



This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

## Bermuda

We are seeing a good deal of Spring Dead Spot this season on bermudagrass, as well as the usual patch diseases. Research has shown that some pre-emergence herbicides used for weed control in the lawn may negatively impact turf trying to recover from disease. The use of herbicides containing the active ingredients prodiamine or pendimethalin, (Surflan, Barricade, Dimension, Tower, Pendulum and Specticle) "may" limit recovery and further weaken the turfgrass system. Symptoms are swelling and clubbing of the tips of the roots. The clubbed roots may have blister-like areas that resemble root-knot infestations, but have no root knot nematodes present. Laterals may be stunted or severely pruned. These chemicals have a relatively long residual in the soil, and may hinder bermudagrass recovery from damage caused by winter injury, heavy traffic or disease. The pre-emergent Ronstar can be safely used in bermudagrass, as research has shown it not to reduce the recovery time of diseased turf.

## Pre-emergent herbicide damage to roots



Ricky Corder University of Arkansas Cooperative Extension

## Pre-emergent herbicide damage to roots (clubbing)



Ricky Corder University of Arkansas Cooperative Extension

## Deodar Cedar

Needle cast of Deodar Cedar, caused by *Sirococcus conigenus*, can be a problem in years with prolonged, wet, cool springs. Temperatures of 60°F to 70°F are the most favorable for disease development. *Sirococcus* overwinters on dead shoots. Conidia are rain or irrigation splashed onto newly emerging needles and shoots in the spring and summer. Symptoms appear about two weeks after infection of new growth. Symptoms are tan to pink needles in the spring. Infection may only be on the new needles or extend down into older tissue. Both terminal and lateral growth may be blighted. Needle cast and shoot death can occur through most of the summer. All blighted twigs and fallen needles should be removed. A leaf or shop vac is handy for vacuuming out the needle debris caught in branches. Fungicides containing mancozeb, or copper hydroxide, or azoxystrobin may be used at bud break and needle expansion.



## Deodar Cedar Needle cast- *Sirococcus conigenus*



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## Rose

We've all heard a lot in recent years about Rose Rosette associated Virus (RRaV) which kills roses. Sometimes people confuse **Rose Mosaic Virus (RMV)** for Rose Rosette associated Virus. Rose Mosaic Virus, unlike Rose Rosette associated Virus does not kill the rose. RMV is a disease of roses caused by a virus complex. Prunus Necrotic Ringspot Virus (PNRSV), Apple Mosaic Virus (ApMV), and Arabis Mosaic Virus (ArMV), have been identified as components of the complex. These viruses may occur singly or together in a rose bush. RMV is endemic in the rose trade, as it is passed from plant to plant via vegetative propagation from an infected plant, or through grafting from infected stock during rose production. Symptoms are extremely variable, depending on rose variety, the virus, and the environment. Leaves may show bright yellow to white mosaic patterns, banding, wavy lines, blotches, oak leaf patterns, or net-like patterns. Rose Mosaic Virus can also cause flower distortion, reduced flower size, reduced vigor, reduced winter hardiness, and a shortened life-span. Usually, only a few leaves show the symptoms which may disappear later in the season. Rose Mosaic Virus is not contagious in the garden with the possible exception of naturally occurring root grafts. Viruses are not curable. Once a rose has the virus, it is always present whether there are visual symptoms or not. Since most grafted roses have some form of this virus, most are left in the landscape.

**Rose Rosette Virus (RRV)** on the other hand does kill roses and can spread from rose to rose in the landscape. This virus is vectored by the the Woolly Rose mite, *Phyllocoptes fructiphilus*. These tiny mites are only 1/4 the size of spider mites. Twenty of them can fit on the head of a pin. They are easily carried by wind to roses in the garden. Symptoms are thickened, succulent stems, ofte with abnormal red color of foliage and stems. An affected shoot may elongate rapidly. Other symptoms are shortened internodes, stems with an abnormal amount of pliable thorns, distorted or dwarfed leaves, deformed buds and flowers, abnormal flower color, reduced winter hardiness, spiral cane growth, and witch's broom. When a rose is diagnosed with this disease, it should be removed from the planting immediately. It is a good idea to try to kill the mites before removing the rose to prevent shaking them off



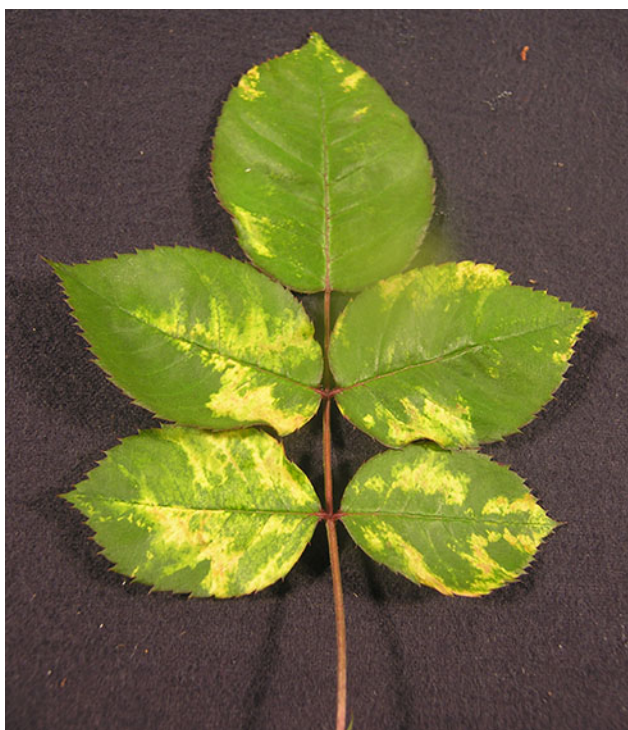
onto nearby roses. Unlike spider mites, many common insecticides kill these tiny mites.

## Rose Mosaic Virus (RMV)



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## Rose Mosaic Virus (RMV)



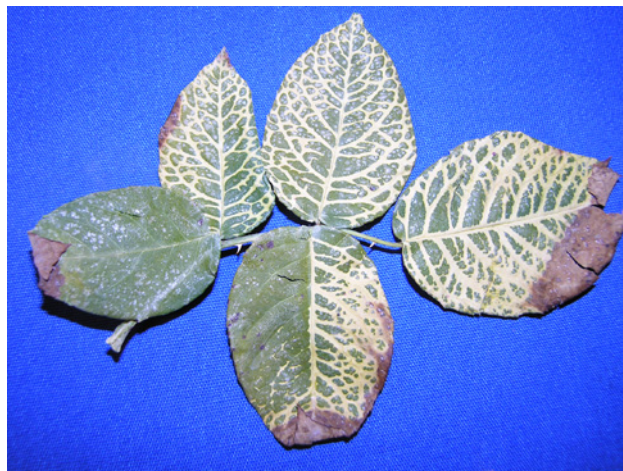
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## Rose Mosaic Virus (RMV)



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## Rose Mosaic Virus (RMV)



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## Rose Rosette Virus (RRV)



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## Rose Rosette Virus (RRV)



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### Request for help from Dr. Robbins:

Root knot nematode populations are needed for our Arkansas species study. I am a nematologist in the department of Plant Pathology in Fayetteville. My student and I are trying to amass populations of as many species of Root knot nematode (*Meloidogyne* sp.) as possible for species



identification using molecular techniques. At present no root knot species in Arkansas have been identified using molecular technology. We are interested in receiving populations from home gardens, shrubs, flowers, trees and grasses. For samples we need about a pint of soil and feeder roots in a sealed plastic bag that is plainly identified by plant host, location (City County, physical address, collector and date of collection). Please send samples to us at the follow address:

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