



Tyler's  
Carlmont  
Nursery

2029 Ralston Ave  
Belmont, CA 94002  
Ph. 650.591.6845  
www.CarlmontNursery.com  
info@CarlmontNursery.com

# "HOW-TO" GUIDE

*Controlling*

## *Rust*

### **What Is It?**

Rust, caused by fungi of the genus Phragmidium, is favored by cool, moist weather such as that found in coastal areas of California and may also be a problem inland during wet years. Infected plants have small orange pustules on leaf undersides; upper sides of leaves may discolor and leaves may drop. The lower leaves are affected first. Each type of rust is specific to a certain host; therefore the rust on your roses will only affect the roses in your garden. Low levels of damage can be tolerated without significant losses.

### **How Does It Grow And Spread?**

Infected plant tissue on or around the plant is the source of the first infective spores. Rust spores are blown, rather than splashed, onto new, susceptible tissue. Once in contact with a leaf, a rust spore germinates and enters the leaf by growing into natural openings. Moisture must be on the leaf for 2 to 4 hours for spore growth and leaf penetration to occur so avoid overhead watering, especially in the evening. Growth and penetration are best when temperatures are from 65 to 70°F.

After penetrating the leaf tissue, the fungus grows farther into the leaf and produces pustules. The spores from the pustules then are blown onto uninfected leaves, and the cycle repeats, often many times within a growing season.

In late summer and early fall, the fungus produces a different type of spore, and the pustules turn dark brown. These late-season spores have thick, dark walls that help them survive the winter. In spring, when the weather begins to warm, the spores are released and blown up onto the leaves and the cycle begins again.

### **How Do I Treat It?**

Cleanliness and prevention is key for controlling rust. During the winter collect and dispose of any leaves remaining on the plants as well as those that have fallen off. Clear away any debris, including mulches, on the ground around the infected plants. In late winter/early spring, just before the weather warms, apply a thick (3-4 inches) layer of mulch around your plants to help suppress spore movement. Upon detection of reoccurrence, preventive applications of fungicides such as Green Light Rose Defense or Ortho Orthenex can be used.