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## ***What's Wrong with My...? Diagnosing Plant Problems***

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If you're a Sherlock Holmes fan (*Basil Rathbone shows my age, Benedict Cumberbatch is awesome, Robert Downey is "interesting"*), then you know it's all about observation and deduction; seeing what others don't, asking questions before making assumptions, being a constant learner. As a Master Gardener, one of the most asked questions is "what's wrong with my...".

It is estimated that somewhere around 60-80% of plant problems are "abiotic" meaning the problem is not a pest or disease (fungus, bacteria, insects, parasitic plants) as much as it is the environment the plant is growing in (temperature, watering too much/too little, the use of an herbicide, too much sun, too much shade, etc.).

When getting to the root of a gardening problem, the first thing to learn is the difference between a symptom and a sign. A symptom is an indication that something is going wrong (i.e. wilting leaves, chlorotic leaves, plant necrosis, etc.). A sign is the *cause* of the symptom (i.e. the presents of insects, fungi, standing water, etc.). These are all *observable* things.

Sometimes diagnosing the problem is relatively easy. For example, you observe a perennial that is wilting (symptom) and you can see that the soil is still soggy from yesterday's rain (sign), thus you can diagnose that the plant is getting too much water and can move on to the solutions.

Other times diagnosing the problem is more complicated and it help to use a series of diagnostic steps to help you determine the problem. Here are the diagnostic steps suggested by Rich Buckley, Rutgers University:

1) Identify the plant.

Some plants have certain susceptibilities. For example, Is it an oak tree or ash tree? (*An ash tree will never get oak wilt.*) In late summer-early fall, Raleigh St. Augustine turfgrass can get, "Large Spot", aka, "Brown Spot". Bermuda will never get Brown Spot.

## 2) Observe symptoms, what do you see, what do you smell?

Evaluate the entire plant. For example, the symptom in a tree canopy might be the foliage but the problem could be in the roots. (*David, AgriLife Extension horticulturist, has said that, when buying a tree from the nursery, pull the tree out of the container and look at the roots.*)

Look at the larger plant community, the landscape, the neighborhood. Is only one viburnum having a problem or are all the viburnums in the entire area having the same problem? Perhaps someone sprayed an herbicide and the wind blew the product beyond its intended area.

## 3) What else is going on?

Is there construction in the area? Was a sprinkler system recently installed? Has it been a wet spring followed by a summer drought?

## 4) Identify the sign.

Can you see the insect or evidence of the insect? (*Molly Keck, AgriLife Extension entomologist, would remind you to look under the leaf for insects.*)

## 5) Bringing it all together.

Make a list of suspects/possibilities as to what is causing the problem, do some research, and narrow the list down. And if needed, get help. This is where you may want to contact a Master Gardener.

As with all things, proficiency in diagnosing plant problems comes with continuing education and practice.

If you would like more information and/or education to help you with your "what's wrong with my..." gardening questions, you may be interested in becoming a First Detector. While Master Gardeners can take the training through our Advance Training program, anyone can become a First Detector by completing the online training at [firstdetector.org](http://firstdetector.org).