

LAWN DISEASES



DIAGNOSIS & CONTROL
FOR PENNSYLVANIA TURF



TURF DISEASE

INTRODUCTION

Disease in lawns develops from an interaction among a susceptible plant, a disease-producing organism (pathogen), and an environment favorable for disease development.

Susceptible grasses and pathogens are present in all lawns, but in most cases, the pathogens exist in a dormant state and do not attack living plants.

Diseases show up when environmental conditions, such as weather, management, and/or site conditions, become more favorable for the pathogen than for the turf.

THREE LAWN DISEASE FACTORS



Grass



Pathogen



Environment

DISEASE

DIAGNOSIS



DISEASES ARE JUST ONE CAUSE OF TURF LOSS. ONCE YOU'RE CERTAIN THE DISCOLORATION IS NOT FROM DROUGHT STRESS OR INSECTS, THEN PROPERLY IDENTIFY THE TYPE OF DISEASE IN YOUR LAWN BY ANALYZING THE SYMPTOMS.

Environment During Onset

Temperature, humidity and precipitation just prior to and during disease development can give you an indication of which disease is present.

Individual Plant Symptoms

Symptoms may appear as small, circular, lesions surrounded by darker borders (leaf spotting); as blotches over most or all of the leaf blade (blighting); or by rot on the crowns and roots (stunting or wilting).

Air movement, drainage, soil conditions, the amount of sun or shade, and slope are important site conditions that may also provide additional clues to disease identity.

Turf Stand Symptoms

Symptoms may take the form of circular patches, rings, spots, or irregular areas of dying or dead turf.



TYPES OF DISEASE

CONTROL METHODS



1. SELECT DISEASE RESISTANT CULTIVARS

2. MANIPULATE THE ENVIRONMENT

3. SELECT AND APPLY A FUNGICIDE

Successful disease control practices involve manipulation of the environment, the grass, and/or the pathogen, to favor the health of the grass and stop the fungus.

These three steps should be followed in order,

CHOOSING A DISEASE

CONTROL METHOD



SELECT

FIRST SELECT A
DISEASE
RESISTANT
CULTIVAR

Seeding with disease-resistant grass cultivars is our first choice. Also, diversity in planting almost always increases the odds of survival which is why it is always preferable to use blends of different grass species or cultivars.

CHANGE

THEN TRY TO
CHANGE THE
ENVIRONMENT

The environment can be altered depending on the disease to be managed. Examples are increasing watering, improving air movement, adding drainage, reducing thatch, adding shade, fertilization regulation, and proper mowing techniques.

ATTACK

IF NECESSARY,
APPLY A
FUNGICIDE

Our last choice is to reduce the pathogen population by applying fungicides that will either kill the fungus or keep it from growing. Proper disease identification is critical so that an appropriate fungicide can be selected.

FUNGICIDES



Turfgrass fungicides can be divided into two categories: contact fungicides and penetrant fungicides.

Contact Fungicides

Contact fungicides are applied to the leaf and stem surfaces and are not absorbed.

They are only effective for short durations and do not protect new foliage.

These are usually used for the control of foliar diseases and have a broad spectrum of uses.

Penetrant Fungicides

Penetrant fungicides are a newer group of chemicals that are absorbed and translocated within the plant, so they are not as likely to be removed by rainfall or mowing.

They may protect plants for a period of 2 to 4 weeks and will protect new growth.

Most penetrant fungicides can control both foliar and root/crown diseases.

Penetrant fungicides tend to have a rather narrow mode of action, thus, they are somewhat prone to resistance.

LAWN DISEASES

COMMON IN PENNSYLVANIA



Anthracnose

Susceptible: Annual bluegrass
Resistant: Creeping bentgrass



Brown Patch

Susceptible: Creeping bentgrass, perennial ryegrass, and tall fescue
Resistant: Kentucky bluegrass and fine fescues



Dollar Spot

Susceptible: Creeping bentgrass, perennial ryegrass, and tall fescue
Resistant: Kentucky bluegrass and fine fescues



Pythium Blight

Susceptible: Creeping bentgrass, perennial ryegrass, and tall fescue
Resistant: Kentucky bluegrass and fine fescues

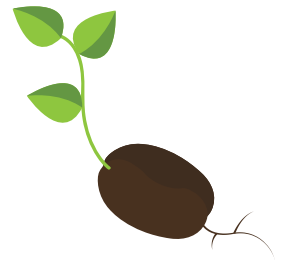


Red Thread

Susceptible: Creeping bentgrass, perennial ryegrass, and tall fescue
Resistant: Kentucky bluegrass and fine fescues

AFTER DISEASE HITS

FIXING THE LAWN



If your lawn has been impacted by disease and it's too late to stop it, sometimes it's best to let it run its course and plan to renovate the lawn in the fall.

Aerating and overseeding the lawn is best done September - October so the seedlings have time to mature before the next season.

Topdressing the seed with organic compost is an eco-friendly way to get quicker results and a healthier lawn.



FALL BEST PRACTICES

- Core Aeration
- Overseeding
- Compost Topdressing
- Targeted Fertilization

NEED HELP WITH YOUR LAWN?



WWW.DREAMGREENER.COM

(412)835-1035

RESOURCES: PENNSTATE COLLEGE OF AGRICULTURAL SERVICES. [HTTPS://PLANTSCIENCE.PSU.EDU/RESEARCH/CENTERS/TURF/EXTENSION/FACTSHEETS/MANAGING-DISEASES](https://plantscience.psu.edu/research/centers/turf/extension/factsheets/managing-diseases)