Rose Rust

Natalie Goldberg
Extension Plant Pathologist

New Mexico State University
Cooperative Extension Service
Rust

• Caused by 9 species of the rust fungus, *Phragmidium*

• Worldwide distribution
  – In the U.S., only a serious disease on the Pacific coast
  – Limiting factor in NM is limited moisture and high summer temperatures

• Only affects *Rosa* spp.
  – One host rust with a complete life cycle (5 spore stages)
Rust

- Yellow, irregular shaped spots appear on the upper leaf surface
- Orange to black “pustules” appear on the lower leaf surface
  - Pustules may also occur on other above ground plant parts
- Severely infected leaves turn yellow and drop prematurely
- Shoots may become distorted or dieback
- Plant declines in vigor
Rust

• Overwinters as spores or mycelium in pustules on dead leaves and on stems

• In spring, new spores are produced which are disseminated by air currents to susceptible tissue

• After infection, additional spores are produced which are capable of spreading the disease on the plant and to other plants

• In mild climate, the repeating spore stages may remain active year round
Rust

- 2-4 hrs of leafwetness (water on the plant surface) is required for spore germination
- Temperature range is 34 – 81 F, with optimal temperature for germination and infection occurring between 59 – 70 F
- Spores will not germinate at temperatures above 82 F, even if moisture is present
- When conditions are not favorable for infection, spores only remain viable for about 1 week
Management of Rust

• Use tolerant cultivars
• Plant only disease-free plants
• Remove and destroy infected leaves as they appear
• In late fall, remove and destroy old leaves (on plants and on the ground) and prune out and destroy all infected canes
• Increase air circulation – proper plant spacing and pruning
• Avoid overhead irrigation
• Fungicide are available but are usually not necessary in NM