

Can You Dig It?

By Schann Nelson
OSU Master Gardener



It's definitely fall! The drive to the valley, or anywhere in the hills, is just too much! Trees and shrubs put on their final display before sinking into the gray of winter; decorating the forests in gold and red, with the occasional spot of darkest blue or white. [Yes, these are hills not mountains!] This much you can see from the road at anything approaching a safe speed. To really see what's out there, you have to get out and walk. That's what public trails are for. Remember to get permission from the landowner to harvest any forest products including (or especially) mushrooms, ferns, salal, vinemapple, elderberry, huckleberry, cascara, cedar...but then we're into the trees and you darn well better have permission to cut!

The busy gardener may not have time to contemplate the foliage however. The extension list of stuff to do in the fall is even longer than the spring list, though it has the advantage of containing many items that cause more dramatic results than similar actions taken in the spring. The full list available at <http://extension.oregon-state.edu/gardening>, along with a complete list of publications that can be downloaded.

When pursuing these chores keep in mind the plant disease acronym ERASE (Exclusion, Resistance, Avoidance, Sanitation, Eradication) and you should see marked improvement next year. The 'R' can also stand for Rotation, a subject more suitable in the spring, but an important practice and a good reason to keep records of what was planted where. Another good source is the late Saturday morning programming on OPB for a lazy cold morning indoors.

Plants that show signs or symptoms of disease should be excluded if at all possible. It's a lot easier to rip out an aphid infested broccoli than something you paid money for at a nursery. Sometimes you have to give up even after trying all of the following prevention techniques. Plant resistance can be strengthened by increasing soil health by making and using compost, adjusting pH, increasing drainage, encouraging survival of beneficial micro- and macro- soil organisms. Practice avoidance by making sure you don't bring home any invaders from the fungal, insect, or plant world that you can't handle. Remove and destroy infected plants or portions of plants. Sanitation is about trying to keep diseases out of the garden by prompt clean up, as you might expect. Crop refuse should be composted or spaded in to prevent infection. Trying to compost diseased plants is not a good idea, unless you have a really nice 'hot' compost that has a better chance of destroying the disease. Often it's a better idea to turn obviously diseased plants, especially trees and shrubs, into ashes in the burn pile, than to try and compost the remains. The final step is eradication. This is the "Nuke 'em from orbit!" approach, and as such is the last resort.

Eradication includes giving up and getting rid of the darn thing, but most of us will go to some effort to save a favored plant or improve the quality of our flowers, fruits, trees and vegetables. First you MUST identify the cause. Diseases occur only when a susceptible host plant is in an environment that allows a pathogen to exist. Plant pathogens include fungi (apple scab), bacteria (ring rot in potatoes), viruses (Who knew?), nematodes (Yes, there are good and bad ones!) and parasitic plants (mistletoe). There are hundreds of sources available on the internet to help identify the disease agent readily, including many pictures. Remember, the problem may not be due to a pathogen but to an environmental cause such as too wet, or too dry. Treatment must always address the specific cause in order to be effective.

Our climate is really good for growing what we want, whether it is our giant forests or the beauty of a prized container. It's also incredibly good at growing certain kinds of pathogens and has a definite profile west of the Cascades. Soils in this part of the state are nearly exclusively acid. Forests have adapted to exactly this environment. Similar plants, especially those developed from natives, are also likely to enjoy the naturally acid soil. These would include rhododendrons, azaleas, and blueberries. Our little microclimate in this northern corner of the state also typically has more rain and less sun than most other parts of the state, conditions favorable for the growth of pathogens, particularly fungi and certain bacteria. If you get lazy, it's pretty much a guarantee that your plants will become infested with at least one of the following: powdery mildew, black spot, scab, leaf curl, rust or rot. You can fight back, once you know what you're dealing with.

If the first anti-fungal spray has been completed, there is plenty of time to do a second spray on fruit trees for fungal diseases. As I recall, it has to be about two weeks between copper sprays. A second coat certainly won't hurt. Figure 1 shows the irregular concentric rings that develop as a fungus grows outward from the point of infestation. These rings can be quite brightly colored (red, yellow, purple) with a dark dry center in later stages. If you don't do something to deter fungal growth, you will find these lesions on nearly every plant in your yard all summer long, which is why treatment with antifungals is a continuing battle. Figure 2 shows the multiple growth stages of the fungus that causes apple scab. The outer cycle shows survival of spores overwintering in leaves, ready to pop out little penetrating spores in the spring. Part of the trick is that many fungicides, including copper and sulfur (allowed under organic growing guidelines), must be present to protect healthy plant tissue before it becomes inoculated. In our continual drizzle, getting the spray on (when it's NOT raining), and keeping enough of the stuff ON even if using a spreader/sticker (when it starts raining again) can present real challenges.

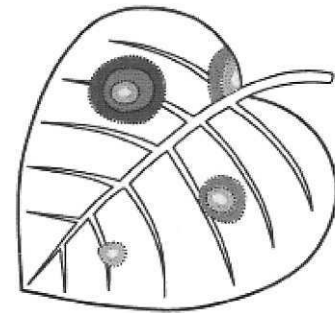


Figure 1—Fungal leaf spots

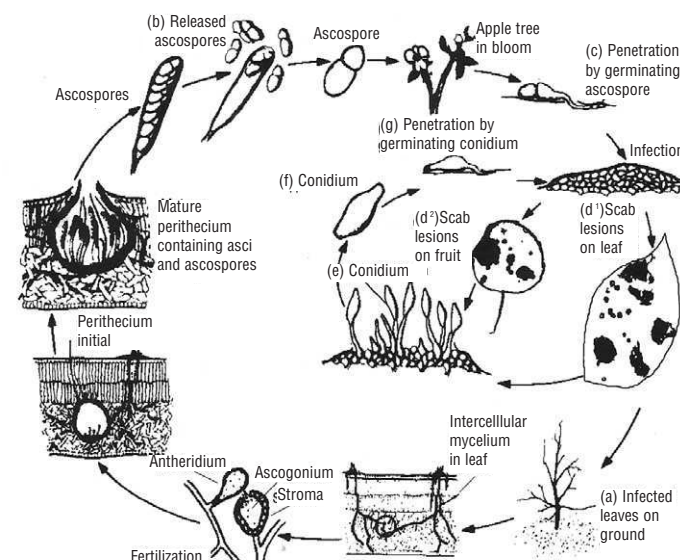


Figure 2—Disease cycle of apple scab: Overwintering fungi (a) produce sexual spores (b) that penetrate and infect trees in the spring (c). Soon scab lesions appear (d), within which asexual spores (e) are produced. These spores are released (f) and drift onto healthy tissue (g), where they cause more scab lesions (d' & d'') and produce more spores (e). The cycle begins again.

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Always remember to READ (and follow) DIRECTIONS for any chemical application. The two allowed exceptions are 1. You can use LESS (but NOT more) than the amount specified on the product label and, 2. You can use a recommended product if the *plant* you want to use it on is included on the label information even if the specific disease you are treating is not mentioned on the label for

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Church Directory

NEHALEM VALLEY BIBLE CHURCH

Gary Taylor, Pastor
Grant & North Streets, Vernonia
503 429-5378
Sunday School 10:00 a.m.
Morning Worship 11:00 a.m.
Nursery available
Wednesday Service 7:00 p.m.

VERNONIA FOURSQUARE CHURCH

Carl Pense, Pastor
850 Madison Avenue, Vernonia
503 429-1103
Sunday Worship Service: 10:30 a.m.
Children's Sunday School

VERNONIA COMMUNITY CHURCH

Grant Williams, Pastor
957 State Avenue, Vernonia
503 429-6790
Sunday Breakfast 9:00 a.m.
Morning Worship 9:45 a.m.
Children and Nursery 10:00 a.m.
Youth Group 6:00 p.m.
Preschool Tues. & Thurs. 9:00 a.m.
Wednesday Prayer 7:00 p.m.
Friday Adult Volleyball 7:00 p.m.

ST. MARY'S CATHOLIC CHURCH

Rev. Luan Tran, Administrator
960 Missouri Avenue, Vernonia
503 429-8841
Mass Schedule
Sunday 12:00 Noon
Religious Education
Sunday 10:30 a.m.

SEVENTH DAY ADVENTIST

2nd Ave. and Nehalem St., Vernonia
503 429-8301
Morning Worship, 11:00 a.m.
Bible Study 9:15 a.m.

FIRST BAPTIST CHURCH

359 "A" Street, Vernonia
503 429-5190
Sunday School 9:45 a.m.
Sunday Worship Service 11:00 a.m.
Wednesday Prayer Meeting 7:00 p.m.

ST. AUGUSTINE (CANTERBURY) EPISCOPAL CHURCH

375 North St. (Vernonia Grange Hall)
Vernonia, 503 705-2173
Please call for service schedule.

CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS

Marc Farmer, Branch President
1350 E. Knott Street, Vernonia
503 429-7151
Sacrament Meeting, Sunday 10 a.m.
Sunday School & Primary 11:20 a.m.
Relief Society, Priesthood and
Young Women, Sunday 12:10 p.m.

ASSEMBLY OF GOD

Wayne and Maureen Marr
662 Jefferson Ave., Vernonia,
503 429-0373
Sunday School 9:45 a.m.
Morning Worship 11:00 a.m.

VERNONIA CHRISTIAN CHURCH

Sam Hough, Evangelist
410 North Street, Vernonia
503 429-6522
Sunday School 9:45 a.m.
Morning Worship 11:00 a.m.
Every Wednesday:
Ladies' Bible Study 9:30 a.m.
Ladies' Worship 10:00 a.m.
Children's Choir 3:00 p.m.
Family Bible Study 7:00 p.m.