

(revision date:4/30/2013)

## ***Common Cultural: Plant girdling and circling roots***

*Use Integrated Pest Management (IPM) for successful plant problem management.*

### ***Biology***

Girdling interrupts the flow of manufactured food, hormones, and other metabolites from the leaves to the roots. The roots may eventually starve, and then the top branches decline. Eventually, the entire tree may die. Trunk girdling may be caused by staking wires, strings, gnawing of vertebrates, and other agents. Roots can become girdled if a plant is grown in a pot for too long, thereby forcing roots to grow in a circular pattern around the root ball. As the trunk grows and circling roots increase in diameter, they may choke the plant at the crown. Polypropylene "burlap" wraps can also lead to root girdling, as the roots grow close together within the wrap and eventually constrict each other's growth and nutrient flow.

### ***Management Options***

#### **Non-Chemical Management**

- ~ Avoid staking trees. When necessary, attach trees to stakes with loose bands and remove within the first year.
- ~ Remove burlap and string or wire prior to planting.

*Select non-chemical management options as your first choice!*

#### **Chemical Management**

***IMPORTANT: Visit Home and Garden Fact Sheets for more information on using pesticides***

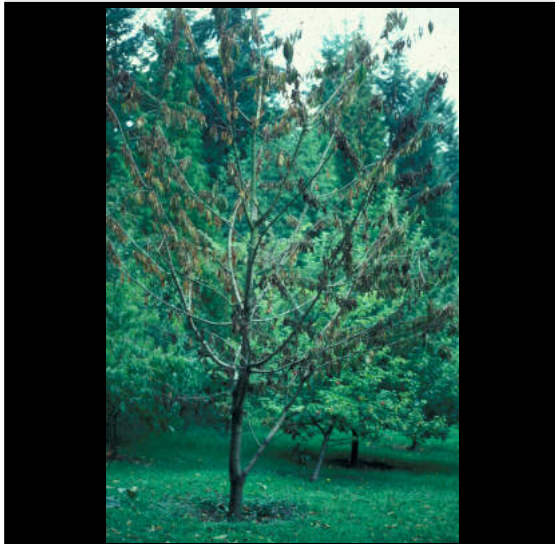
None recommended

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***Images***



~ *Caption: Girdling on London plane tree caused by staking wire*  
~ *Photo by: R. Maleike*



~ *Caption: Complete dieback caused by girdling at the crown*  
~ *Photo by: R.S. Byther*



~ *Caption: Circling roots from plant growing too long in pot*  
~ *Photo by: B.M. Johnson*



*~ Caption: Circling and girdling roots  
~ Photo by: B.M. Johnson*



*~ Caption: Root girdling caused by  
polypropylene "burlap" wrap  
~ Photo by: B.M. Johnson*