Disease Note

FIRST REPORT OF *ALTERRANIA ALTERNATA* CAUSING BROWN LEAF SPOT OF POTATO IN PAKISTAN

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Potato plants with brown spot symptoms were observed in the Punjab, Pakistan during March 2015, with an approximate incidence of 45.5%. Symptoms were small, brown lesions on leaves with concentric rings coalescing into larger lesions. Infected leaves died. For pathogen isolation, surface sterilized leaves were cut from lesion edges, and incubated at 25 ± 2°C on potato dextrose agar medium for 7 days. Fungal colonies up to 18 mm in size. Infected tissues from *M. nigra* and *M. rubra* collected from eight locations were cut to small pieces, surface-sterilized and transferred to Potato Dextrose Agar (PDA). Cultures incubated at 21°C for 10 days exhibited a dense, velvety, whitish to grey mycelium. Hyaline, straight or curved conidia, mostly 3-6 septate 54 (38-82) × 4.4 (4-5) μm were observed either on affected leaves or on isolates grown on PCA (Potato Carrot agar). Pathogenicity tests were conducted according to Hong et al. (2011) on three *M. alba* plants with two isolates from *M. nigra* and *M. rubra*. Small brown spots developed only on inoculated leaves, 12 dpi, from which the same fungus used for inoculation was reisolated. The internal transcribed spacer region of 10 cultures (five *M. alba*, three *M. nigra* and two *M. rubra*) was PCR-amplified followed by sequencing of the amplified products (GenBank accession Nos. KX982229-31). A BLAST search revealed 100% identity of all tested amplicons with the sequence of *Mycosphaerella mori* (AB435069). Molecular analysis and morphological features, support the identification of *M. mori* as the causal agent of the disease observed on *M. nigra* and *M. rubra*. This pathogen is of widespread occurrence on *Morus* spp in the world (Farr and Rossman, 2017). To our knowledge this is the first report of *M. mori* on *M. nigra* and *M. rubra* in Poland.


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FIRST REPORT ON *MYCOSPHAERELLA MORON MYCOSPHAERELLA MORION MORUS NIGRA AND M. RUBRA IN POLAND*

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In 2016 leaf spot and necrosis were observed on mulberry plants (*Morus nigra* and *M. rubra*) in house gardens and public parks in the city of Poznań and in several other locations in the west of Greater Poland district. At first, evenly distributed small, brown spots appeared on the leaves, which successively developed in oval or irregular necrotic lesions up to 18 mm in size. Infected tissues from *M. nigra*, *M. rubra* and *M. alba* collected from eight locations were cut to small pieces, surface-sterilized and transferred to Potato Dextrose Agar (PDA). Cultures incubated at 21°C for 10 days exhibited a dense, velvety, whitish to grey mycelium. Hyaline, straight or curved conidia, mostly 3-6 septate 54 (38-82) × 4.4 (4-5) μm were observed either on affected leaves or on isolates grown on PCA (Potato Carrot agar). Pathogenicity tests were conducted according to Hong et al. (2011) on three *M. alba* plants with two isolates from *M. nigra* and *M. rubra*. Small brown spots developed only on inoculated leaves, 12 dpi, from which the same fungus used for inoculations was reisolated. The internal transcribed spacer region of 10 cultures (five *M. alba*, three *M. nigra* and two *M. rubra*) was PCR-amplified followed by sequencing of the amplified products (GenBank accession Nos. KX982229-31). A BLAST search revealed 100% identity of all tested amplicons with the sequence of *Mycosphaerella mori* (AB435069). Molecular analysis and morphological features, support the identification of *M. mori* as the causal agent of the disease observed on *M. nigra* and *M. rubra*. This pathogen is of wide occurrence on *Morus* spp. in the world (Farr and Rossman, 2017). To our knowledge this is the first report of *M. mori* on *M. nigra* and *M. rubra* in Poland.


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