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First Report of Leaf Spot of Smooth Bromegrass Caused by *Pithomyces chartarum* in Nebraska

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plant disease

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Disease Notes


First Report of Leaf Spot of Smooth Bromegrass Caused by *Pithomyces chartarum* in Nebraska

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Smooth bromegrass (*Bromus inermis* Leyss.) is the most common perennial grass species cultivated for forage in North America. During late fall of 2004, smooth bromegrass plants in Lincoln, NE were observed to have brown lesions on leaf midveins that were several centimeters long. Symptomatic leaves were surface disinfested for 1 min in 2% NaOCl and incubated at 25°C on potato dextrose agar (PDA) and water agar. The fungus, *Pithomyces chartarum* (Berk. & Curt) Ellis, was isolated consistently and identified on the basis of morphological characteristics (1). Colonies were effused and black on PDA. Conidiophores measured 3.5 to 8 × 1.9 to 3.9 μm and were smooth and single. Conidia (7 to 25 × 9.5 to 14 μm) were broadly ellipsoidal, pale brown to dark brown, verrucose with mainly three transverse septa and one to two longitudinal septa. Pathogenicity tests were conducted on 50-day-old plants by spraying with a conidial suspension (2.5 × 10⁵ spores per ml). Control plants were sprayed with sterile water. All plants were kept in a moist chamber (100% relative humidity) for 3 days and then transferred to a greenhouse (25°C, >70% relative humidity, and a 12-h photoperiod). One week after spraying, elongated lesions developed on leaf midveins of inoculated plants from which *P. chartarum* was consistently reisolated. No symptoms were observed on control plants. While *P. chartarum* has been described as a saprotroph or a parasite on a wide range of plants primarily in the tropics and subtropics, including the southern United States (2), it was reported previously on *B. inermis* only in Canada (3). This report expands the distribution and host range of *P. chartarum* as a pathogen in the United States.

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