

What's Wrong with My Plant?

By Sacha Buller

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The importance of understanding and managing plant diseases in your garden

Gardening is an optimistic act. We plant our gardens with hopes for beautiful flower bouquets, dreams of homemade strawberry rhubarb pie and plans for kale harvested through the winter. We hope that our garden will thrive and bear flower and fruit if we plant those first hopeful seeds in the proper sunny location, at the correct depth underground and with the right amount of water.

But sometimes our plants – like any living organism – become sick. For example: the bottom leaves of those healthy dahlia plants could start to wilt and turn yellow in July. The first-year gardener thinks, “Hmmm...maybe I planted my dahlias too early and they are dying back. Maybe I planted the dahlia tubers too shallow.”

The second year, this gardener thinks, “Drat! I saw this last year too. Maybe I need to water more. Maybe I need to fertilize more.” After three years, the gardener says, “I know I planted, watered, and fertilized this correctly. Maybe there is something else going on. Or maybe I just don't have a green thumb after all.”

The master gardener looks at the plant and states, “The chlorosis (yellowing of the leaves) is assymetrical, there is significant wilting and some v-shaped necrotic (dead) lesions. These symptoms look like Verticillium wilt. These dahlia tubers and the soil that they grew in are unfortunately diseased and will continue to give you problems. You need to grow dahlias in a new location.”

The WSU Skagit County Master Gardener Program is here to help you answer your questions. It can be tempting to ignore misshapen growth or yellowing or dying leaves as general damage and dieback. However, these symptoms likely point to diseases, nutrient deficiencies or insect damage. It is important to identify and manage these problems, so that they do not become worse or spread to other plants.

For example: if you've ever tried to grow tomatoes outdoors during cool wet summers in the Skagit Valley, you've probably experienced late blight, a common and devastating plant disease. One morning in mid-to-late summer, an ugly blackish brown blotch will develop on the leaf or stem of the plant. This blotch (or lesion, as it is technically referred to) may have concentric rings, similar to a target, within the blackened dying tissue. Soon it will spread throughout the plant, girdling the stem, collapsing branches and infecting the ripening tomatoes. It can be heartbreaking to watch loads of perfect green tomato fruit blacken and rot on the vine.



Top Left: Late blight is a major problem for home gardeners who grow tomatoes outside the shelter of a greenhouse. **Bottom Left:** The soft green “blossom” on an azalea isn’t a flower at all but a fungal infection known as a leaf gall. **Right:** Bee balm is a marvelous perennial plant for butterflies and bees in midsummer but it can be easily infected with powdery mildew. *Photos by Christine Farrow / WSU Skagit County Master Gardeners*

Late blight is caused by a pathogen whose spores are carried by the wind. For this reason, you cannot prevent late blight by moving tomatoes to a new spot in the garden. The spores land on the leaves or stem of the plant. These spores need enough moisture on the surface of the leaf to “germinate” and infect the plant. This is why the disease often starts to show up in mid-to-late August, when Skagit Valley mornings become wet and foggy.

The safest way to successfully grow tomatoes in western Washington is under cover, such as in a greenhouse or hoop house. Plants are protected from too much moisture so the pathogen doesn’t have a chance to get started. Also, you can plant a tomato variety that is more tolerant or resistant to late blight. Some cherry tomato cultivars such as ‘Sugar Sweetie’ have been shown to be more tolerant, and ‘Matt’s Wild Cherry’ and ‘Legend’ are resistant.

Once a plant is infected with late blight, it is generally beyond saving, although you can try to prune out blackened leaves from the plant. Even if you try to salvage healthy-looking fruit from the diseased plant, the fruit is often already infected and will rot quickly. The best option is to remove the entire plant from your garden immediately and throw it in the trash (not on the compost pile).

The WSU Skagit County Master Gardeners provide free weekly plant clinics to diagnose plant problems for home gardeners. The Anacortes Plant Clinic is held Thursdays, April through September at the Anacortes Senior Center from 9 AM to 12 noon. The Burlington Plant Clinic takes place on Wednesdays, April through October at the WSU Skagit County Extension from 10 AM to 2 PM. You can also bring plant samples for the plant clinic to the WSU Skagit County Extension Office anytime between 9 AM and 4 PM, Monday through Friday. Although it is best to bring a plant sample to the plant clinic, you can call master gardeners with plant disease and gardening questions at (360) 428-4270, extension 228 or e-mail skagitmgplantclinic@gmail.com.



On August 13, the WSU Skagit County Master Gardener Program will feature an August *Know and Grow* lecture, “Plant Diseases of Skagit County: How to Recognize and Manage Them,” taught by Gloria Williams. Gloria Williams is a longtime WSU Skagit County master gardener who is well known for her plant disease expertise. She will be discussing common issues such as apple and pear scab, black spot on roses and dogwood anthracnose. The talk will take place from 1 PM to 2:30 PM, at the WSU Mount Vernon Northwestern Research and Extension Center on Memorial Highway. The event is free and open to the public.

Ignorance may be blissful, but it will not serve you well as a gardener. Education is the best way to keep your green thumb. Learning to recognize and manage the plant diseases common to this area is the best health insurance you can provide for your plants.

RESOURCES:

- Oregon State University. Tomato (*Lycopersicon esculentum*) – Late Blight. Pacific Northwest Plant Disease Management Network.
<http://pnwhandbooks.org/plantdisease/tomato-lycopersicon-esculentum-late-blight>
- UC Davis. Dahlia (*Dahlia spp.*). Pest Management Guidelines.
<http://www.ipm.ucdavis.edu/PMG/r280111111.html>

Know and Grow on Plant Diseases

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- When:** August 13
- Time:** 1 PM to 2:30 PM
- Where:** WSU Mount Vernon Northwestern Research and Extension Center
16650 State Route 536 (Memorial Highway)
- Cost:** Event is free and open to the public.
- More Info:** Call 360-428-4270, ext. 0 for more information