

OHIO STATE UNIVERSITY – Turfgrass Pathology Program

Todays Presentation- Getting Back To Turf Disease Basics Master Gardener Lunch and Learn 2020



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Turfgrass – The amazing ground cover ...





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Unfortunately This is what it usually looks like when you show up to answer the call for help!



06/11/2011



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How to Properly Diagnose a Turf Problem





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Always Get Background Info On the Area

- Mowing- Frequency, Mower condition
- Water- Natural or Artificial, how much?
- Fertility- type used, application info
- Pest History
- Pets?
- Area Use
- Problem history- is it worse or better?
- Walk the surrounding area for clues




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Tools of the Trade

- Pen and Paper, Recorder
- Hand lens or Magnifying Glass
- Knife or Hand Spade
- Soil Probe/ Profiler or Corer
- Camera
- Sample Containers- Bags/Jars/Boxes
- Tweezers
- Flashlight
- Books- L 187, Turfgrass Compendium, Weeds Book



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Helpful Handouts

<https://turf-disease.osu.edu/handouts>

TURFGRASS DISEASE CALENDAR
FUNGICIDES FOR RESIDENTIAL TURFGRASS
LAWN TURFGRASS DISEASE - INFORMATION CHART
SELECTING TURFGRASSES FOR LAWNS
PROFILE OF POTENTIAL DISEASES IN TURFGRASS




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Look at the Environment


- Weather history
- Topography
- Grass Type
- Time of the Year
- Sun exposure



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In our current world, restrictions from covid 19 may require off site or remote diagnostics. Please make sure to inform the client your going to help but, NOTHING can take the place of an on site diagnostic visit. With the help of background information and some detailed pictures MOST problems can be identified or a long list of probable problems can be ruled out!



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Getting “Down” to Business Use your tools and investigate the problem up close and personal




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Carefully examine the turf in question with your eyes and your hands.




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What are We Looking For?

- Mycelium/ Fruiting Bodies
- Patches
- Lesions
- Soil Condition and Type
- Root condition
- Other Evidence



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What is normal?

What does “healthy” turf look like?




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Examine the entire plant ...





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Take Plenty of Samples

Soil
Thatch
Turf- both healthy and problem areas



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Do not make assumptions ! Check below the surface.




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Are there indications of new growth?



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There Are Going To Be Instances Where “I Don’t Know” Is The Only Answer You Can Come With!

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In Case of “I Don’t Know”

-Make sure you see the turf recovering or new growth happening to fill in problem areas

Have reseeding options for the client

- A. Ruff up area with a rake, hand spread seed
- B. Ruff up with a drag matt, broadcast seed, drag area for good seed to soil contact
- C. Rent or have someone come in and slit seed area to insure good seed to soil contact

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Decision Time

Easy- Make recommendations on the spot

Medium-Go back to the office for further investigation.

Uh Oh- Get help! Make a call and/or send in a sample

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Sending Samples

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**Ohio State University Extension
Plant and Pest Diagnostic Clinic (PPDC)
C. Wayne Ellett Plant and Pest Diagnostic Clinic**

ALL TURFGRASS SAMPLES GO TO :

**Rm. 201 Kottman Hall
2021 Coffey Rd.
Columbus, OH 43210
(614)292-5006
ppdc.osu.edu**

(check for forms, fees, & how to send a sample)

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How to Take & Send a Sample

- ppdc.osu.edu (Info & Forms, YouTube...)
- OSU Fact Sheet <http://ohioline.osu.edu/hvy-fact/3000/pdf/3087.pdf>



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Taking a Lawn Sample



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Sampling For Turf Diseases

- Minimum 4" Diameter by 1-2" Deep (Not Soil Probe)
 - Wrap In Towel and Then Aluminum Foil
 - Pack Tightly In A Box To Avoid Tumbling and Mixing Foliage With Soil
- Hand Deliver Or Ship Overnight Express So Sample(s) Is Received No Later Than Thur. Do Not Ship Thur-Sat




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A completed sample form with **ALL** information filled out as complete as possible will help with a timely and accurate diagnosis!




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Collect samples from both 'affected' and 'normal' areas.



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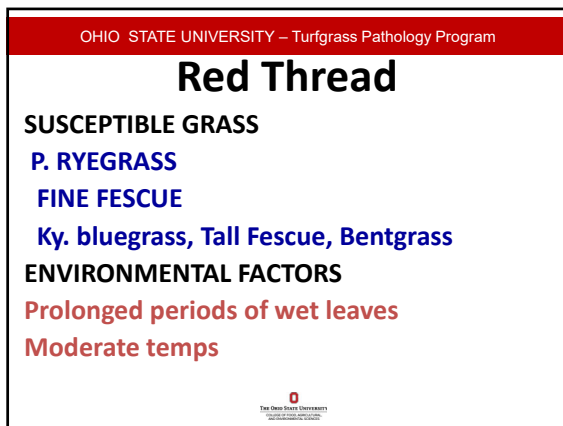
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Red Thread

Management Strategies

1. Follow balanced fertilization program (nitrogen & phosphorous)
2. Select more resistant cultivars
3. Promote growth and health
4. Fungicide applications

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Leaf Spot

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Leaf Spot

SUSCEPTIBLE GRASS

- P. RYEGRASS
- FINE FESCUE
- Ky. bluegrass, Tall Fescue, Bentgrass

ENVIRONMENTAL FACTORS

- Prolonged periods of wet leaves
- Hot and cold temps, depends on which Leaf Spot is present.

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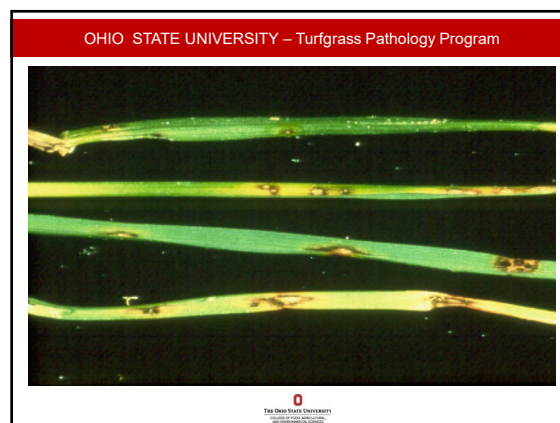
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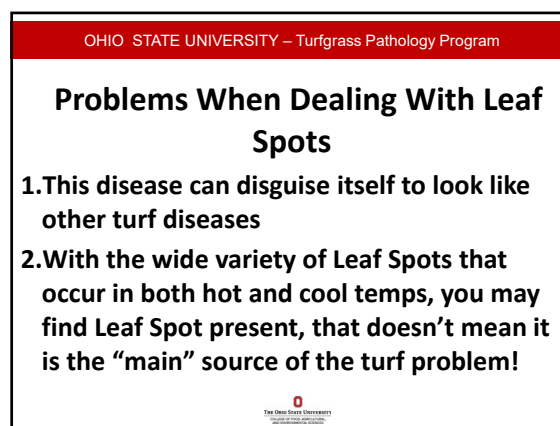
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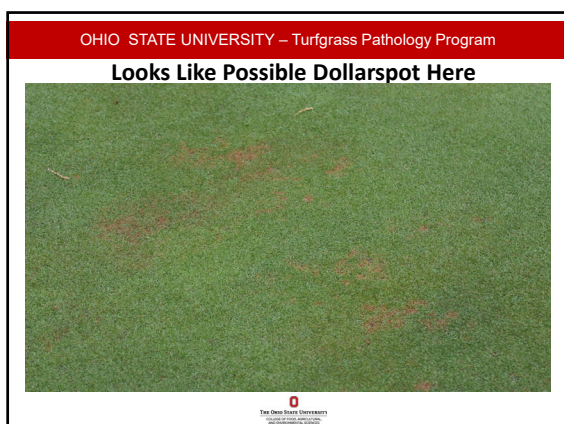
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Leaf Spot

Management Strategies

1. Ensure good drainage
2. Select more resistant cultivars
3. Promote growth and health
4. Fungicide applications



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Rust






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Rust-(*Puccini spp.*)

SUSCEPTIBLE GRASS
PERENNIAL RYEGRASS
KY. BLUEGRASS (Some varieties are susceptible some resistant.)

ENVIRONMENTAL FACTORS
 Low fertilizer programs (slow growth)
 Prolonged leaf moisture / high humidity
 Dry soils (slow growth)



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Note the ruptured leaf surface and release of spores.




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Rust-(*Puccini spp.*)

MANAGEMENT STRATEGIES

- 1) Choose resistant grass (types & varieties).
- 2) Manage an adequate fertility program.
- 3) Promote growth with irrigation and soil compaction management.
- 4) Fungicide applications.



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Dollar Spot-(*Clarireedia jacksonii*)




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Dollar Spot

SUSCEPTIBLE GRASS

KY. BLUEGRASS **P. Ryegrass**
C. BENTGRASS **Fine Fescue**

ENVIRONMENTAL FACTORS

Low fertilizer programs
Prolonged leaf moisture
Moderate temps, day temps 60 – low 80's
Dry soils and excessive thatch





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Classic Dollar Spot Leaf Lesion:

- tan band across the leaf
- lesion has darker edges 'margins' (between tan and green tissue)
- the lesion may have an 'hourglass' affect

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Dollar Spot in high cut lawn made up of Kentucky bluegrass & perennial ryegrass


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Dollar Spot

MANAGEMENT STRATEGIES

- 1) Choose resistant grass varieties.
- 2) Manage an adequate fertility program.
- 3) Minimize the time foliage is wet.
- 4) Use more resistant turf cultivars.
- 5) Avoid & manage excessive thatch.
- 6) Promote turf growth / avoid dry soils, check the soil moisture level.
- 5) Fungicide applications.



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Brown Patch/Rhizoctonia Blight (*Rhizoctonia solani*)




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Brown Patch/Rhizoctonia Blight (*Rhizoctonia solani*)

SUSCEPTIBLE GRASS

TALL FESCUE	P. Ryegrass
BENTGRASS	Ky. Bluegrass
Fine Fescue	

ENVIRONMENTAL FACTORS

- Hot / Wet, high humidity, free moisture (wet...)
- Days > 80 to mid 90s and warm nights, mid 60's +
- Abundant water, wet soils, poor drainage, poor air circulation, excessive Nitrogen fertilizer



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Brown patch on Tall fescue




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Brown patch on Tall fescue





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Brown Patch/Rhizoctonia Blight (*Rhizoctonia solani*)

MANAGEMENT STRATEGIES

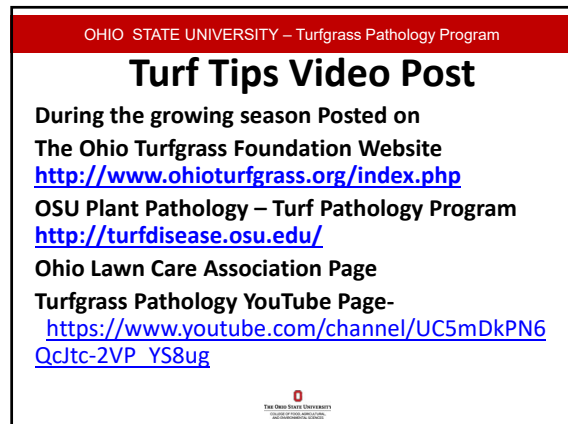
- 1) Avoid excessive watering & poor drainage. (evaluate the irrigation system)
- 2) Avoid excessive Nitrogen fertilization.
- 3) Improve drying conditions; Increase air circulation by removing surrounding vegetation & increase sun light.
- 4) Mowing, dew removal, turf selection, etc.
- 5) Fungicide applications.



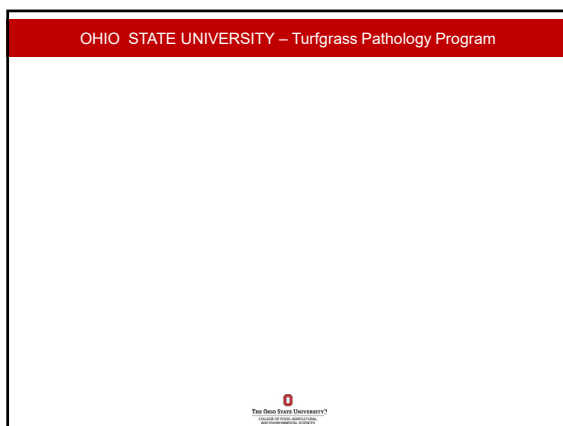
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