

Diagnosis & Disorders

Wood County Master Gardeners

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Steps in the Diagnostic Process

- DIAGNOSIS:
 - 1. Identify the plant.
 - 2. Identify the problems.
 - A. LOOK – Define the problem by describing the signs and symptoms.
 - B. READ – Distinguish between possible causes by comparing signs and symptoms with details from reference materials.
 - C. COMPARE – Determine probable causes through comparison and elimination.

Steps in the Diagnostic Process

- MANAGEMENT:
- 3. Evaluate damage/stress potential.
 - A. What type of damage/stress does the disorder/pest cause?
 - B. Under what situations would management efforts be warranted?
- 4. Evaluate management options effective for this disorder/pest and when they are applied.

Step 1 - Identify the Plant

- There are hundreds of insects and diseases that attack landscape plants in Ohio.
- Once a plant has been correctly identified. The list of potential insects and diseases that the specific plant drops to a few. Additionally, insects and diseases account for only 20% of the landscape plant problems.

Step 2 – Identify the Problems

- Take a close look at the plant and surroundings.
- A detailed description is essential for diagnosis.
- **SYMPTOMS** are changes in the plants growth or appearance in response to casual agents.
- **SIGNS** are the presence of the actual organism or direct evidence of the casual factors.

Symptoms

- Blight - A rapid discoloration and death of twigs, foliage or flowers.
- Canker – Dead area on bark or stem, often sunken or raised.
- Chlorosis – Yellowing – Chlorosis is so generic that without details diagnosis is impossible.
- Decline – Progressive decrease in plant vigor.
- Dieback – Progressive death of shoot, branch, or roots.

Signs

- Fruiting bodies – Reproductive structures of fungi.
- Insects & Mites are common signs.
- Mycelium – A mass of fungal threads (hyphae) on the plant surface.
- Slime Flux or Ooze – A bacterial discharge that oozes out of plant tissue.
- Frass – Insect digested food.

Normal versus Abnormal

- It's common for homeowners to suddenly observe normal characteristics of tree and mistakenly attribute it to an insect or disease. For example, on evergreens:
 - Needle problems and dieback of the new needles at the branch tip are abnormal.
 - Yellowing and dropping of older needles from the inside of the tree are normal.

Evaluate the Tree

- Look at the tree. Walk completely around the tree look for things that stand out. These may be the clues for other steps. For example, decline from the top down is typical of root problems.
- Look at the surroundings.
- Soil and rooting area. Soil contributes to 80% of the problems in the landscape.

Evaluate the Tree

- Trunk – Things to look for include:
 - Cankers
 - Lawn Mower Decline
 - Evidence of decay.
 - Borer exit holes.
- Major Branches – Things to look for include:
- Cankers or borers.
- Old pruning cuts or storm damage.

Evaluate the Tree

- Minor Branches and Limbs –
 - Tip of the branch and look at growth rate.
- Foliage – Things to look for include:
 - Leaf color and size.
 - Leaf spots and foliage diseases.
 - Leaf insects.
 - Galls
 - Leaf scorch.

Diagnosis & Disorders

- Some disorders can be diagnosed.
- Diagnosis must be done in context of tree's environmental.
- Ask questions of the homeowner about lawn treatment, construction, drainage problems, etc.

Questions

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