

Crown gall is a disease caused by a soil bacteria (*Agrobacterium tumefaciens*). The bacteria enter the plant roots through wounds, and cause rough, woody, tumor-like galls to form on the roots, trunks, and occasionally the branches of many different trees and shrubs.



Appearance:

- Susceptible plants are infected through fresh wounds or abrasions, resulting from pruning, freeze injury, soil insect feeding, cultivation and other factors that may damage plants.
- Over time, galls begin to decay and breakdown. The bacteria return to the soil where they can be further dispersed by water or equipment.
 - Irregular tumor or wart-like growths that range in size from 1/10 inch up to 1 foot in diameter.
 - New galls are round, rough textured, light colored and may be smooth and slightly spongy.
 - Older galls become hard and dry. They are often dark in color with many rough cracks and fissures.
- Commonly found on the main stem at the point where the stem enters the soil; can also form on roots.
- Plants with several galls may be unable to move water and nutrients up the trunk and become weakened, stunted and unproductive. Young plants can be killed by developing gall tissue.

Management & Treatment:

- Plant only fruit cultivars that are sufficiently hardy for your climate; freeze injury to tender cultivars is a common starting point for crown gall.
- Avoid injury or pruning wounds that may come in contact with the soil.
- Disinfect pruning tools (hand pruners, loppers, pruning saws) daily before pruning.
- Use tree wrap to protect against string trimmer damage and keep your garden tools (hoes, rakes, shovels) clean and away from fruit trees.
- Provide winter protection with tree spirals (when trees are young), and/or paint older tree trunks with a mixture of 1 part water to 1 part interior latex white paint. This helps eliminate bark splitting in winter due to sun scald.
- Remove existing galls with a sharp pruning knife. Destroy the infected plant tissue and treat the wound with pruning sealer. If the plant does not recover, remove and destroy it.

Sources: University of Minnesota Extension, Planet Natural Research Center, Michigan State University Extension, and Patrick L. Byers, Horticulture Specialist.