

TURFGRASS TRENDS

Volume 7, Issue 6 • June 1999

PATHOLOGY

Gray Leaf Spot An Emerging Disease of Perennial Ryegrass

Paul Vincelli, Ph.D.
Department of Plant Pathology, University of Kentucky

Perennial ryegrass has increased in popularity for a variety of turfgrass uses. In Kentucky and most of the transition zone, this cool-season grass is widely used for fairways, tees, green surrounds, approaches and roughs. Many golfers find this grass to be their preferred choice for fairways. In locations further north, perennial rye is used alone or in combination with Kentucky bluegrass. In most southern locations, it is used for overseeding bermudagrass fairways and greens.

During the hot, very humid weather of the summer of 1995, perennial ryegrass swards in many areas of the transition zone suffered severe to catastrophic epidemics of wilting, blighting and turf loss. At that time, several plant pathologists suspected that a leaf-infecting fungus called *Pyricularia grisea* was the cause of these epidemics. However, conclusive proof that this fungus was indeed the cause was lacking. It is interesting to note that, as recently as four years ago, we knew so little about this disease of perennial ryegrass that turfgrass scientists were disagreeing as to what actually killed the turf.

Since 1995, epidemics of gray leaf spot on perennial ryegrass have been diagnosed throughout the transition zone from New Jersey to Virginia and as far west as Kansas. Significant outbreaks north of the transition zone have been observed in Connecticut, Rhode Island, southern Pennsylvania, southern Ohio, Iowa, southern Illinois and eastern Nebraska.

Much has been learned about gray leaf spot since the 1995 epidemic, including the fact that the fungus *Pyricularia grisea* is indeed the cause of widespread loss of perennial ryegrass in many regions.

The Pathogen

Pyricularia grisea is known to infect plants in over 20 genera of grasses. The first destructive outbreak of this pathogen on perennial ryegrass was observed as early as 1986 by Dr. Pete Dernoeden in Maryland. However, until the 1995 epidemic, gray leaf spot was not considered a significant disease threat over most of the area of perennial ryegrass adaptation. Among turfgrasses, *P. grisea* is also known to attack St. Augustinegrass and tall fescue. It is also possible to find leaf spots caused by *P. grisea* on certain weed grasses — notably large crabgrass and foxtails — as well as on German foxtail millet.

IN THIS ISSUE

■ Gray Leaf Spot: An Emerging Disease of Perennial Ryegrass . 1

Symptoms

Scouting

Influence of Cultural
Practices on Disease

Fungicidal Management

Fungicide Resistance

■ Humic Substances and Their Potential for Improving Turfgrass Growth. 9

Composition of Humic
Substances

Plant Growth Response

■ Green Kyllinga: Sedge Weed of Turf and Ornamentals. 14

www.landscapegroup.com