

## NECROTIC RING SPOT OF *POA* SPECIES



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Necrotic ring spot caused by *Ophiosphaerella korrae* (formerly *Leptosphaeria korrae*) is a widespread and serious disease of *Poa pratensis*, *Poa annua*, *Poa trivialis*, and *Festuca rubra*. The pathogen is also considered to be sometimes responsible for spring dead spot. The disease is active in the cool, wet periods of spring and fall, although symptoms are mainly expressed in the warm weather of the summer. The summer symptoms are the result of the inability of the turfgrass plant to take up water due to root destruction that has occurred earlier. The first symptoms are small (2-4 in), light green spots which enlarge into patches that can range from 1 to 3 feet. The turf in infected patches turns reddish brown to bronze and eventually fades to a light, straw color. All of the plants in an infected area may die leaving a sunken depression, but more often plants survive or recolonize infection centers resulting in a ring-like appearance. Symptoms can sometimes occur as a diffuse yellowing or browning that coalesces into large areas of blighted turf; leaf lesions are not seen with this disease. Necrotic ring spot can appear throughout the growing season. The disease is characterized by a blackening of roots and rhizomes and dark brown, ectotrophic hyphae on affected roots, rhizomes, and crowns. Roots and crowns may become extensively rotted.



*O. korrae* is thought to survive as mycelium in plant debris; little is known about its behavior in the soil. The pathogen grows along the surface of host roots and rhizomes and when conditions favor disease development, infection hyphae penetrate to interior portions of the roots. The growth of *O. korrae* is favored by cool, wet conditions; heat and drought stress can intensify symptom expression. The disease can appear over a wide range of pH, is most severe in compacted soils, and most prevalent on 2-4 year old stands that were established with sod. Left untreated, it may decline in severity after

several years due to the build-up of antagonistic microflora.

### Management:

- Avoid drought stress. When the disease is severe in hot weather, light daily applications of water will reduce heat stress and stimulate recovery. Light, daily irrigation allows the weakened plants to survive heat stress and also cools off the plants.
- Maintain adequate levels of potassium and phosphorous fertility as well as optimal nitrogen levels.
- Adequate nitrogen is essential for management of necrotic ring spot. Slow release or organic forms of nitrogen are preferred.
- Reseed with more resistant species like bentgrasses or ryegrasses.

- Aerify to reduce compaction and improve drainage.
- Azoxystrobin and thiophanate-methyl fungicides must be watered in before they dry on the foliage to be effective. Best results are obtained when the turf is irrigated prior to application.

***Chemical recommendations:***

**azoxystrobin (Heritage):** 0.4 oz/1000 sq ft (REI 4h). Apply when conditions are favorable for disease development. Alternate with a fungicide with a different mode of action to prevent resistance development.

**fenarimol (Rubigan A.S.):** 2 fl oz/1000 sq ft (REI 12 h). Apply preventively in two applications in April and May. Thoroughly irrigate before spray has dried to move into roots/crowns. Repeat in fall, if necessary.

**iprodione (26 GT):** 8 fl oz/1000 sq ft (REI 12 h). Apply preventively when conditions favor disease development and repeat at 28 day intervals.

**myclobutanil (Eagle 20EW):** 1.2 to 2.4 fl oz/1000 sq ft. Make preventive applications in early to mid-spring and again in the fall. When disease pressure is high or used as a curative treatment, use the higher rate.

**propiconazole (Banner Maxx):** 4 fl oz/1000 sq ft (REI 24 h). Apply in the fall and early spring.

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