

Fact Sheet #29

Girdling Roots



Above: Girdling roots growing around the trunk will eventually choke the tree



**COLLIER
ARBOR CARE**

Environmentally Friendly... Since 1937

Girdling Roots

Description

A girdling root is defined as a root that grows around the trunk of the tree thus tending to strangle the tree. Girdling roots act like an ever tightening tourniquet, restricting and cutting off the flow of water and nutrients. They are a common problem in the decline and death of ornamental trees planted in the landscape. Although the decline symptoms of girdling roots typically show up 10 to 20 years after the tree is planted, the problem generally starts when the tree is young.

Research has shown that trees planted with their root flare too deep develop girdling roots. The root flare is the area at the base of the trunk that swells out to become buttress roots entering the soil; and is also known as the root collar. It is interesting to note that natural trees in the forest do not have girdling root problems.

Plants Affected

All trees and shrubs. Most common trees are Norway Maples, Red Maples, Japanese Maples and Pine Trees.

Symptoms/Damage

- No visible root flare at soil surface. The trunk descends straight into the soil with no flare.
- Trunk may be flattened on one side.
- Excavation of soil at trunk base may reveal the girdling roots.
- Leaves and annual growth are smaller than normal. Leaves may be scorched.
- Early fall color and leaf drop.
- Dieback in the crown of the tree. Sparse amount of foliage, tree eventually dies

Management

Prevention

Prevention begins at planting. Examine root system and remove encircling roots. For containerized trees, bare root and balled and burlap trees; remove or straighten encircling roots in a radial form. If the root collar flare is buried remove excess soil, then plant so the root flare is slightly exposed above ground. Consider rejecting trees if encircling roots are too severe or if the root flare is buried too deep.

Cultural

The younger the trees the more chance of success you can expect with removal of girdling roots. As the tree gets larger and the encircling roots more severe, the removal of the roots must be balanced with the injury of the root removal. Many situations are so hopeless that it may be just a matter of time before the tree dies.

To assess for the presence of girdling roots, either hand dig or use a soil excavation tool called an air spade. Girdling roots can be removed using wood gouges, saws or pruners. If more than one half of the circumference is severely compressed treatment is not recommended and removal should be considered.



Above: Failed tree due to girdling roots

Collier Arbor Care is a homegrown, second-generation family-owned business. We've been around since 1937.

We are recognized by our customers and by horticulture professionals for knowledge, experience, trusted advice, and the highest standards of workmanship. The continuing education of our staff brings the most up-to-date knowledge and industry techniques to your landscape.

