Fusarium Patch (Pink Snow Mold)

PATHOGEN

Microdochium nivale

TURFGRASS AFFECTED

- All cool-season turfgrasses
- Creeping bentgrass, annual bluegrass and perennial ryegrass most susceptible

APPEARS WHEN

- Fall through spring
- Pink snow mold generally refers to the disease that develops under snow cover
- When it develops without snow cover or on the edges of snow cover, it's referred to as fusarium patch, a separate but related disease

FAVORABLE CONDITIONS FOR DISEASE

- Temperatures 40 F to 50 F wet weather for fusarium patch
- Pink snow mold common after at least 60 days of snow cover, but particularly severe when snow covers unfrozen ground

IDENTIFICATION

- In the fall starts as 1-inch to 2-inch orange to red-brown circular spots and will grow into larger spots
- Dead leaves may have gelatinous spore masses
- White or pink fungal threads may be observed in the early morning, giving the turf a pink cast

CULTURAL CONTROLS

- Remove dew from greens
- Physically remove snow in spring
- Promote good air circulation and encourage morning sun exposure through pruning of surrounding trees
- Manage thatch levels
- Avoid excessive nitrogen applications in mid-fall

WHAT PHOENIX OFFERS FOR CHEMICAL CONTROL

PHOTOS COURTESY: JOE RIMELSPACH, THE OHIO STATE UNIVERSITY

GUESS WHO

trusts Pegasus™ HPX fungicide.

Enter our "Name That Super" contest and you could win!

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Here are a few clues:

Education: Rutgers University

Course Location: New York State

Preferred Product: "I use Pegasus HPX fungicide in combination with my fertility program for control of turf disease. Pegasus HPX has given us fantastic results, and it's lower-priced than other options so I get a lot more bang for my buck."

Phoenix

Pegasus HPX™

KEEP OUT OF REACH OF CHILDREN
CAUTION

Go to www.NameThatSuper.com/DG
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Gray Leaf Spot

PATHOGEN

Pyricularia grisea

TURFGRASS AFFECTED

- Most warm-season turfgrasses, especially St. Augustine
- Ryegrasses and fescues may exhibit symptoms under prolonged wet, warm weather
- Most severe in newly established plantings

APPEARS WHEN

Early spring through August

FAVORABLE CONDITIONS FOR DISEASE

- Night temperatures above 70 F
- More than 10 hours of leaf wetness per day for several days
- Disease is severe in shaded areas or during periods of extended overcast weather

IDENTIFICATION

- Turf may have gray cast
- Round or oval gray spots on leaves
- Spots surrounded by brown or yellow borders
- Leaves may be blighted gray, usually from tip downward

CULTURAL CONTROLS

- To reduce the severity of the disease, avoid applying soluble nitrogen on moderately shaded turf during the summer
- Maintain balanced fertility throughout the growing season
- Avoid late-afternoon and evening watering, which keeps the leaf blades moist for extended periods
- Decrease shade and increase air circulation to enhance drying of turf

WHAT PHOENIX OFFERS FOR CHEMICAL CONTROL

PHOTOS COURTESY: JOE RIMELSPACH, THE OHIO STATE UNIVERSITY

Moss

SPECIES

Bryum argenteum
(Silvery thread moss)

TURFGRASS AFFECTED

All turfgrasses, but mostly a problem on putting greens

APPEARS WHEN

Any season

FAVORABLE CONDITIONS FOR DISEASE

- Moss grows in areas poorly suited to turfgrass growth, areas with poor drainage, inadequate sunlight, compaction, low fertility

IDENTIFICATION

- Mosses are green plants with leaves arising from all sides of a central axis. Moss typically forms a thick, green mat at the soil surface. They are very competitive in cool, moist, shaded locations.

CULTURAL CONTROLS

- Maintain proper pH and nutrient levels
- Increase mowing height
- Improve light penetration
- Use shade tolerant grasses

PHOTOS COURTESY: JOE RIMELSPACH, THE OHIO STATE UNIVERSITY

Nematodes

Plant Parasitic (PPN)

PATHOGEN

Approximately 12 different species damage various species of turfgrass

TURFGRASS AFFECTED

All turfgrasses are susceptible

APPEARS WHEN

- PPN feed most actively when turfgrass is vigorously growing.
- They are most active on warm-season grasses during the summer and autumn, on cool-season grasses on mid to late spring and again in autumn

FAVORABLE CONDITIONS FOR INFESTATION

- PPN, which are microscopic, worm-like creatures that live in the soil and feed on turfgrass roots, are most active and create most damage in light, sandy soils that are low in nutrients and water-holding capacity

IDENTIFICATION

- Aboveground symptoms include chlorosis (yellowing) of leaves, slow growth, gradual thinning of turf, turf that responds poorly to fertilization and irrigation
- The only way to determine if nematodes are responsible for poorly performing turfgrass is to have soil samples assayed for nematodes

CULTURAL CONTROLS

- Selection of the most tolerance types of turfgrass
- Good management practices

PHOTOS COURTESY: LANE TREDWAY, NORTH CAROLINA STATE UNIVERSITY

Pythium Blight

PATHOGEN

Pythium aphanidermatum and other species of Pythium

TURFGRASS AFFECTED

- All turfgrasses
- Annual bluegrass and perennial ryegrass are particularly susceptible

APPEARS WHEN

- Generally in mid summer
- When day temperatures exceed 85 F and night temperatures exceed 70 F

FAVORABLE CONDITIONS FOR DISEASE

- Prolonged leaf wetness for several days in a row
- More prevalent in areas of poor drainage

IDENTIFICATION

- Irregularly shaped area of greasy-looking dark green, yellow brown or reddish grass that spreads rapidly
- Patches concentrate on the wettest areas of the property

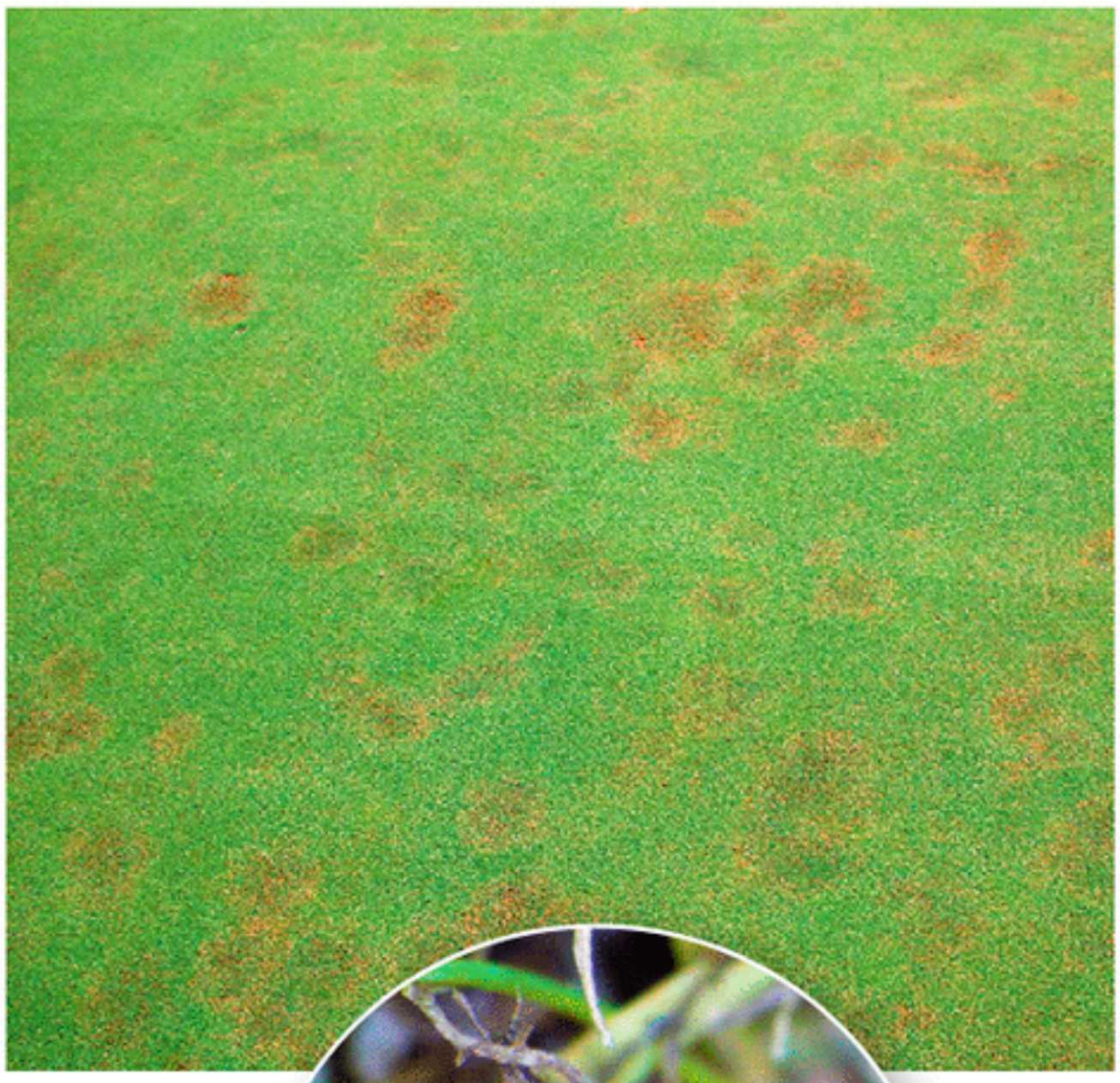
CULTURAL CONTROLS

- Avoid excess nitrogen fertility
- Maintain optimum plant calcium levels
- Decrease shade, increase air circulation, promote drying
- Don't irrigate in the evening or at night
- Don't mow when turf is wet and night temperatures exceed 70 F

WHAT PHOENIX OFFERS FOR CHEMICAL CONTROL

PHOTOS COURTESY: JOE RIMELSPACH, THE OHIO STATE UNIVERSITY

Pythium Root Rot



PATHOGEN

Pythium spp.

TURFGRASS AFFECTED

All

APPEARS WHEN

Because there are many species of *Pythium*, the disease can appear any time of the year

FAVORABLE CONDITIONS FOR DISEASE

- Soil that remains saturated for an extended period of time
- Poor surface or subsurface drainage
- Excessive thatch and accumulated organic matter buildup

IDENTIFICATION

- Foliar symptoms include dieback from the leaf tip and leaf blighting
- Leaves may develop a tan, yellow or orange tint
- Roots, stolon, rhizomes and crowns will turn dark brown or black

CULTURAL CONTROLS

- Control moisture is vital
- Aerify and topdress often to control thatch
- Open the turfgrass to sunlight and air movement

WHAT PHOENIX OFFERS FOR CHEMICAL CONTROL

PHOTOS COURTESY: LANE TREDWAY, NORTH CAROLINA STATE UNIVERSITY (MAIN); DR. BRUCE MARTIN, CLEMSON UNIVERSITY

Red Thread

PHOTOS COURTESY: JOE RIMELSPACH, THE OHIO STATE UNIVERSITY

PATHOGEN

Laetisaria fuciformis

TURFGRASS AFFECTED

- Bentgrass, bluegrass, bermudagrass
- Fine-leaf fescue and perennial ryegrass are particularly susceptible

APPEARS WHEN

Spring and fall

FAVORABLE CONDITIONS FOR DISEASE

- More prevalent on slow-growing, nitrogen-deficient turf
- Cool temperatures of 40 F to 70 F
- More than 10 hours of leaf wetness for several days
- Occurs more on higher mown turfgrasses

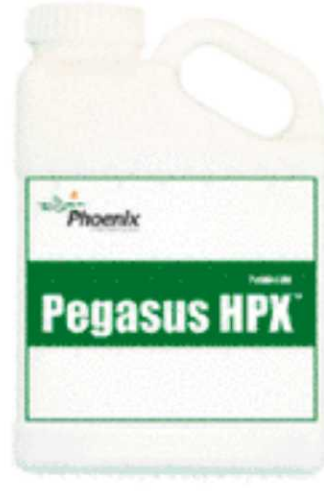
IDENTIFICATION

- Red-brown patches of turf 1 inch to 8 inches in diameter
- Pink-red mycelium grows from tips of infected leaf-blades

CULTURAL CONTROLS

- Maintain moderate to high levels of potassium and phosphorus according to soil tests
- Reduce shade and increase air circulation
- Mow turf at least once per week to remove disease portion of leaf blades

WHAT PHOENIX OFFERS FOR CHEMICAL CONTROL



Southern Blight

PATHOGEN

Sclerotilum rolfsii

TURFGRASS AFFECTED

Bentgrasses, bluegrasses, ryegrasses, bermudagrass, fescues

APPEARS WHEN

Spring into the fall

FAVORABLE CONDITIONS FOR DISEASE

- Extended periods of warm or hot weather combined with high moisture and heavy thatch
- Optimal conditions for disease development are air temperatures of 85 F to 95 F with heavy precipitation or over irrigation

IDENTIFICATION

- Affected circular or crescent-shaped areas of turf, enlarging up to 9 feet in diameter
- Turfgrass turns reddish brown as it dies
- As disease spreads, abundant mycelia appear on the turfgrass
- Dark-brown sclerotia, which are tiny and hard and resemble mustard seeds, develop at the base of stems

CULTURAL CONTROLS

- Disease is less destructive on well-fertilized, actively growing turf
- Maintain good sanitation on equipment to prevent the spread of fungus sclerotia
- Avoid overirrigation

PHOTOS COURTESY: DR. ALI HARIVANDI, UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION