



## Root Rot Pathogens Love Wet Weather By Nick Goltz, DPM

Fall is in the air once again. I know I'm not alone in enjoying the mild days and cool nights, curling up with a warm drink and a good book, and seeing the magnificent display of colorful leaves that will soon return to the earth, heralding the long New England winter.

While there are many wonderful things that come with fall in New England (apple picking, leaf peeping, cider doughnuts, and pumpkin everything, to name a few), fall brings its share of challenges as well. One such challenge, for plant health anyway, is the increase in rain that our region receives most years and the correlating increase in plant diseases that wet weather brings.

As much as plants need water to live (as do the rest of us), too much of a necessary thing can be harmful as well. Plants may become stressed by excessive water. Symptoms of water-related stress are varied. Some plants will drop their leaves very early (Norway Maple, *Acer platanoides*, will commonly do this). Others will drop their leaves without first changing colors as one would normally expect. Sometimes, the bark of some trees will crack and split after cyclic swelling accompanying frequent rains followed by sun exposure and warm temperatures.

Beyond these stress-related symptoms, which do not usually kill plants, excessive water may lead plants to be more susceptible to disease. One common plant disease complex linked to excessive wetness is root rot. Root rot is often caused by pathogens. Examples include fungi like *Fusarium*, or water molds (Oomycetes) such as *Pythium* or *Phytophthora*. Nearly all plants are, to some extent, susceptible to root rot, and plants typically do not recover once infected.

Root rot diseases can be destructive and difficult to manage. Symptoms of aboveground tissue include wilting, leaf discoloration, lesions that may girdle the stem at the soil line, vascular discoloration, and root discoloration. If you see leaves wilt despite plenty of water being provided, cut a piece of a branch and dig up a few roots – if either is dark and “unhealthy” looking, you may be dealing with root rot. The plant should be removed and sent for analysis to a diagnostic lab for pathogen identification and management recommendations. Root rot pathogens can survive in wet soil and move between plants, so it is important to remove sick plants when they are observed.



How can root rot be prevented? The most important strategy is not overwatering. If you aren't sure if your plant needs water, simply place your finger in the soil near the roots of the plant in question. If you can feel damp soil before your first knuckle (1 to 2 inches), do not water! Most plants require less water in the fall and winter as they aren't photosynthesizing and transpiring to the same degree that they would be the rest of the year (especially deciduous plants).

Additional tips for preventing root rot include: (1) Don't compost or allow sick plants to remain in your garden. (2) Disinfect tools, pots, flats and other things that came in contact with sick plant tissue. Easy-to-use disinfectants include 70% ethanol (rubbing alcohol) or 10% diluted bleach (1 part bleach, 9 parts water) sprayed on the surface and allowed to dry. (3) Ensure good soil drainage before planting. (4) Rotate the area with less susceptible, water-loving plants. And if all else fails, (5) apply a fungicide to reduce the likelihood of new plants becoming infected.

Before wasting time and money applying a fungicide that won't be useful for controlling the pathogen, submit a sample to a plant diagnostic lab to have the pathogen identified such as the UConn Plant Diagnostic Lab (<https://plant.lab.uconn.edu/>). Different pathogens are managed with different products. Be sure to always wear proper protective equipment and carefully follow the label instructions when applying any product – organic or otherwise. If you have questions on how to keep your plant healthy, prevent root rot, or how to collect and submit a sample, reach out to the helpful folks at the UConn Home & Garden Education Center by emailing [ladybug@uconn.edu](mailto:ladybug@uconn.edu) or calling (877) 486-6271