

DISEASE NOTE

FIRST REPORT OF NIGROSPORA LEAF SPOT ON *Pennisetum americanum* IN IRAN

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During August-September 2013, a new leaf spot disease was observed on pearl millet (*Pennisetum americanum*) in the Birjand district of South Khorasan province of Iran. Nearly 20% of plants showed irregularly shaped yellow to brown lesions that with time turned dark brown and caused leaf shredding. A fungus was consistently isolated from symptomatic tissues on potato dextrose agar (PDA) which formed one-celled, smooth, black, spherical to subspherical conidia (5-10 µm in diameter). Each conidium was born on a hyaline vesicle at the tip of each conidiophore. Fungal colonies were initially white, then became grayish-brown. The fungus was identified as *Nigrospora oryzae* (Berk. et Br.) Petch. The internal transcribed spacer (ITS) region of ribosomal DNA was amplified using ITS4/ ITS5 primer pair and the PCR product was sequenced. Comparison of the sequence revealed 99-100% similarity to *N. oryzae* (GenBank accession Nos. Fj496318 and GQ22186). Thus, morphological and molecular data supported the identification of this fungus as *N. oryzae*. Pathogenicity tests were performed by placing 5-mm diameter mycelial plugs from 7-day-old colonies onto pearl millet leaves. While the inoculated isolates caused symptoms similar to those in the field within 7-10 days, no infection was observed on control leaves. *N. oryzae* has been reported on *Pennisetum purpureum* and *P. typhoides* in Africa and Asia (Farr and Rossman, 2014) but this is the first report of this fungus causing a disease on *P. americanum*.

Farr D.F., Rossman A.Y., 2013. Fungal Databases, Systematic Mycology and Microbiology Laboratory, ARS, USDA. Retrieved May 18, 2014, from <http://nt.ars-grin.gov/fungaldatabases>

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DISEASE NOTE

FIRST REPORT OF LEAF NECROSIS AND WILT OF ROSEMARY INDUCED BY *Cladosporium herbaroides* IN IRAN

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In Spring 2013, wilted and collapsed rosemary (*Rosmarinus officinalis*) plants were found in a greenhouse in the Hamedan province of Iran. Disease symptoms consisted of wilting and leaf necrosis followed by death. Leaf fragments from the edge of leaf lesions were surface-sterilized in 5% NaOCl for 60 sec. Eight-day-old cultures were sub-cultured on synthetic nutrient agar (SNA) at room temperature (23±2°C). Morphological observations (Bensch *et al.*, 2012) showed that conidiophores were both macro- and micronematous and branched in a few cases. Macronematous conidiophores measured 30-230×3-5 µm and micronematous conidiophores were 3-65×2-3 µm. Conidia formed by macronematous conidiophores were catenate, subglobose, obovoid, limoniform, ellipsoid to cylindrical, 3-33×3-6 µm size and 0-3 septate. Conidia formed by micronematous conidiophores were paler and narrower, mostly formed in unbranched chains, limoniform, narrowly fusiform, almost filiform to subcylindrical, 15-31×2-3 µm in size and 0-3 septate. A portion of the translation elongation factor 1- α (TEF) gene was PCR-amplified using primers EF1-526-F and EF1-156-R (Bensch *et al.*, 2012) and sequenced. The TEF gene sequence was 99% similar to that of *C. herbaroides* (accession No. KM052582). Pathogenicity was tested by spraying a conidial suspension (1×10⁵ spores/ml) in sterile water on healthy leaves of 2- to 3-week-old greenhouse-grown rosemary plants. Control plants were sprayed with sterile water. Symptoms appeared two weeks post inoculation on inoculated plants whereas control plants remained asymptomatic. The same fungus (*C. herbaroides*) was reisolated from inoculated plants, thus fulfilling Koch's postulates. To our knowledge, this is the first report of *C. herbaroides* on rosemary in Iran.

Bensch K., Braun U., Groenewald J.Z., Crous P.W., 2012. The genus *Cladosporium*. *Studies in Mycology* 72: 1-40

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