITS1/ITS4 primers and sequenced. Sequences of the isolates were 99% identical to two *L. theobromae* accession from GenBank (HM008598 and HM999905). Five 1-year-old healthy plants of *J. curcas* were inoculated inserting a 10-mm PDA plug of mycelium into the wound and wrapping the inoculation site with wetted cotton wool and Parafilm. Ten non-inoculated plants served as control. After 6 days, all inoculated plants produced the same symptoms. while controls remained symptomless. The pathogen was reisolated from inoculated branches, fulfilling Koch's postulates. *L. theobromae* has been reported to cause cankers and dieback in Malaysia (Sulaiman and Thanarajoo, 2012) and India (Latha *et al.*, 2009). To our knowledge, this is the first report of stem canker associated with *L. theobromae* of physic nut in Egypt.

Latha P., Prakasam V., Kamalakannan A., Gopalakrishnan C., Raguchander T., Samiyappan R., 2009. First report of *Lasiodiplodia theobromae* (Pat.) Griffon et Maubl. causing root and collar rot disease of physic nut (*Jatropha curcas* L.) in India. *Australasian Plant Disease Notes* **4**: 19-21.

Sulaiman R., Thanarajoo S.S., 2012. First report of *Lasiodiplodia theobromae* causing stem canker of *Jatropha curcas* in Malaysia. *Plant Disease* **96**: 767.

Corresponding author: W.M. Haggag  
Fax: +20.2.3371391  
E-mail: Wafaa\_haggag@yahoo.com  
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