

Phytophthora Diseases in Ornamentals
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Phytophthora is a genus of fungal-like organisms that comprise a group, along with Pythium, common known as the “water molds”. *Phytophthora* diseases appear in nurseries, garden centers and landscapes generally during the growing season. There are different species of *Phytophthora* that are capable of attacking the foliage, stems and roots of ornamental plants. Two distinct diseases that I have seen this month are phytophthora crown rot of petunia and phytophthora root rot of azalea.

Phytophthora crown rot of petunia is capable of wiping out a bed of petunia within a few weeks (Figure 1). Plants are infected at the stem and rapidly wilt and die. The interesting thing about this disease is that the root system on a freshly killed plant will look perfectly healthy. The fungus doesn’t affect the root system. The fungus *P. nicotiana* is long lived in the soil and will attack and kill susceptible plants next season. Fungicides have not been very effective in preventing this disease, so crop rotation to marigold, zinnia or another resistant bedding plant is your best option. Goldsmith Seeds has recently released a phytophthora resistant line of annual vinca.



Figure 1. Bed of Wave petunia wiped out by phytophthora crown rot. Note that marigold is resistant.

Phytophthora root rot of azalea can be caused by several different species of *Phytophthora*. Rapidly wilting of the foliage is the most common symptom (followed by death). Infected roots are a cinnamon color rather than white or off-white (Figure 2). These fungi can be long lived in landscape beds also. Planting disease free plants is the best defense. However, this can be a problem as the root system can be partially infected and not obvious even to the trained eye. Planting in raised beds with well drained soil in which organic has been added can help, but problems may still abound. Irrigation should be monitored closely; overwatering can lead to disaster. Fungicides for phytophthora diseases exist, but are expensive.



Figure 2. Azalea ‘Autumn Debutante’ infected with phytophthora root rot. Note-discolored roots. There is also some moderate freeze injury (bark splitting) on branches.