

Necrotic Ring Spot (NRS)

(Ophiosphaerella korrae — fungal turf disease)

Necrotic Ring Spot is one of **Colorado's most common and destructive lawn diseases**, especially in **Kentucky bluegrass**. It causes **rings, dead patches, frog-eye patterns**, and thinning that worsens with drought, heat, and excessive thatch. Usually appears **late spring through fall**.



Seasonal Disease Activity Calendar

Icons: 🌸 Spring | ☀️ Summer | 🍂 Fall | ❄️ Winter

<u>Problem</u>	<u>Type</u>	<u>Active Season</u>	<u>Icons</u>
Necrotic Ring Spot	Fungus	Spring infections; visible Summer–Fall	🌸 ☀️ 🍂

Symptoms (Homeowner-Friendly)

<u>Symptom</u>	<u>Description</u>
Frog-eye pattern	Healthy green grass in the center with a brown ring around it

Symptom

Description

Circular dead patches

6"–3 ft wide patches that slowly expand

Thinning in heat or drought

Grass appears weak, patchy midsummer

Blackened roots

Infected roots look dark, brittle, or rotted

Most severe in Kentucky bluegrass

Fine fescue & tall fescue are more tolerant

Treatment & Management

Necrotic Ring Spot **cannot be cured with a single product**—it requires **cultural management plus optional fungicide programs**.

Cultural Practices (Most Important)

Action

Why it Works

Aerate 1–2 times per year

Reduces thatch and compaction that promote fungus

Raise mowing height (3–3.5")

Reduces stress and strengthens roots

Deep, infrequent watering

Once every 3–5 days; avoid daily irrigation

Topdress with compost

Increases soil microbes that suppress NRS

Overseed with disease-tolerant tall fescue

Helps mask and outgrow damaged areas

Avoid heavy nitrogen in spring

Makes NRS worse—use fall fertilization instead

Fungicide Options (Professional Recommended for Best Results)

*Timing is critical: fungicides work **preventively**, not curatively.*

<u>Fungicide Types</u>	<u>Use Window</u>	<u>Notes</u>
DMI fungicides (propiconazole, myclobutanil)	Late spring–early summer	Best applied before symptoms expand
QoI fungicides (azoxystrobin)	Late spring	Often tank-mixed with DMIs
Combination fungicides	May–June	Used for high-pressure properties

Important: Fungicides alone will NOT fix the problem without improved soil, aeration, and watering adjustments.

When to Worry vs. When It's Cosmetic

● When to Worry (action recommended)

- Large rings expanding each season
- Turf dying completely in hot, dry spells
- Roots easily pull up—black or rotted
- Daily irrigation is being used (makes NRS worse)
- Thatch layer is over 1/2 inch thick
- Turf does not recover after overseeding

These cases require **professional intervention + multi-year recovery plan.**

● Mostly Cosmetic (monitor only)

- Small, new rings early in the season
- Thinning that recovers with fall weather
- Patches limited to high-traffic or compacted zones

- Minor frog-eye patterns without spreading

These typically improve with **aeration, compost, and proper watering.**