

SUMMER LAWN DISEASES

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These following diseases can cause serious problems in Ohio during summer conditions and are caused by different fungi. Remember the majority of lawn problems are **not** caused by diseases but the result from adverse weather conditions that are not conducive for growing cool-season grasses in the summer or from injury to the turf plants from maintenance procedure that were not properly executed.

The majority of the fungi that cause lawn diseases persists from year to year in lawns by surviving in - turf plants – in the thatch – or in the soil. In some cases the spores of the fungi are carried into Ohio annually by the wind, blown in on the jet stream; examples are rust and gray leaf spot. Since the pathogen, the fungus that causes the disease, is usually present and does not need to be introduced the critical factor to initiate a disease outbreak in a lawn is the environment (weather conditions). The longer the weather is right for the fungus to grow the more damaging and the more severe the disease will be. Often there are questions if the fungus that causes different lawn diseases is moved from lawn to lawn on mowers, equipment, on shoes or boots, etc.? The answer is NO, not to any significant degree. The environment and normal life cycles of these diseases are the key factors for survival and spread of the pathogen. Keep in mind that the different grasses make up a lawn and the different grasses vary in their susceptibility to different diseases so a disease may be found in only certain places in a lawn.

Brown Patch:

Diagnostic Information –

There are many challenges to acutely diagnosis Brown Patch /Rhizoctonia Blight caused by (*Rhizoctonia solani*) in lawns. Since all common turfgrasses can get the disease it is difficult to rule out the disease on the bases of the type of grass in the lawn. However, many tall fescue lawns are prime candidates to be the first to develop brown patch when weather is favorable for the disease. There are differences in susceptibility by the different cultivars of tall fescue. Check the web site of the national Turfgrass Evaluation Program for rating tall fescue cultivars and susceptibility to brown patch at – www.ntep.org A key factor that needs to be present for active Brown Patch/ Rhizoctonia Blight is wet conditions (heavy rainfall, over irrigation, wet & humid sites, poorly drained areas, long periods of wet foliage/ thatch and soils). If there are “brown patches” in a lawn and the turf and site are dry continue the diagnostic process since Brown Patch/ Rhizoctonia Blight is most likely NOT the problem. A lush stand of turf is also a high candidate for the disease, especially if the lawn is wet and the temperatures are right. If there are questions about the specific diagnosis of this disease, submit a sample to a turf diagnostic lab for verification.

Management and Control Strategy –

- **KEEP THE LAWN DRY! Wet leaf blades greatly increases infection and disease. If the lawn needs moisture, water deep and infrequent, early in the day, so the grass leaves will dry quickly. Do not water in the late afternoon or early evening. Night watering is not recommended in hot, humid weather. Avoid frequent light sprinklings.**

- **Avoid fertilizer applications that cause a flush of succulent**

growth since it is very susceptible to brown patch. Minimize or avoid nitrogen fertilizer applications before or during hot weather whenever possible. Several lighter fertilizer applications are less likely to trigger disease than one heavy application.

- **Use turfgrass cultivars that are more resistant to brown patch. A source of information on turfgrass assessment for disease is the National Turfgrass Evaluation Program in Beltsville, MD or check the web site at <http://www.ntep.org>**

- **Fungicide Management:** When a lawn has had previous brown patch problems, fungicides may be applied when humid weather and hot nights are predicted. Applications should continue according to the fungicide label for as long as the hot, humid weather persists. For specific fungicides refer to the OSU Turfgrass Pathology Program web site: <http://turf-disease.osu.edu> Look under publications for - Management of Turfgrass Diseases Bulletin (L-187 Disease Section). Read the label and follow all instructions.



A patch caused by “Brown patch” in a tall fescue lawn. (Photo by J. W. Rimelspach)



Brown patch fungus (mycelium) in tall fescue lawn, the fungus may appear similar to pythium mycelium. (Photo by J. W. Rimelspach)



Lesions caused by brown patch on the tall fescue leaves. (Photo by J. W. Rimelspach)



Brown patch lesion on crabgrass leaf, this is very similar to lesions of brown patch on tall fescue.

Dollar Spot:

Diagnostic Information -

The first symptoms of the disease appear as tiny yellow spots on individual grass blades. The spot expands to a straw colored or tan band with dark reddish-brown margins. The tip of the affected leaf often remains green. The tan band, or lesion, is often narrower in width than the leaf, resulting in the lesion taking on an “hourglass” shape. The entire blade soon becomes bleached. As the grass dies and the infected areas enlarge, light straw-colored spots 2 to 3 inches in diameter appear in the lawn. A fine, cobwebby white mold may be visible early in the morning when heavy dew is present. This mycelia growth of the fungus will disappear as the turf dries. The turf in these spots may be killed all the way from the lesion to where the plant comes into contact with the soil. If left unchecked, the spots may merge and form large, irregular straw-colored patches. On low cut turf, such as that on golf greens and fairways, the spots are often well defined and smaller than those on high cut residential or commercial turf and as the name implies are about the size of a silver dollar. Thus, the descriptive term “dollar spot.” In lawns the affected spots are not as defined and are larger than the size of a silver dollar coin.

Management and Control Strategy –

- Adequate fertilizer program. Proper nitrogen fertility will greatly reduce the occurrence and severity of dollar spot. Refer to Home Yard and Garden fact sheet 4006, “Fertilization of Lawns.” Note: Careful consideration must be given to fertility programs to avoid excessive

nitrogen fertility which aggravates other diseases such as Brown Patch.

- Avoid periods of prolonged wet leaves. Avoid watering in the late afternoon or evening. Prune trees and shrubs to facilitate optimal penetration of sunlight and remove barriers or wind blocks to promote optimal air movement so grass dries faster.

- Provide adequate soil moisture for turf growth.

- Select resistant cultivars. Before seeding, consider recommended cultivars that are resistant to dollar spot. This is especially helpful when planting Kentucky bluegrass, **check with the National Turfgrass Evaluation Program.**

- Chemical control used early in disease development can be quite successful. Once dollar spot gains a foothold and is widespread, chemical management will be difficult. For specific fungicides refer to the OSU Turfgrass Pathology Program web site: <http://turf.disease.osu.edu> Look under publications for - Management of Turfgrass Diseases Bulletin (L-187 Disease Section). Read the label and follow all instructions.



Dollar spot – in a Kentucky bluegrass lawn (photo by J. W. Rimelspach)

Rust:

Diagnostic Information -

Diseased plants initially develop light-yellow flecks on the leaves. As the spots enlarge, the surfaces of the leaves rupture exposing masses of powdery, orange to brick-red colored spores of the fungus. The powdery material rubs off easily on your fingers, shoes or clothing. Rust-colored spores of the fungus are diagnostic of this disease. Continuous heavy infection causes many grass blades to turn yellow, wither and die.

Management and Control Strategy –

- Select and plant resistant turfgrasses and cultivars. A source of information on turfgrass assessment for disease is the National Turfgrass Evaluation Program in Beltsville, MD or check the web site at <http://www.ntep.org>

- Turfgrass provided with optimal levels of fertilizer and water is less likely to be severely damaged by rust.

- Avoid night watering which increases the length of time the leaf blades remain wet.

- Mow frequently at a height not less than what is recommended for the turfgrass. Avoid close mowing or scalping of the turf. Do not remove clippings rather recycle to return nutrients.

- Fungicide applications used before infection or very early in disease development can be quite successful. Once rust gains a foothold and is widespread, chemical management will be difficult. For specific fungicides refer to the OSU Turfgrass Pathology Program web site: <http://turf-disease.osu.edu> Look under publications for - Management of Turfgrass Diseases Bulletin (L-187 Disease Section). Read the label and follow all instructions.



Rust – in a perennial ryegrass lawn, note the yellow leaves that are heavily infected with the fungi (photo by J. W. Rimelspach)

Gray Leaf Spot:

Diagnostic Information –

Gray leaf spot caused by the fungus *Piricularia grisea* is a devastating on perennial ryegrass Turfgrass. Initially symptoms may appear as drought-like symptoms. The pathogen kills the plant by causing severe leaf blight. Part of the blighting process involves the production of phytotoxic chemicals, which disrupt the normal biochemical and physiological balance within the turfgrass. Initial symptoms often appear as small pinprick lesions, which often go unnoticed or mistaken as a less aggressive leaf spot disease. Patches of Kentucky bluegrass, fine fescues, bentgrass, and many perennial weedy grasses will not be affected. In most cases the ryegrass will quickly die and appears as drought stress however the soil is wet and has plenty of moisture. In years when the disease it is the most wide spread in Ohio there is a strong correlation to weather patterns of warm days and nights, high humidity and rain fall from the remains of hurricanes that trace through the Ohio valley.

**DID YOU
KNOW THAT
LAWNS CAN....**

Reduce glare and noise. Since a lawn is a non-reflective surface, it acts as a screen to soften glare from the sun. Lawns, trees, and shrubs also have the ability to absorb sound, while hard surfaces like streets will reflect sound. Lawns and other green plants can reduce noise levels by 20 - 30%.



Gray leaf spot – perennial ryegrass lawn, plants are killed by this disease. (Photo by J. W. Rimelspach)

Management and Control Strategy –

- Reduce or limit nitrogen fertilizer in the summer. Avoid quick-release sources of nitrogen.

- Irrigate early morning and avoid evening irrigation. Check the soil moisture level because the disease mimics drought stress. Over watering caused by misdiagnosis increases the severity of this disease.

- Seed areas with a resistant type of turfgrass such as Kentucky bluegrass or fescue. Remember that seedling perennial ryegrasses are extremely susceptible to infection of gray leaf spot and can easily be killed if the disease is active.

- New perennial ryegrass cultivars are being developed that show reduced susceptibility to the disease. Again check the NTEP web site for more resistant cultivars.

- Chemical management must be timely to prevent damage or at the earliest indication of the disease. For specific fungicides refer to the OSU Turfgrass Pathology Program web site: <http://turf-disease.osu.edu> Look under publications for - Management of Turf grass Diseases Bulletin (L-187 Disease Section). Read the label and follow all instructions.

Need help with diagnosing a problem?

If there is a need to have a laboratory diagnosis to identify or confirm a lawn problem submit a sample to the C. Wayne Ellett Plant & Pest Diagnostic Clinic at The Ohio State University.

Send Turf Samples to:

201 Kottman Hall
2021 Coffey Road
Columbus, OH 43210

For more information on collecting and submitting a sample see the C. Wayne Ellett Plant & Pest Diagnostic Clinic web site: <http://ppdc.osu.edu>