

## A Greener View: Fungal disease most likely killed plants

by Jeff\_Rugg

Q: I had a 12-year-old Japanese maple tree in my front yard. It began to "wilt" and finally died. Once it was removed, a smaller tree was planted in the same area, but it died after two months. I hired a landscaper who made many changes in the yard and replanted that problem area with shrubs. I asked why these would succeed when others had not. He replied that he had used shrubs which were "very hardy and could live almost anywhere."

Within a matter of weeks they died. What might be the problem? How do I fix it? Right now the yard looks sad and neglected.

A: It is possible that the Japanese maple died from a serious fungal disease known as Verticillium wilt. It often affects plants quickly and there is no chemical control for it. It can get into the tree roots from the soil or from low wounds on the plant. Once in the tree, it spreads throughout and clogs the water-conducting pores. Sometimes the branches die one at a time and sometimes the whole tree dies all at once.

Even though all soil can have Verticillium spores, the fungus persists better on infected plant debris. So when the original plant was removed, the fungus was still available to infect the next plant because it remained on leftover dead roots from the maple. New plants often have some roots that are damaged as the plant is installed, which give the fungus the opportunity to infect the new plant.

Replacing a large area of soil would help reduce the possibility of the fungus from being available to infect new plants. Another thing to do would be to use Verticillium resistant plants. There are many possibilities. Plants that have needles and cones are resistant as are such diverse plants as ferns, cacti, bamboo, iris, palms and grass. Many other trees and shrubs are also resistant such as birch, boxwood, crab apple and dogwood.

Since a variety of plants have died in the same spot, it is possible that there is an environmental problem. It is unlikely that a random chemical spill occurred to poison the soil; however, if the house was recently remodeled or painted, it is possible someone poured something into the flower bed to get rid of some liquid during the cleanup time.

Another soil problem that could develop after a long time is a leak in a pipe. Is there a gas line, waterline or sewer pipe in the area where the plants died? Natural gas slowly leaking into the soil can fill the air spaces in the soil thus suffocating the roots. If the leak were big, then the landscaper would probably have noticed it when the soil was being dug up.

The water and sewer lines would fill the soil with water and also suffocate the plant roots, but again, this should have been noticed when the plants were replaced.

Did the yard have changes to the drainage in the year or so before the original maple started to decline and die? Did a downspout or sump pump drain line get moved into a position where it could drown the tree and the new plants?

If the environmental causes can be ruled out, then the fungal disease problem becomes more likely and new plants should be looked at for their resistance to it.

Q: My azalea leaves are turning white. It is not the normal discoloration you see when they need iron in the soil. I looked at the leaves and all I saw were some small flies. What can I do; it seems to be spreading.

A: The small flies you saw are probably the culprits. There is a small sucking insect called a lace bug that is only about an eighth of an inch long. It has clear wings like a fly that look like they are made of lace. The adults and larvae both feed on the leaf by sucking the plant juices out, leaving tiny white dots. A lot of feeding turns the leaf white and kills the leaf. Many lace bugs can kill the whole plant. There are several generations of lace bugs each year, so they keep attacking the plant.

They tend to favor azaleas planted in full sun, which isn't a great place for azaleas in the first place. They also

usually start on evergreen azaleas before deciduous azaleas, possibly because the eggs are inserted into the leaf. Therefore, the evergreen azaleas have a built-in supply of pests each spring, while the deciduous plants only get infested after the first spring adults can fly over to the plant.

The damage as well as the population is the worst in July and August. Contact insecticides such as insecticidal soap or permethrin need to be sprayed on the bottom of the leaves, since that is where they hide. Systemic insecticides are not as effective, but try systemics that include acephate or dimethoate. Horticultural oil can be used during the winter to reduce the number of eggs that survive.

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