Sherrie Smith
Keiddy Urrea

Issue 5, April 1, 2019

Arkansas Plant Health Clinic Newsletter

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Rose Brown Canker

Re-blooming roses should have been pruned by now in most parts of the state. However, pruning times may vary depending on local conditions. It is easier to prune before new growth starts in the spring. It may also be of some benefit in the struggle with Rose Rosette Virus as we now know the mite that vectors the disease overwinters in the top third of the plant.

In the absence of concealing foliage, an examination while pruning often reveals cankers on the canes. All canes with cankers should be removed as soon as they are discovered. Brown Canker of roses, caused by *Cryptosporella umbrina*, is the most common rose canker we see at the Plant Health Clinic. Brown Canker starts as small, red to purple spots on the current season's canes. The lesions enlarge into whitish, necrotic areas with purplish reddish margins. Older cankers may coalesce into solid tan patches with purple borders. Under moist environmental conditions, the cankers are covered with yellow spore tendrils. All cankered canes should be pruned out as soon as symptoms are observed. Spring pruning should be done above outward facing buds or leaf axils. Although fungicides are not effective against existing cankers, a systemic fungicide such as Bio Advanced Disease Control for Roses, Flowers & Shrubs, or Fertilome Liquid Systemic Fungicide II, may be applied to discourage the development of new cankers.

Rose Brown Canker-*Cryptosporella umbrina*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Daffodil

Daffodils are considered harbingers of spring, being among the very first of the spring bulbs to bloom. Depending on what part of the country you hail from, these spring beauties are called Daffodils or Jonquils or Narcissus. Narcissus is the genus name for Daffodils, Jonquils, and Paperwhites. We use the common name daffodil when referring to the large, trumpet-shaped flowers of the *Narcissus pseudonarcissus*. Daffodils have flat leaves and usually one bloom per stem. Jonquils, *Narcissus jonquilla*, have dark green, tube-shaped leaves with several flowers per stem. *Narcissus tazetta papyraceous* are known as Paperwhites and are tender in colder parts of the country. Paperwhite bulbs are often forced for indoor displays during the holiday season. There are hundreds of cultivars in the Genus Narcissus. For the purposes of this discussion, we will refer to the entire group as Daffodils. Whether you call them Daffodils, or Jonquils, or Narcissus, they usually have few disease problems. The Plant Health Clinic does occasionally receive a sample of Daffodils with what is known as Bud Blast. Extreme environmental conditions such as a hard freeze or hot spell at a critical time may cause the buds to dry out and turn brown before opening. Drought conditions during the growing period may contribute to the problem. Slow-release fertilizers rich in potassium applied in the fall helps with preventing Bud Blast. If this becomes a chronic problem in your garden, look for daffodils which are resistant to blast, such as: 'Tahiti', 'Unique', 'Sir Winston Churchill' and others. Occasionally, we hear complaints of Daffodils failing to set buds altogether. This occurs when bulbs are set too shallowly. Shallow planting encourages the bulb to offset small bulblets that are too small to flower. Daffodils should be planted 6-9 inches deep and covered with several inches of mulch to protect against ground heaving during freezes. . They may also fail to set buds if the foliage is cut off right after bloom the previous year. Spent foliage should be left after bloom for at least eight weeks.

Daffodil Bud Blast-Abiotic

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Tulip

Several species of Phytophthora attack tulip bulbs. Bulbs that are planted in heavy, continually wet soils are most susceptible to infection. The zoospores of the pathogen are attracted to the bulb as soon as it produces roots. Phytophthora moves from the roots through the basal plate of the flowering stem. If

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this occurs early, no stem is produced. If infection of the flower stalk occurs after the stalk is up, no flower is produced because the stalk becomes rotted at the base (shanking). If a flower is produced, it will be of inferior quality. The entire bulb becomes colonized with Phytophthora and rots in the ground. It is critical that tulips be planted in soils with excellent drainage. They should NOT be planted in a bed with a history of the disease. There are no chemical treatments effective for bulbs already rotted. Homeowners may use Actinovate Lawn and Garden Biological Fungicide as a preventative but will have to order it over the internet. Commercial growers may use Subdue Maxx, or Aliette, or Segway, or Stature, or Banrot, or Fenstop, or Hurricane, or Adorn, or Segovis, or Insignia, or Alude, or Compass O, or Strike Plus.

Tulip Bulb and Shank Rot- *Phytophthora* spp.

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Blueberry

Soon it will be time to start scouting for Mummyberry, caused by *Monilinia vaccinii-corymbosi.* If you miss the narrow window for seeing it on leaves and stems, the disease will be undetectable until your berries become symptomatic. The first symptom of Mummyberry is wilting of developing leaves and shoots in the spring, followed within 24 hours by browning of the upper side of bent shoots, midribs, and lateral veins of leaves. Infected shoots, leaves, and flowers are killed within 3 days after initial symptoms appear. Dead leaves and flowers eventually fall off the plant. Plants are then free of symptoms until berries start to ripen. Berries that are infected become cream to salmon pink, then tan or whitish gray. The mummified berries shrivel and harden, and then drop to the ground. These mummies are called pseudosclerotia. They germinate to form apothecia which resemble tiny mushrooms. The apothecia produce the ascospores that infect new tissue in the spring. Conidiophores and conidia are produced on the tissue infected by ascospores and cause secondary infections of berries. Control of Mummyberry needs to be a combination of good cultural practices and fungicide treatments. In the fall, before leaf drop, shallowly cultivate to bury mummies. In early spring around budbreak, destroy developing apothecia by raking or cultivating soil. Some growers pile soil from between the rows at the base of the bushes and between the bushes to bury the mummies. They rake soil back into the rows later in spring after apothecia are gone. Practice good weed

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control and plant tolerant cultivars. Lime sulfur applied during the dormant season helps control Mummyberry. Captan, Captevate, Abound, Cabrio, Pristine, Indar, and Switch are labeled for Mummyberry control during the growing season. Applications should begin at green tip and pink bud stage. Read labels for complete directions.

Arándano by Keiddy Urrea

Se acerca el momento de empezar a revisar las plantas de arándano para detectar la enfermedad conocida como momificacion de los frutos (Mummyberry). Esta enfermedad es causada por el hongo *Monilinia vacinii-corymbosi*. Existe poco tiempo donde se pueden observar síntomas de la enfermedad en las hojas y tallos, después de este tiempo la enfermedad no se puede detectar fácilmente porque se vuelve asintomática. Los primeros síntomas de la momificación de los frutos se presentan en la primavera con marchitamiento de las hojas y las puntas de los tallos; pasadas 24 horas las hojas, nervadura central y lateral toman una coloración marrón. Después de 3 días de la aparición de los primeros síntomas, los tallos, ramas y flores infectadas mueren. Las hojas y flores muertas se desprenden fácilmente de la planta. En este momento no se pueden identificar síntomas de la enfermedad hasta que las frutas empiezan a madurar. Las frutas infectadas con *Monilinia vacinii-corymbosi* adquieren un color rojo – salmón claro y luego se tornan grises y caen al suelo. El hongo forma estructuras en estas frutas momificadas llamadas “apotecia”, en los cuales se produce esporas llamadas ascosporas, las cuales que sirven de inoculo para el siguiente año. Este hongo casusa infecciones secundarias cuando las ascosporas germinan y producen otro tipo de esporas asexuales llamadas “conidios”, las cuales infectan tejido sano de la planta. El control de esta enfermedad debe hacer la combinación de practicas sanitarias en el cultivo y la aplicación de fungicidas. En el otoño previo a que a la caída de las hojas se deben enterrar las frutas momificadas. En el comienzo de la primavera cuando las nuevas yemas empiezan a brotar, se recomienda enterrar o rastrillar las frutas momificadas que quedaron de la cosecha anterior. Se recomienda hacer un buen control de malezas y plantar cultivares con ciertos niveles de resistencia a la enfermedad. Se recomienda la aplicación de azufre de cal en el otoño. Aplicaciones de fungicidas como: Captan, Captevate, Abound, Cabrio, Pristine, Indar, and Switch se pueden emezar cuando las primeras yermas aparecen (green tip and pink but stage). Se recomienda seguir las indicaciones de las etiquetas para la aplicación de estos productos.

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Blueberry Mummyberry-*Monilinia vacinii-corymbosi*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

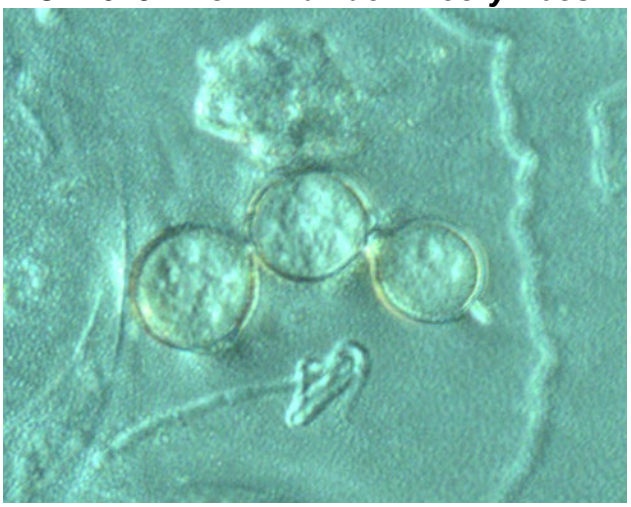
Blueberry Mummyberry-*Monilinia vacinii-corymbosi*

Photo by University of Georgia Plant Pathology Archive, University of Georgia, Bugwood.org1496520

Blueberry Mummyberry-*Monilinia vacinii-corymbosi*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Blueberry Mummyberry Conidia- *Monilinia vacinii-corymbosi*



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Blueberry Mummyberry Conidia-*Monilinia vacinii-corymbosi*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Blueberry Mummyberry Apothecia-*Monilinia vacinii-corymbosi*

Photo by University of Georgia Plant Pathology Archive, University of Georgia, Bugwood.org

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.

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