

Shade Tree Decline  
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Dead and dying branches, branches that fall, lichens, death of small limbs and few or yellowed leaves tell us a tree is stressed and probably has some type of root or lower stem injury. Lichens are grey-green leafy or scaly growths on stems. They do not hurt the tree but can be an indication of poor plant vigor.

Root injury can be the result of hard soils, drought, improper planting and other factors. Lower stem injury can be due to being hit with a weed eater or mower, bark splitting or insect or wood pecker feeding.

Some insects and diseases will attack and kill weakened trees. However the major problem will often be the stress and not the pest. The take home message is to reduce stress on your trees. One pest will attack young, old, and weak trees – the Asian ambrosia beetle. They are such a concern that we recommend chemical control of these pests.

We are not always sure why tree bark splits. It may be related to rapid temperature changes in the cooler months. Whitewashing the lower limbs in the fall may help prevent this problem. Whitewashing is probably not practical or aesthetically acceptable for most ornamental trees.

Ignore most leaf spots we see. They cause little damage and are expensive and difficult to control. In most cases, controlling them means little to the tree's health. Rake up and dispose of the leaves when they fall. This may reduce the disease levels for the next year.

Healthy trees start before planting. Select the proper plant for the site. Do not plant a shade loving tree like dogwood in the sun. Do not plant a sun-loving tree like crape myrtle in the shade.

Dig very wide planting holes. They need to be a minimum of two to five times the diameter of the root ball. Personally, I prefer that you till up large beds and plant the trees into them. This gives the tree lots of soft soil to send roots out into.

Never plant a tree deeper than it originally grew. If feasible, you may want to plant into raised beds to insure good drainage. Wet roots will quickly kill a tree. This is probably the number one killer of new trees.

Do not dig around, drive over, pile soil or build on the roots of trees. Since roots extend out two to five times the length of the branches, this may seem impossible to do. In general, protect the area under the canopy of the tree. A more exact measure of the minimum area we need to protect to give the tree a chance to survive is called the critical root zone (CRZ). Measure the trunk diameter in inches. Multiply this by one and

a half. This will be the size in feet of the radius of the circle that you must protect around the tree. For instance, a 20 inch diameter tree would have a critical root zone with a radius of 30 feet. Avoid digging, piling soil, trenching or driving through this area. Trees may take up to five to seven years to show damage from these type activities around their roots. If you are trying to cover exposed roots, apply a mulch around the tree out to the edge of the dripline.

What else can we do? Properly water the tree during dry weather. Apply one inch to one and a half inches of water once a week. Do not water more often than once a week even in severe drought. You can damage trees by watering too often. No established plant (lawn, shrubs, flowers etc.) should be watered more often than twice a week. Especially do not water every day or every other day. This can severely damage roots and is a recipe for problems.

If practical, remove the grass and apply a mulch around the tree. Be careful if using herbicides to kill the grass. These can damage the tree. Digging the turf up can harm tree roots as well.

Apply a two to four inch deep mulch around the tree from the trunk out to the edge of the dripline. Pull the mulch slightly away from the trunk of the tree. This helps to protect the trunk of the tree from pests.

Inspect the tree for harmful insects - especially the trunk and small twigs. Do you see scales on the limbs? These insects attach to the stem and suck the plant's sap. They can look like small round flat scales or shells or brown or white cottony, waxy or Styrofoam-like growths on stems and leaves.

Spraying dormant oils on scales in the winter is usually the best control. You may have to repeat the treatment. Be careful to get good coverage. Scales will remain attached after they die so crush a few to see if they are still moist inside. If they are, the scales are probably still alive. Another method of control is to spray for the immature scales (crawlers) in the spring when they start emerging. This will require you to determine when the crawlers begin to emerge.