

Basic Steps for Diagnosing Plant Problems

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Diagnostic Steps

1. *Identify the Problem*
2. *Identify Signs & Symptoms*
3. *Collect Information*
4. *Research*
5. *Follow up with Client*

Step 1: Identify Problem

- Identify Plant (or Insect)
- Clarify if using common names/terms (may need to see sample)
 - Describe the plant (flower color, how it grows, etc)
 - May need to see sample or Picture of problem
 - Use books, keys, online
- What is the specific concern?
- What should it look like?
- What is “normal”?

Step 2: Identify Signs and Symptoms

- What is abnormal?
 - Color, wilting, galls, holes, spots
- Overall and close up
- Pattern of problem
- Have symptoms changed?
- How long has the problem occurred? Has it happened before?
- When did the problem first appear?
- Are other plants affected?

Step 3: Collect Information

- Plant History
 - Overall health
 - Age
 - Culture- water, fertilizer, planting, mulching - What? When? How?
- Pesticide Usage?
 - Direct Applications
 - Indirect

Step 3 continued: Collect information

- Environment around plant
 - Site conditions
 - Soil – drainage, type, pH, compactions
 - Other – Sun/shade, wind, construction, buildings, roads, etc.
 - Surrounding plants (Black Walnut?)
- Weather conditions
 - Consider multiple years
- Localized issues – flood, lightening

Step 4: Research when with client

- It's ok to ask for a sample and tell them exactly what you need (entire plant, leaf, insect sample, stem with leaf attached, etc.) Pictures are great too!
- Take notes,
- Consider living (biotic)
 - Fungi, phytoplasmas, viruses
 - Insects, mites
 - Animals (wild, pets, human)
- And non-living (abiotic)
 - Nutritional problems
 - Weather - temperature, water, hail, lightening
 - Injuries

Step 4: Research (In office)

- **Take notes**
- Tools: hand lens, dissecting scope, utility knife, etc
- Use appropriate resources & references
- Get samples if needed or Pictures
- Your horticulture educator/agent

Step 5: Follow Up with Client

- First – review all facts and conclusions
- Don't jump to easy answer
- Research based recommendations
- Unbiased, all options
- Return calls (updates) in timely manner

UW-Extension – We are here to help!

- Specialists
- Labs & Clinics
 - Plant Disease Diagnostics Clinic
 - Insect Diagnostic Lab
 - Soil Testing Labs
 - Turfgrass Diagnostic Lab

Common Missteps

- Not using “rule out” process
- Jumping to a quick conclusion
- Not gathering enough information
- Leading questions
- Not listening carefully or clarifying
- Using incorrect/appropriate resources
- Not saying “I’ll research it and get back to you.”