



# Rose Mosaic Virus

O & T Guide OD-9

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**Hosts:** Rose mosaic is a disease of roses caused by Prunus Necrotic Ringspot Virus (PNRSV) and Apple Mosaic Virus (ApMV). These two common viruses are found worldwide and are known to cause serious diseases in stone fruits and apples. These viruses, separately and together, have been found in rose bushes. The disease in roses is referred to as Rose Mosaic Virus.

**Symptoms:** The symptoms are highly variable, depending on the variety, the virus and the environment. Some of the more common symptoms include; chlorotic bands or ringspots, wavy lines, yellow vein banding, oak-leaf pattern, and general mosaic (splotches of yellow and green on leaves). Color-breaking (mottled flower color) has also been reported in some cultivars. Symptom development on only a portion of a plant is common. Some infected plants never express symptoms. Symptoms usually appear in the spring and remain throughout the growing season.

**Conditions for Disease:** In stone fruits and apples, the viruses are pollen transmitted. In roses, the only proven means of transmission is through vegetative propagation of infected buds, scion or root stocks. There has been much speculation and research conducted on other means of transmission in roses. However, to date, the disease has not been proven to be transmitted by any other

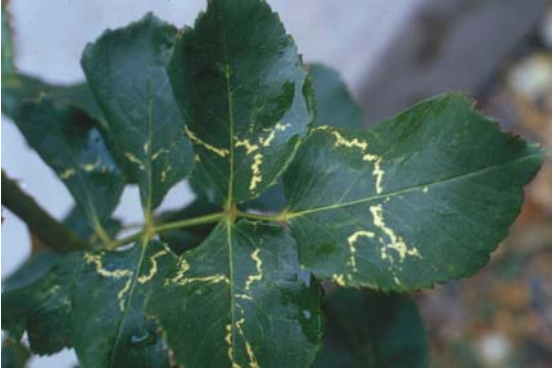
means and there is no evidence that rose mosaic spreads from plant to plant in a garden setting. Because the disease often occurs on only one cane or a few leaves, it is mistakenly thought to be relatively harmless. However infected plants have decreased vigor, produce fewer flowers on shorter stems, have poorer transplant survival rates, and are more susceptible to winter-kill.



Chlorotic bands in an oak-leaf pattern caused by rose mosaic. Photo: George Philley, Texas Agricultural Experiment Station.



Chlorotic ringspots caused by rose mosaic. Photo: Oregon State University.



Wavy lines caused by rose mosaic. Photo: E. Shannon, New Mexico State University.



Mosaic symptoms caused by rose mosaic. Photo: University of Georgia.



Yellow vein banding caused by rose mosaic. Photo: N. Tisserat, Kansas State University.



Mosaic symptoms caused by rose mosaic. Photo: E. Shannon, New Mexico State University.



Symptoms caused by rose mosaic. Photo: Mississippi State University Extension Service.

**Management:** Once the plant is infected, there is no cure. Infected portions of the plant can be pruned, however this simply removes the symptoms; the plant is systemically infected and will eventually develop symptoms on other leaves and canes. Infected plants should be removed and destroyed if they are not performing up to desired levels, but they are not a risk for spreading the disease to healthy plants. When purchasing new roses, buy only certified virus free plants.