

Problem: Rose Rosette



Host: Wild and domestic roses. (*Rosa spp.*)

Description: Rose rosette is a more destructive disease than rose mosaic virus. It is a serious problem in Kansas on wild roses (*Rosa multiflora*) in pastures and hedges. It is also found in domestic rose plantings.

Infection is thought to start with rapid elongation of a new shoot. The rapid shoot growth may continue for several weeks to a length of two to three feet. Following shoot elongation, a witches' broom or clustering of small branches often occurs. The stems usually develop excessive thorniness and produce small, deformed leaves with a reddish-purple pigmentation. Stems and petioles of *Rosa multiflora* plants may have reddish blotches or streaks. Rose plants infected with the rose rosette virus die rapidly, usually within one to two years.

Rose rosette is caused by a Emaravirus species. Transmission of the disease has been shown experimentally through grafting and is also thought to be spread by mites. Though KnockOut roses are resistant to many diseases, they are susceptible to this one. The disease can also be transmitted by pruning shears. Therefore, disinfect the shears when moving from one plant to another by using rubbing alcohol or a disinfectant such as Lysol.

Recommendations: There is no effective control measure for roses infected with rose-rosette. In garden settings, infected plants including the root ball should be removed and destroyed. Wait two weeks before replanting to be sure no suckers resprout from any remaining roots.

Recent research has suggested disease prevention is possible by controlling mites before infection. Research is ongoing to determine rates and spray intervals. The products that were effective in a two-year study were Akari (fenpyroximate), Kontos (spirotetramal), Forbid (spiromesifen) and Talstar (bifenthrin). Horticultural oil and Avid + horticultural oil provided significant control the first year but not the second as disease pressure increased the second year. Not surprisingly, Sevin (carbaryl) was not effective.

Commercial people who decide to try to prevent this disease by using these miticides should not use one miticide exclusively but should alternate products from different IRAC groups to prevent the buildup of resistance. Akari is in group 21A, Kontos and Forbid in group 23 and Talstar in group 3. Therefore, since Kontos and Forbid are in the same group, alternating between them would do no good.

For homeowners, we would suggest alternating horticultural oil and bifenthrin (Hi-Yield Bug Blaster Bifenthrin) on two week intervals throughout the growing season. In other words, spray with horticultural oil, wait two weeks,

spray with bifenthrin and repeat throughout the growing season. Be careful of temperature restrictions on horticultural oil so pay attention to the label.

Again, the results of this study are preliminary and we have much to learn before we can make more specific recommendations.

References:

1. [Rose Rosette Disease](#), K-State Research and Extension, Plant Pathology MF-2974
2. Horst, Kenneth, ed. 1983. Compendium of Rose Diseases. pg. 28. APS Press.

Last Update: 3/2/2018

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