Helpline Happenings

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Lawn Rust

Pathogen - Disease: *Puccinia* spp. (fungus) – Lawn Rust
Hosts: Cool season lawns - Kentucky bluegrass and perennial ryegrass are most affected





Photos: Purdue Extension BP-110-W

Identification (Diagnosis)
- Appears late summer to early fall.
- Lawn has a yellow/orange, or brown thinning appearance.
- Diffuse pattern most visible in shaded or protected areas.
- Yellow flecks on leaves/stems, pustules release powdery yellow spores turning items orange (shoes).

Causes
- Group of related fungi.
- Excess rain resulting in depletion of available nitrogen.
- Cool nights, heavy dew and light, frequent rainfall.
- Prolonged summer heat, drought stress, low nitrogen fertility, compaction, shade, infrequent mowing.
- Moderate temperatures (50°-60°F) and long evening dew periods (> 10 hours).

Life Cycle
- Complex with numerous types of spores produced and many hosts (woody shrubs, herbaceous ornamentals).
- Spores spread by wind, water, shoes, equipment, germinate on leaves, and infect new tissue.
- Pathogen survives as resilient spores over winter, or as inactive mycelium in dormant turf.

Concerns
- Rust will not harm humans, safe to walk on lawn, more of a visual nuisance.
- Fungal spores will cover anything that moves over the lawn, including shoes, pets, mowers.
- Rust may weaken turfgrasses and make them more susceptible to other problems.

Cultural Control
- Wait for cooler temperatures favoring cool-season lawn growth, then simply mow off the rust.
- Apply Nitrogen in late summer-early fall to encourage lawn growth to surpass rust's disease cycle.
- Small amounts of nitrogen fertilizer (0.2-0.5 pound of N per 1,000 square feet) in trouble spots will help control the disease.

Chemical Control

- Fungicide applications are not recommended for homeowners unless the lawn is severely infected for several years.
- For severe rust outbreaks, fungicide families DMIs and Strobilurins are effective in suppressing Rust.
- Remember to follow application rates and make sure the fungicide is labeled for your area of application.

Prevention

- Select rust-resistant cultivars.
- Maintain proper nitrogen fertilization.
- Avoid evening irrigation or afternoon watering.
- Manage excessive thatch – over ½ inch thick layer of organic matter between green matter and soil surface
- Core aerification and topdressing (compost) prevents excessive thatch – applied in spring or fall.
- Core aerification helps resolve soil compaction, poor drainage, and microorganisms in topdressing (compost) break down thatch.
- Ensure good airflow and light penetration by pruning trees and shrubs near affected lawn.
- Submit a soil sample for analysis regularly - apply recommended amounts of fertilizer, lime, etc.

Fun (and not so fun) Facts

- Severely diseased plants have an appearance like rusty iron, hence the name rust.

Other lawn diseases that might be mistaken for lawn rust

Disease	Symptoms/Signs	Season	Conditions	Management
Brown Patch	Tan, yellow leaf lesions dark borders, 1-3 ft patches thinning turf.	May-Sept.	Temp: Night > 70°F, Day > 90°F, 10-12h leaf wetness.	⇩ leaf wetness, high Nitrogen, reduce thatch.
Gray Leaf Spot	Oval tan, purple leaf spots, general thinning, yellowing of lawn.	July-Sept.	Temp: 70-95°F, 14h leaf wetness, Most damaging to 1st year lawn.	⇩ leaf wetness, high Nitrogen, regular mowing, resistant cultivars.
Pythium Blight	Tan, gray, orange matted leaves, greasy in appearance, cottony mycelium.	June-Aug.	Temp night > 65°F, Day > 85°F, 12-14h leaf wetness several days.	⇩ leaf wetness, high Nitrogen, reduce thatch.
Rust	Orange specks, blisters on leaves, powdery orange spore released.	March-June Sept.-Nov.	Temp 50-60°F, long evening dew periods > 10h. Low Nitrogen.	⇩ leaf wetness, maintain Nitrogen, reduce thatch, resistant cultivars.



Brown Patch | Gray Leaf Spot | Pythium Blight | Rust



Photos - https://www.turffiles.ncsu.edu/diseases-in-turf/

Sources

Managing Diseases of Landscape Turf (Rutgers NJAES)

Diseases | NC State Extension (ncsu.edu)

Rust Diseases (purdue.edu)

Turfgrasses and lawn care in Eastern Oregon | OSU Extension Service (oregonstate.edu)

Rust Diseases on Home Lawns - Lawn Talk- University of Illinois Extension

Lawn rust and why your shoes are turning orange | Illinois Extension | UIUC

Managing Patch Disease in Lawns - Lawn Talk- University of Illinois Extension

Rust | NC State Extension (ncsu.edu)

turfrust.indd (wisc.edu)

Turfgrass Diseases: Rust Diseases (Causal fungi: Puccinia spp.) (psu.edu)

https://turfdisease.osu.edu/news/rust-turfgrass

Diseases of Cool-Season Turfgrasses | NC State Extension Publications (ncsu.edu)