

A Pest Profile on Necrotic Ring Spot

Prof. Tom Hsiang

PATHOGEN: *Leptosphaeria korrae*

HOST PLANTS: Kentucky bluegrass and possibly fine fescue are particularly susceptible.

SEASON of OCCURRENCE: Pathogen is active in late spring and early autumn, but summer heat may intensify the symptoms.

CONDITION FAVOURING DISEASE: Cool temperatures (10 to 20 C) and moist conditions. It is most common on sodded turf, two or more years after establishment, particularly on sites where there is very little top soil and with a hard pan of clay underneath.

SYMPTOMS: Patches develop 10 cm to one meter in diameter with ring or frog-eye symptoms, especially on recently sodded lawns. The turf in the patches have very little root hold. The centres of the dead patches are depressed or invaded by other grasses and weeds, and the patches may coalesce. On the plants, the outer leaves turn yellow and bleach out. Younger leaves turn red-purple before turning brown. Dark strands and masses of hyphae can be seen on root surfaces which blacken. Symptoms are most apparent when the fungus is active, but stress conditions such as summer drought will enhance symptom expression.

LIFE CYCLE: The fungus survives the winter on roots and lower crowns as mycelium. In the spring, spores or mycelium infect roots and may causes symptoms 12 to 18 months later. Summer heat and dryness decrease the activity of the pathogen, but symptoms from prior root damage may be enhanced by drought. In the fall, cool moist conditions allow the fungus to grow and infect more turf.

CULTURAL CONTROL: Fertilize to promote growth during early spring and fall, but reduce succulent growth during the summer. Spread nitrogen applications over several times during the growing season. Use deep, infrequent watering to promote deep rooting, along with light syringing in the summer to reduce heat stress. Thatch should be controlled to promote plant vigour. Encourage deep rooting by increasing the mowing height. Overseed or resod patches with resistant turfgrasses.

CHEMICAL CONTROL: No chemicals are registered for necrotic ring spot control in Canada. Consult provincial publications for recommendations.

RESISTANT TURFGRASSES: From the results of several American cultivar resistance tests, these Kentucky bluegrass cultivars did not show susceptibility: Adelphi, Classic and Nugget; whereas Glade, Ram 1, and Sydsport were found to be susceptible to necrotic ring spot.

Rothwell Seeds Limited
P.O. Box 511, LINDSAY, ONTARIO, CANADA K9V 4S5
(705) 324-9591 FAX (705) 324-0882

*Turfgrass Specialists
in Establishing and Maintaining Turf for all Purposes*

Norman Rothwell, President

G.C. Duke EQUIPMENT LTD.

Paul Turner
Sales Representative
Cellular: (416) 565-1641

1184 PLAINS ROAD EAST, BURLINGTON, ONTARIO L7S 1W6
Burlington (905) 637-5216 Toronto (416) 338-2404
Fax: (905) 637-2009

TURF CARE **TOM FISCHER**
Commercial Sales Manager

TORO® - new and used turf equipment
PAR EX® - fertilizers
E-Z-GO® - new and used golf cars & utility vehicles

R.M.C. EQUIPMENT LTD.
200 Pony Drive
Newmarket, Ontario L3Y 7B6
Phone: (905) 836-0988

ZANDER
SOD CO. LIMITED

Suppliers of Top Quality Turf Grasses

R.R. 1
Kettleby, Ont.
L0G 1J0

Tel: Toronto (416) 364-5700
Aurora: (905) 727-2100
Fax (905) 727-8546