

# Southern Fusiform Rust

## TREE DOCTOR TIPS

### Southern Fusiform Rust (*Cronartium quercuum* f.sp. *fusiforme*)

#### DESCRIPTION:

Southern fusiform rust is a fungal pathogen that causes trunk and/or branch swelling in pine hosts and rust on oak leaves.

#### HOSTS:

The pathogen needs both a pine host and oak host to complete its life cycle. All pine trees with needle bundles of two or three are vulnerable; but slash and loblolly pines tend to be the most susceptible. Several species of oak trees act as the alternate host.

#### BIOLOGY AND SYMPTOMS:

If conditions are right, southern fusiform rust will infect susceptible pine trees in the early spring. Within four to six months, yellow, spindle-shaped bumps called galls swell up on tree branches. Galls develop on the pine tree for about two years before producing orange spores. The spores released from these pine galls disperse in the wind to infect the alternate oak host causing rust spots on the leaves.

#### MANAGEMENT:

Proper pruning and fertilization can shield trees from a southern fusiform rust infection. **Be cautious about over-fertilizing trees. Too much nitrogen, a base ingredient in many fertilizers, can increase the likelihood of trees developing an infection.** For trees that have already been plagued with galls, pruning diseased limbs can help control further spread.

Fully remove and destroy affected branches to reduce the chance of repeated infection the following spring.

A professional arborist can provide detailed information about effective pruning and a suitable fertilization schedule.



FIGURE A. SWELLING AND DEFORMITY, WHICH RESULTS WHEN THE FUNGUS INFECTS THE TRUNK.

FIGURE B. ORANGE-YELLOW AECIOSPORES THAT ARE PRODUCED IN EARLY SPRING.

*The scientists at **The Davey Institute** laboratory and research facility support our arborists and technicians in diagnosing and prescribing based on the latest arboricultural science. For specific treatment and application details, your arborist may consult **The Davey Institute PHC Handbook**.*

