

Master Gardener Hotline

hosted by Master Gardeners of Greene County

9 am - 4:30 pm, Monday - Friday [March - October]

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Located inside the Springfield-Greene County Botanical Center

2400 S Scenic Ave, Springfield MO 65807



Diagnosis of Plant Problems

The following list of questions can be used to help diagnose plant problems. Some of the questions may lead to solutions, while others may only help you convey information to someone helping you with the diagnosis.

Identify The Plant:

- What kind of plant is it?
(Annual, perennial, shrub, tree (fruit or ornamental), vegetable, houseplant)
- What is the common name?
- What is the variety or cultivar? (Some are resistant to disease)
- How old is the plant? (Some plants don't live long)

Determine The Environment:

- Where is the garden located in the county? (Weather and soil conditions vary)
- What has the weather been like lately?
(Hot, cold, damp, rainy, warm days and cool nights for mildew?)
- How much water is applied? (Timing? Amount? Is it too little? Or too much?)
- How is the water applied? (Sprinkler? Drip? Hand watered? Overhead or flooding?)
- Is there lawn around the plant? (possible Weed and Feed runoff?)
- Is there mulch around the plant? What kind?
- Is the soil moist under the mulch? (Is water getting through the mulch to the soil?)
- Is fertilizer given? How much and what kind?
(Appropriate fertilizer? Too much or too little?)
- When was the fertilizer given? (Applied during heat spell can burn leaves)
- Have you applied any garden chemicals nearby recently? (Herbicide? Insecticide?)
- How much sunlight does the plant get?
(Full, partial or no direct sun and from what direction and how long?
Some plants require full sun. Few do well in full shade.)
- Is the plant next to a fence or building or street or on a slope?
(Neighbor spraying pesticide or fertilizer? Is it wet at slope bottom or dry at slope top?)
- Has additional soil been added over roots? (Roots need oxygen to survive.)
- Are there animals near the plant? (Animal urine can harm plants or digging of roots or squirrel damage to fruit or nuts or flowers.)
- Do the neighbors hire a gardener?
(gardeners can spray chemicals or cause blower/mower/trimmer damage.)
- Was there any construction work nearby?
(Runoff from new construction can affect plants)

Do you have home gardening questions?

Read our tips on plant problem diagnosis first. These tips may help you solve your problem, but even if they don't, they'll give you an idea of the kinds of questions we're likely to ask. Master Gardeners are volunteers trained by the University of Missouri Extension to answer your home gardening questions.

Symptoms And Signs:

- What does the problem look like?
- How long ago did the symptoms appear? Was it a sudden or gradual decline?
(Tie timing to external event)
- How much of the plant is affected? (Borer or fungus can affect one side of plant)
- What parts of the plant are affected? (Leaf, branch, bark, crown)
- What is the pattern of the damage? (Random? Uniform effect might be virus)
- What is the progression of the problem? Started from cut? Blossom? Hole? Spot?
- Is more than one plant of similar type affected? How far apart are they?
(Oak root fungus?)
- Is the base of the plant healthy? (Any sign of crown rot?)
- Are the leaves healthy or yellowing or white blotches or blackened?
(Nutrient or sunburn? Tip or edge? On vein or between?)
- Are there spots? If so, how big? What color and shape?
Are there holes in the spots? (Insects or leaf spot.)
- Are there holes or scrapes on leaves or bark? (Chewing/sucking insect/caterpillar or bird?)
- Are there slime/shiny trails on the plant or ground? (Slug or snail?)
- Is anything oozing from the bark? (Borer?)
- Do you have an insect sample and where was it found? (How many?)
- Are there signs of insects such as frass or sawdust? (Borer or termite)

Control Efforts:

- What have you done to remedy the problem so far?
(Caution against overuse of chemicals)

Home Diagnosis Efforts:

- Examine the plant or insect closely to be able to describe appearance.
- Investigate thoroughly by digging into soil near trunk or pulling back turf or turning leaves over.
- Use magnifying glass if available.
- Tap leaves over a sheet of white paper to see if insects fall off.
- Cut into the plant at damage site. What color is it?

Bringing In Samples to the Hotline:

- Bring in damaged plant sample along with insect (if any) causing it.
- Bring in enough plant material to see full damage, including both healthy and affected tissue.
- Bring in recently damaged sample, not old, dried out material.
- Bring in sample early in the week. Monday through Wednesday is best.