

Common Virus Diseases of Roses

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Rose Mosaic and **Rose Rosette** are common diseases caused by microorganisms. **Rose mosaic** is often associated with mixed infections of prunus necrotic ringspot virus (PNRSV) and/or apple mosaic virus (ApMV). Rose mosaic is the most common virus disease of rose.

Rose Mosaic produces a variety of symptoms on the leaves, including wavy white to yellow line patterns, ringspots, yellow net patterns, and yellow vein banding. Symptoms of this virus disease vary considerably with the rose cultivar, time of year, and environmental conditions. Plants infected with this virus tend to be less vigorous, making them more susceptible to other plant stresses, such as cold injury. Cool temperatures tend to favor virus multiplication and disease development within the rose plant. Plants may not show symptoms for a year or two after planting. The overall effects of rose mosaic tend to be mostly from an aesthetic standpoint, causing an unappealing leaf appearance. There may be some reduction in flower production and loss of overall vigor, but this virus disease rarely kills the plant.

Rose Rosette is caused by a virus or virus-like microorganism that is spread through grafting or by eriophyid mites that feed on the plant. Rose rosette is more destructive than rose mosaic—infected plants usually die rapidly, sometimes within one to two years. This disease is commonly found on wild roses (*Rosa multiflora*) that are grown in the midwestern, southern, and eastern United States. Rose rosette can be spread from multiflora roses to cultivated roses.

The most obvious symptoms of Rose Rosette include rapid elongation of new shoots, witches' broom (short internodes with clustering of small branches), conspicuous red coloration of branches, and excessive thorn production on the branches. Flowers can be deformed and mottled. Flower buds may abort and become deformed.

Prevent these two rose virus diseases by growing and propagating virus-free plant material. No pesticide can cure these or other virus diseases of ornamentals. Because the natural spread of rose mosaic is minimal, infected plants do not need to be removed unless growth becomes undesirable. However, plants suspected to be infected with rose rosette should be uprooted and burned. Wild roses, which may serve as reservoirs for infection, should be removed from the vicinity of cultivated roses.

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