

# Crapemyrtle Management

## Introduction

The crapemyrtle (*Lagerstroemia indica*) arrived in the United States in the late 18<sup>th</sup> century. Native to Asia and Australia, it has become very popular in North Central Texas and in 11 other states across the southern U.S. It may be considered a tree or large shrub thriving in warm temperatures in USDA Hardiness Zones 7-10 and comparable climates around the globe.

Its popularity has mushroomed because of prolific flowering, overall hardiness, vigorous growth habit and the development of dozens of cultivars. These new cultivars feature a variety of bloom colors including white and multiple shades of red, pink and purple. Leaf color also includes various shades of green and purple.

Because the crapemyrtle has the capacity to produce significant blooming throughout the growing season, a comprehensive management protocol should be considered to maximize that potential. There are four primary tenets of effective crapemyrtle management that should be addressed; these include selection/placement, pruning, insect/disease control and fertilization.

## Selection

Proper selection and placement are the foundation for growing healthy, showy specimens. Although legacy varieties have been documented at over 100 feet in height, modern cultivars available in North Texas typically range from three feet to 30 feet tall and wide. It is critical to select the proper variety to match the desired planting space.

In addition, crapemyrtles need a minimum of seven hours of direct sunlight daily to maximize overall health and bloom potential. All too often, they are planted as an understory resulting in a weakened, underperforming condition. Furthermore, selection and placement may significantly affect the need for pruning, insect and disease control as discussed below.

## Pruning

Pruning may be the most misunderstood and misapplied practice in crapemyrtle management. Frankly, pruning boils down to one simple question: Is it necessary?

The following bullet points can help answer this question:

- If a suitable cultivar has been selected and positioned properly, thus allowing the plant to branch and spread naturally, little-to-no pruning will be necessary.
- Removing old blooms and seed pods can help extend the blooming cycle into fall; however, as the tree matures, this practice will be difficult on the large varieties.
- Trimming old blooms and seed pods notwithstanding, the best time for “light” pruning is mid-late winter. Light pruning at the top of the canopy can spur new growth which may result in additional flowering.
- Care must be taken, however, to avoid pollarding. This is otherwise known as “crape murder” and involves cutting back the upper crown by 50% or more. In most cases, this is done to crapemyrtles that have outgrown their space resulting from improper selection and placement. The practice of pollarding can result in compromising the plant’s structural integrity, stunted growth and significantly reduced blooming.

- Removal of dead or diseased branches can (and should be) removed as needed by making the cut at a branch junction or at the base of the plant.
- If a single-trunk tree is the goal, a “primary” stem needs to be identified, and all surrounding stems should be removed at the base. The smaller the plant, the easier it will be to “train” for the single trunk effect.
- Some crapemyrtles may have very dense canopies possibly requiring thinning to allow increased air flow and sunlight; this will help mitigate potential insect and disease issues. Again, branches selected for removal should be cut at a branch junction or at the base of the plant.

## **Insect/Disease Control**

There are two primary insect species in North Texas that can significantly affect crape myrtles. These include the crapemyrtle bark scale (*Eriococcus lagerstroemiae*) and crapemyrtle aphid (*Tinocallis kahawaluokalani*).

The crapemyrtle bark scale, an introduced species native to Southeast Asia, was first reported in the United States near Dallas, Texas in 2004. Since its discovery, this pest has spread to at least 11 additional states across the southern U.S. An infestation can be visually identified by the presence of small, white scale-like insects (1/8” or less in length) on the bark of trunks and stems. When crushed, the scale will “bleed” a pink fluid known as hemolymph. The immature stage of scale (crawlers) penetrates the bark and feeds on vascular tissue producing a substance known as “honeydew.” This is the leftover sugary solution from feeding on sap visible on the trunk/stems as a black, sooty mold. Heavy populations rarely cause the demise of the plant but can result in poor aesthetics, decreased blooming and reduced plant vigor.

Regarding the life cycle, eggs are laid in May to September possibly producing as many as three generations per year in North Texas, although a fourth suspected generation has been observed in the Dallas, Texas area. It is possible for adult females, eggs and some immature crawlers to overwinter under the loose bark and in cracks and crevices of the tree. While adult males are winged, females are wingless and, along with immature crawlers, can be spread via birds or wind. Longer distance transport likely occurs with infested plant material moved from one location to another.

Control of bark scale may include mechanical, biological and chemical methods:

- Mechanical:
  - \*Remove light scale/sooty mold with soft brush and soapy water (may not provide lasting control).
  - \*For isolated, more heavily infested branches, removal of those branches may provide some suppression of the population.
- Biological:
  - \*At this point, the most effective option seems to be lady beetles.
  - \*Experiments regarding the protection of lady beetle populations when using certain synthetic chemicals indicate the importance of the role lady beetles have in suppressing bark scale populations.
- Chemical: Synthetic and Organic

\*There are two basic chemical modes of action when using chemical options, contact and systemic.

\*The contact mode involves the insect having to directly come into contact with the chemical as it is applied or shortly thereafter.

\*The systemic mode involves the insect ingesting the chemical as it feeds on the plant; the product has been absorbed into the plant via the roots or leaves (translaminar).

The crapemyrtle aphid is also a common pest in the North Texas area. It was first described in Hawaii and named for the queen, Kahawaluokalani. It is small, about 1/16" long, pale greenish-yellow with black spots on the abdomen. These aphids are monophagous; they feed on one plant species and will not move from the crapemyrtle to other plants.

These aphids feed by inserting slender mouthparts into leaves and sucking out sap that is rich in sugars. They also inject saliva while feeding causing pale yellow spots on the leaves. Like the bark scale, they secrete a honeydew that is initially shiny and sticky but will turn to a sooty mold. Again, as with bark scale, heavy feeding results in poor aesthetics, decreased blooming and reduced plant vigor.

Eggs begin hatching in April and will give rise to living young the entire growing season producing many generations per year. Winged forms migrate throughout the growing season to start new colonies, and the last generation of the year will lay eggs that will overwinter on the crapemyrtle.

Control measures for this pest closely mirror those used on bark scale, with a couple of differences. There is a wider range of the aphid's natural enemies including lady beetles, green lacewings, hoverfly maggots, parasitic wasps and entomophagous fungi. Additionally, since aphids are primarily leaf feeders rather than bark feeders, they can be treated with systemic insecticides that are absorbed through the leaves.

There are three primary diseases of crapemyrtles in North Texas:

1. Powdery mildew (*Erysiphe lagerstroemiae*)
2. *Cercospora* leaf spot
3. Sooty mold

Powdery mildew is a white to greyish powdery growth appearing on the surfaces of leaves, flowers and new shoots. Occurring primarily spring and fall, infected parts of the plant can be distorted and stunted. It is most prevalent in damp, shady areas where plants are crowded and air circulation is poor.

The most effective control measures include locating plants in full sun with adequate circulation and removing diseased twigs, stems and branches. New sprouts at the base of the plant (suckers) should also be removed since they are particularly susceptible to infestation. In addition, disease resistant varieties may also be considered. If the disease is severe enough to warrant further control measures, chemical options, both organic and synthetic, are available.

*Cercospora* leaf spot is a fungal disease and typically appears during periods of warm, moist weather. Yellow spots up to 1/4" in diameter appear while grayish-white spores reproduce on the undersides of leaves. The result can be almost complete defoliation of the tree in late summer and fall.

Again, selection of resistant varieties and proper placement can help avoid this disease. If *Cercospora* does appear, early detection of symptoms is critical in treating with fungicides and minimization of potential damage.

Interestingly, sooty mold is a disease caused not by environmental factors but by an insect. As previously discussed, scale and aphids secrete a substance called honeydew as they feed. Fungal spores will begin to appear and eventually turn black on the bark and/or leaves. The key, therefore, is to control scale and aphid populations as outlined above to prevent sooty mold.

The last component of a comprehensive crapemyrtle management program is fertilization. Established crapemyrtles are said to be “heavy feeders” and are more prolific bloomers when fed often. Frequent fertilization helps maintain new growth; crapemyrtles bloom only on new growth. In fact, one recommendation is to lightly feed established plants every two weeks through the growing season with a balanced 10-10-10 liquid or granular formulation. However, slow-release fertilizers may be used to reduce the frequency of feeding. Additionally, a thorough watering should always follow fertilizing, along with weekly watering in hot, dry conditions.

Fertilizing should be discontinued in fall in addition to watering less often. This will help the plant to “harden off” in preparation for dormancy, helping the plant to withstand colder, drier conditions.

There are practical, cost-effective options when considering a crapemyrtle management protocol resulting in healthy, vigorous trees with a maximized bloom potential. Any questions regarding this process or any information presented may be directed to The Greenery at 972-617-5459 or Ken Burks at 214-949-7022.