Disease Notes

First Report of Gray Leaf Spot on St. Augustinegrass in Italy. G. Polizzi and I. Castello, Dipartimento di Scienze e Tecnologie Fitosanitarie, University of Catania, Via S. Sofia 100, 95123 Catania, Italy; and A. M. Picco and D. Rodino, Dipartimento di Ecologia del Territorio e degli Ambiente Terrestri, Sezione di Micologia, University of Pavia, Via S. Epifanio 14, 27100 Pavia, Italy. Plant Dis. 87:1536, 2003; published on-line as D-2003-0927-01N, 2003. Accepted for publication 2 September 2003.

St. Augustinegrass (Stenotaphrum secundatum (Walt.) Kuntze) is used for lawns in southern Italy because it is much more resistant to biotic and abiotic adversities than other turfgrass species. Because few seeds are viable, this species is established by vegetative propagation. A new disease was noticed during the spring of 2002 and 2003 on cuttings of St. Augustinegrass growing in three greenhouses in eastern Sicily. The disease affected leaves and culms and caused a progressive drying of the plants. The infection was first seen on leaves as gray, necrotic spots that enlarged in high-humidity conditions to form oval, and later, spindle-shaped lesions. In association with the lesions, it was possible to observe fungal spore development and sunken areas with blue-gray centers and slightly irregular, brown margins with yellow halos. Spots were concentrated without specific arrangement along longitudinal veins and the midrib and at the base, tip, and margins of the leaf blade. Symptoms on the culms consisted of brown-to-black blotches that sometimes extended throughout the internodes. From these infected tissues, 20 explants taken from leaves and culms were cut, washed with sterile water, and placed on 1.5% water agar (WA). Later, conidia and conidiophores were obtained from colonies with a sterile glass needle and placed on 4% WA. From these plates, two monoclonial isolates were obtained and transferred to rice meal medium (1). The colonies were identified as Pycnaria grisea Cooke (Sacc.), anamorphic state of Magnaporthe grisea (Hebert) Yeagashi & Udagawa, the cause of rice blast disease and gray leaf spot disease of turfgrasses. The conidia were pyriform to obclavate, narrowed toward the tip, rounded at the base, 2-septate, 21 to 38 µm × 6 to 10 µm (average 25.7 ×8.2 µm). Pathogenicity tests were performed by inoculating leaves and culms of six St. Augustinegrass plants with a conidial suspension of the fungus (1.5 x10^7 conidia per ml). The same number of noninoculated plants was used as controls. All plants were incubated in a moist chamber with high humidity at 25°C. After 6 days, all inoculated plants showed typical symptoms of the disease. Koch's postulates were fulfilled by isolating P. grisea from inoculated plants. Gray leaf spot caused by P. grisea has been a chronic disease. The infection was first reported in Italy in 1997 (2). A

References

First Report of Swiss Needle Cast Caused by Phaeocryptopus gaeumannii on Douglas-Fir in Turkey. F. Temel, Kafkas University, Artvin Faculty of Forestry, 08000 Artvin, Turkey; J. K. Stone, Department of Botany and Plant Pathology, Oregon State University, Corvallis 97331; and G. R. Johnson, USDA Forest Service PNW Research Station, 3200 NW Jefferson Way, Corvallis, OR 97331, Plant Dis. 87:1536, 2003; published on-line as D-2003-0929-01N, 2003. Accepted for publication 5 September 2003.

Two 15-year-old Douglas-fir (Pseudotsuga menziesii var. menziesii (Mirb.) Franco) test plantations at Artvin, in the eastern Black Sea Coast Region of Turkey, were inspected in July 2003. The test plantations were established with seedlings produced in Turkey by using seed obtained from various sources. Earlier Douglas-fir plantations in Turkey date from 1953 and were established by using seed originating from France. The possibility that the pathogen could have arrived with untracked Douglas-fir seedlings from outside Turkey imported by arborists or private nurseries cannot be excluded. Alternatively, scattered Douglas-fir plantations could have served as links between the Artvin infestation and known infested areas in central and eastern Europe, with spread occurring via windborne ascospores, similar to the spread of the pathogen to Denmark from the British Isles (ca. 1930) (1). Presence of severe SNC infections in Douglas-fir test sites at Artvin could hamper efforts to use this species in operational forestry in Turkey. To our knowledge, this is the first report of the occurrence of Swiss needle cast on Douglas-fir in western Asia. Voucher specimens have been deposited in the Oregon State University herbarium (OSC 106394-106403).

References


In 2002, in Debrecen, eastern Hungary, Puccinia xanthii Schwein, was detected on hunter burr, a geographically spreading, noxious weed species in row crops. Symptoms were first observed on leaves, stems, and petioles of plants collected from a competition experiment between sugarbeet and hunter burr. Density of the hunter burr population (6 plants per m² or 20 plants per m³) influenced the rate of infection. In the low-density population, the number of rust pustules and infected leaves was lower than that in the high-density population, in which 70% infection was reached by September. First symptoms appeared at the end of July (high-density population) and in the beginning of August (low-density population) in the form of small, chlorotic raised spots on the underside of the leaves. Dark brown telia (3.8 mm in diameter or larger) developed on spots. Elliptical telia occurred at the rate of 0.02 to 2.57 pustules per cm². Elongated pustules caused swelling and epidermal splitting on stems and petioles. Teliospores were brown, two-celled, and 35 to 56 x 15 to 21 µm, the walls were 0.8 to 1.0 µm at the side and 5 to 8 µm at the apex, the septum was 1 to 1.5 µm, and a persistent pedicel was 15 to 50 µm. Size and morphology of teliospores fit the description of P. xanthii (2). A pathogenicity test was conducted in the greenhouse (24°C with high relative humidity) according to the “leaf disc method” of Morin et al. (1) using freshly collected hunter burr leaves. Teliospores germinated immediately, producing metabasidium, and basidiospores were produced within 5 h. The first macroscopic symptoms on test plants were observed 4 days after inoculation. Approximately 8 days after inoculation, developing telia arose from the thellus and began to erupt through the epidermis. Developed teliospores on artificially inoculated plants were morphologically identical to those from leaves collected in the field. Control plants did not develop symptoms. This microcyclic rust occurs in several regions of the world, including several southern European countries. This rust is a potential biological agent for the control of Xanthium spp.; however, it can infect several cultivars of sunflower (1).

References