Chrysanthemums — Are They Annuals or Perennials?

By Pat Dickey, Fairfax Master Gardener

We know that fall has arrived when we see colorful Chrysanthemums at local nurseries and stores. They are a favorite flower for the fall growing season, adding that pop of color where the petunias and other annuals fade in the flower bed in front of your home or in that urn at your entryway.

Chrysanthemums spp, better known as mums, were first grown in China in 15th century BC as a flowering herb for a headache remedy, and the leaves were brewed as a festive drink. Karl Linnaeus, a Swedish botanist, introduced chrysanthemums to the Western world in the 17th century, but the flowers were small, yellow and shaped like daisies, not like we see today. Flower hybridists in the US, as well as in England, France and Japan, have continued to develop countless shapes, sizes and colors of chrysanthemums since then. Mums are now available in pink, purple, red, yellow, bronze, orange and white. Their shapes now include pompom, daisy, cushion, anemone and spider, among others. Today, they are the most widely-grown potted flowers.

Elaborate varieties of mums that you see in nurseries and at florists have been grown in a greenhouse environment and pinched continuously to produce an abundance of tiny flower buds ready to bloom for that special event or party. These potted mums are best treated as annuals. Since they have given most of their energy to producing the flower buds, their root systems are not well developed enough to adapt to cold winter temperatures. Remember to purchase mums that have not already bloomed so that they last longer in your garden.

Garden or hardy varieties of mums are also available to purchase if you want to grow them as perennials. They usually are more natural and leggy in appearance than the mounded varieties. In this area, they should be treated like tender perennials, since our unpredictably cold winters could hinder their survival until spring. The earlier they are planted in the ground, the better established they will be. They should be sited in full sun and in well-drained fertile soil. When planting garden mums, make sure the planting hole is a few inches larger than the root ball, and that the root ball is level with the ground. Then mulch them lightly and keep them watered regularly. Deadhead the flowers when they turn brown, but do not remove any of the foliage to protect the plants' crowns for the winter ahead. You may want to add additional mulch material to your garden mums,

spider mums

such as straw or evergreen boughs, to protect the plants from the cold. Or, you can move them to a more protected area, such as a garage, if frigid temperatures are predicted.

When spring arrives, new growth will begin to emerge from the crowns. This is the time to cut back the old stems. Fertilize every three to four weeks with an all-purpose fertilizer. Stop fertilizing at the end of August since excessive fertilizing can weaken the plants and reduce flowering. Mums need to be pinched back throughout the summer so that the plants produce more blooms late in the season. Begin pinching when they reach 5 inches in height. Remove 1 to 2 inches of new growth every two to three weeks. Continue to pinch the plants back until mid-July. Blooms should begin to appear in three to four weeks.


football mums

Chrysanthemums are subject to Pythium root rot, bacterial blight and web blight. Consult the 2017 VCE Pest Management Guide for pesticide applications in severe cases, at Chapter 4, Control of Ornamental Diseases.

References

- Chrysanthemums care (fact sheet), Merrifield Garden Center. Thank you to the staff at Merrifield Garden Center for their expertise and help with my questions about mums.
- National Chrysanthemum Society, USA
- Control of Ornamental Diseases, 2017 Virginia Cooperative Extension Pest Management Guide, p. 4-7, Table 4.1

What is this pest?
The technical term for crape myrtle bark scale is *Eriococcus lagerstroemiae*, a type of invasive felt scale from Asia related to the azalea bark scale and oak eriococcin scale. According to the Mississippi State University Extension Office, adult females produce a white, felt-like sac around their bodies and lay approximately 100 to 300 pink eggs inside this sac. Eggs hatch into tiny pink crawlers, and the older nymphs are pink, gray or brown. Adult males, rarely seen, are winged and mobile. They can complete two to four generations per year in the Southeast.

What does it look like on the tree?
Fluffy white and gray tiny bumps with sooty mold will be seen on the bark and twigs. Sooty mold is a black fungus that grows on honeydew, the excrement of aphids and scales. As compared to soft or hard scales, these scales feel like felt when touched. Pink blood-like fluid runs out when they are crushed. On young branches, the scales may cluster on the underside away from direct sun.

How does it spread?
Long distance infestation comes from unknowingly planting purchased infected plants. Once on a tree, the scale can spread by wind, or crawlers in contact with birds, flying insects, small animals or people. Once in an area, it spreads rapidly from tree to tree, even when trees are hundreds of feet apart. Heavy infestations

may also extend to the leaves and on nearby low-growing plants, grass and mulch. Pruning or removing an infected tree may expand its spread to crape myrtles along the path of removal to disposal unless done with extreme caution.

Where did it come from?
CMBS was first discovered on crape myrtle trees in the United States in the Dallas/Fort Worth area in 2004, probably on an infested nursery stock import, and has been rapidly spreading to cover 13 states. It reached Mississippi in the spring of 2015, North Carolina in August 2016 and Virginia Beach, Virginia in January of 2017.

Does it hurt the tree?
According to the North Carolina Forest Service, CMBS can cause considerable damage to crape myrtle trees, including stunted growth, branch dieback, reduced flowering and limit photosynthesis capabilities. It does not kill the tree, but it is very unattractive and weakens the tree.

How do we get rid of it?

- Inspect plants for felt scale before purchase and avoid it.
- Plant another selection instead.
- Use a systemic soil-applied or foliar insecticide spray for treatment. (Horticultural oils and lady bugs as predators are only mildly effective.)
- Soil-applied Insecticide. The Extension Office of the Mississippi State University has recommended soil-applied insecticide crape myrtle bark scale treatments showing charts for both homeowners and professionals. Treatments that have proven most effective are the ones that contain active ingredients including very low doses of dinotefuran, imidacloprid, a combination of imidacloprid + clothianodin, or thiamethoxam. The best time to apply soil systemic pesticides is after the leaves begin to bud out, and these treatments take several weeks to work. (Crawler sprays with insect growth regulators, with products containing pyriproxyfen or buprofezin, can supplement soil-applied systemic treatments for more aggressive control.) Note that pesticide users are required by law to follow the usage directions on the container.
- Contact Spray. The Texas A&M Extension Service also recommends the option of a contact spray with an insecticide such as Bifenthrin. The bark scale are targeted in their immature stage at their peak (later than for systemic pesticides) and then two weeks later to catch those that have emerged following the first treatment. Again, note that pesticide users are required by law to follow the usage directions on the container.
- For either the soil or spray method, the sooty mold will still remain unless removed. Heavier accumulations can be scrubbed off with a soft-bristle brush, water and a bit of dishwashing liquid. Scrubbing the sooty mold before applying the pesticide will make the control more effective. Washing alone will not stop it.

Can this be confused with anything else?
The crape myrtle aphid also causes sooty mold, but does not have scales.

Conclusion
CMBS is an invasive pest on crape myrtles that is spreading quickly. It is difficult to control, but early identification, knowledge and a pro-active plan of attack are key to managing the potential damage. If you suspect that you have this pest, please immediately contact the Virginia Cooperative Extension Office.

References

- News -- *We hate to report that crape myrtle bark scale is here*, Oct-Dec. 2016 Newsletter, Virginia Landscape Nursery Association
- Crape Myrtle Bark Scale: A New Exotic Pest, Pub. EHT-049 3/14, Texas A&M AgriLife Extension

- Crape Myrtle Bark Scale Identification and Control, Pub. 2938 (POD-02-16) Mississippi State University Extension
- Crape Myrtle Bark Scale: New Tree Pest Has Arrived in NC, post by Dr. Frank, NC State Extension
- New scale insect threatens the South's beloved crape myrtle, North Carolina Forestry Service
- Crape myrtle bark scale study reveals tree treatments to fight pest, Texas A&M University