**Yard and Garden – 06-22-2013 - Ted Griess / Extension Horticulture Assistant**

I hate being the bearer of bad news, but a client recently brought me sample cuttings covered with strange foliage from one of her rose bushes. Although the disfigured foliage somewhat resembled herbicide damage, I immediately thought that the pattern resembled a viral disease which occurs in Echinacea (cone flower) called Asters Yellow. Knowing that such a disease does not attack roses, I began a little research. Soon, I unveiled nasty news involving a disease called Rose Rosette Disease, or RRD. One significant symptom of RRD is infected plants produce numerous lateral shoots, known as witches brooms— creating bunches of growth at the tips of canes. The leaves are smaller than normal and often badly distorted. Other symptoms to look for are excessive thorns, thick inconsistent stems and abnormally small leaflets and leaves. See the attached photograph.

Since I am not a plant pathologist, I took a photo of the sample and sent it to our plant pathology diagnostic lab at the University of Nebraska in Lincoln. My suspicions were correct. The diagnostician concurred— the plant is infected with RRD.

Once a rose is infected, there is no cure. The disease is normally spread and carried by a very specific, very small spider mite called *Phyllocoptes fructiphilus*. Only microns in size, this petite pest is invisible to the naked eye. The bite of the mite spreads the disease from plant to plant when it feeds on the shoot tips and leaves. This wee one is wingless and is blown from plant to plant by the wind. RRD is highly contagious and can also be spread by pruners; thus, one should disinfect garden tools, gloves and anything else that comes in contact with a diseased plant.

Interestingly, RRD is an import. It hitched a ride to the United States in the late 1800s when *Rose multiflora* was imported as an ornamental from Asia. Multiflora was also widely used as a hardy rootstock for grafting more tender varieties of roses. In the 1930s and 1940s, the US Department of Agriculture Soil Conservation even promoted multiflora rose for erosion control. Unfortunately, the multiflora rose went wild, and today is deemed a weed throughout most of the country. Due to its ability to grow and thrive under adverse conditions and its capability of producing prolific seed crops, it is now a pest. Multiflora rose is extremely susceptible to RRD, and the disease has been spreading. It was first discovered in Nebraska in 1941.

At one time, RRD was claimed not to infect other ornamental roses, but statistics show differently. Most all garden roses, including hybrid teas, floribundas, miniatures, climbers, shrub and old–fashioned garden roses can be infected. Although newer roses are bred to be more disease resistant, their resistance is generally against black spot and other fungal diseases and not RRD. At present, no rose is immune.

With such a message of gloom and doom, does this mean one should simply stop growing roses? Of course not! Just keep an eye out for it and act quickly.

If RRD is detected in one's roses, what should one do? Dig it up, roots and all and destroy it. That's the first step. Although no chemical control exists for RRD, chemical agents such as miticides and insecticides can be used to control the mite. Sevin and Telstar are excellent choices and should be applied in April and September when the mites are most active. If populations of multiflora roses exist upwind, within 300 feet of your garden, consider eliminating them. See to it neighboring roses do not touch one another. Reducing water on the leaves is another maintenance control method because the mite needs water to survive.

It is certainly bad news, but fortunately RRD is currently not epidemic nor is it predicted to become an epidemic. Being aware of this rose disease and paying close attention should be your first line of defense.