

**Evaluation of Imidacloprid  
for Control of Crapemyrtle Bark Scale  
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Year - 2016  
Gregg County**

**Summary:**

In the genus *Acanthacoccus*, the scale is a type of felt or bark scale. Its closest cousin is the Azalea bark scale, but that species has never been associated with crape myrtle before. Current evidence suggests that the scale may be a migrant from Asia, *Acanthacoccus lagerstroemia*, which is common on the timber tree *Lagerstroemia indica* in Japan and China.

*A. lagerstroemia* is commonly referred to as the crapemyrtle bark scale, as it infests bark and has thus far only been found on landscape crapemyrtles (*Lagerstroemia spp.*) in the US.

One of the first signs of an crapemyrtle bark scale infestation is white spots on the trunk and black (sooty mold) coating that appears on the bark of the trunk and on the branches of crape myrtles (see picture). Leaves and limbs may feel sticky from byproducts of the insect's feeding. The adult insects appear as white, waxy encrustations likely to occur anywhere on the plant, but often near pruning wounds or in branch crotches. Up close, the crapemyrtle bark scale is white to gray in color. Adult female scales "bleed" a pink liquid when crushed. Careful examination may reveal dozens of pink eggs under some of the larger white scale covers.



**Objective:**

The objective is to find a reasonable treatment to manage the crapemyrtle bark scale for homeowners. This also involves timing to treatments to coincide with insect pressure and activity of the bark scale emergence (crawlers). Treatment options are still being explored and that is one of the reasons for this demonstration.



## **Materials & Methods:**

On March 14, 2016, weekly evaluations were started using double sided sticky tape to trap the bark scale crawlers (immature stage of the scale) to try to establish when the scale insects had emerged and were active on six crapemyrtle trees. Crawlers are very hard to see with the naked eye. Tape samples were then sent to entomologist at the Texas A&M Agrilife Research & Extension Center in Overton for counting of crawlers and analysis. This was done each week on Mondays, through early August.

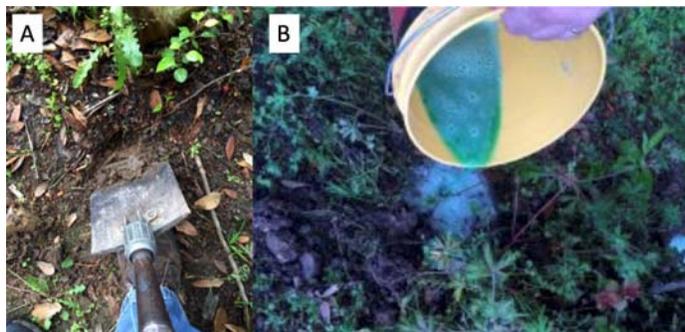


On April 15, 2016, treatment was applied as a soil drench treatment of 1.47% Imidacloprid insecticide. Imidacloprid was mixed and applied at a rate of 1 ounce per inch of trunk diameter, measured at 4.5 feet up the tree trunk. (Figure 1), as per lable instructions. This was applied to three of the six trees. The other three trees served as a control group, with no treatments. On multiple trunk trees, the diameter of all branches were measured and added together and multiplied by 0.75 to acquire the final rate, as instructed on the label.

<b>Tree Number</b>	<b>Total Trunk Diameter (in)</b>	<b>Total Drench Treatment</b>	<b>Total Cost/Tree</b>
1	-	Control	0
2	-	Control	0
3	32	32 ounces	\$13.88
4	19	19 ounces	\$8.27
5	-	Control	0
6	10	10 ounces	\$4.34

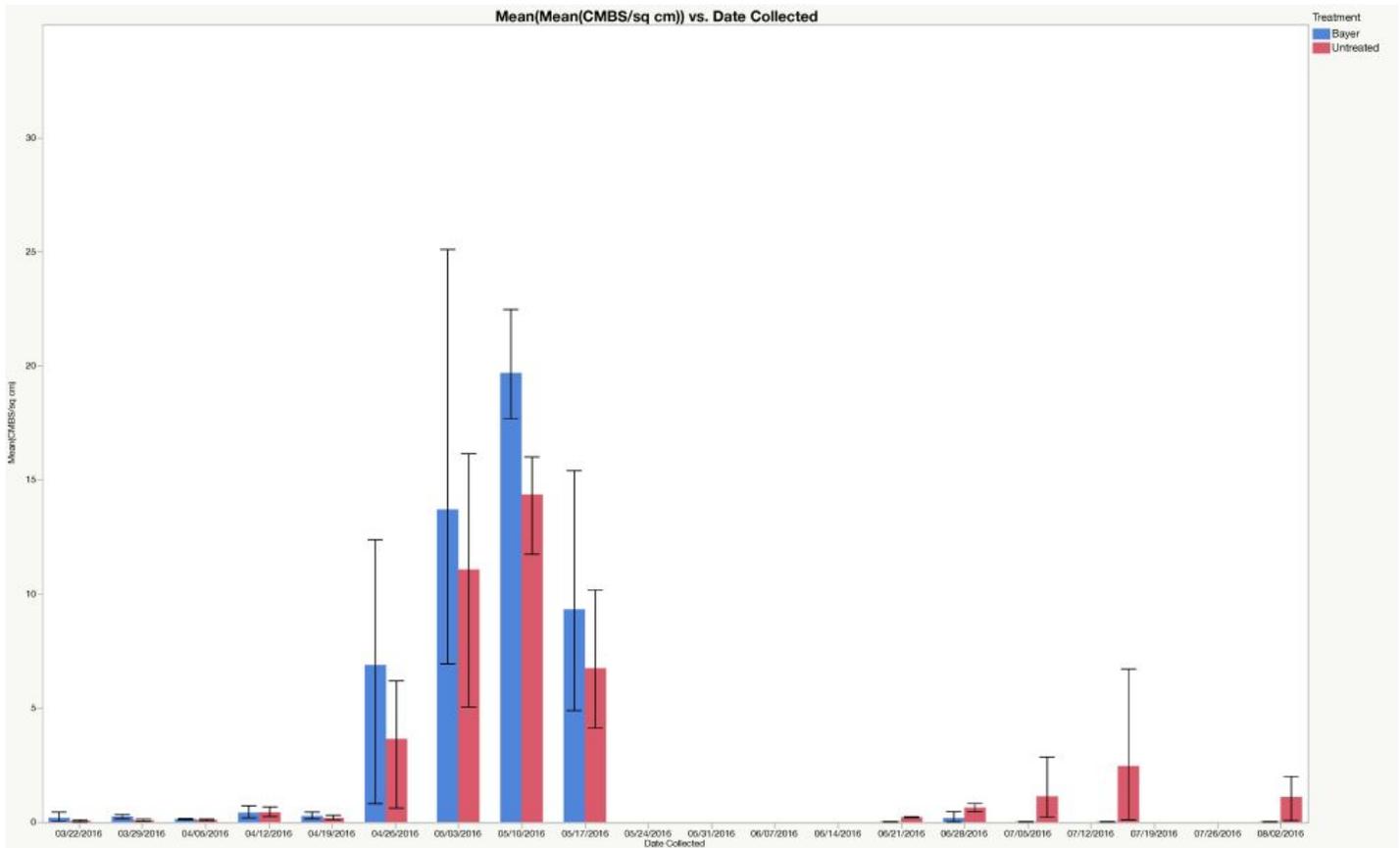
**Figure 1.** Tree, total truck diameter at 4.5 feet off the ground, label rate of product required and cost treatment. Pricing based on 32 oz. of product from public retailers at about \$18.50 after tax.

The weather was partly cloudy and 67 degrees on the day of application. With the concern for rainy weather the days following treatment, shallow holes were dug at the base of each treated tree so that chemical could be poured in and would be held to that area. The holes were approximately three to four inches deep. (Figure 2 A&B).



**Figure 2.** Holes dug for applying soil drench (A) and application of soil drench into the hole near the trunk of the treated trees using a bucket and concentrated product in 1 gallon of water (B).

## Results & Discussion:



**Figure 3.** Average crapemyrtle bark scale crawlers per sq. cm double-sided sticky tape collected weekly from untreated (red) or treated (blue) crapemyrtle trees. Note the difference between the treated and untreated trees in the second half of the season, suggesting that the drench application was effective after sufficient time was given for it to permeate in the plant. Vertical blue dashed line represents date of drench application.

Evaluations were made on a weekly basis from early spring, after application through early August. Insect counts were collected and sent to Overton for analysis by Erfan Vafaie, Extension Program Specialist in Integrated Pest Management, who also supplied the data graph above.



Treated (Bayer Advanced Tree & Shrub, Protect & Feed) *Imidacloprid*



Untreated of Control

Bark scale activity was highest during the months of April through mid May, data was not collected during mid May through mid June due to weather conditions. Control of bark scale “crawlers” was noticed from mid June through early August, as evident from the graph.

This data tells us to allow sixty (60) plus days for the Imidacloprid to move from the roots to the entire plant for control, it also allows time for the chemical to potentially dissipate prior to foraging bee activity with crapemyrtle's blooming later in the summer.

### **Conclusions:**

Treatment of crapemyrtle bark scale can be achieved with planning, by allowing early treatment of infected plants for crepe myrtle bark scale. Again, keep in mind that it is a slow process for the insecticide treatment to reach its potential and to also allow for safer foraging of local bees.

Cost for this demonstration was .43 cents per inch of trunk diameter treated. (On multi-trunked trees, all diameters are combined).

### **Acknowledgments:**

We would like to thank Erfan Vafaie, Extension Program Specialist at the Texas A&M Agrilife Research & Extension Center in Overton for his support, expertise and insect data analysis with this project. Also to Dr. Mike Merchant, Extension Entomologist for his input and coordination into the regional project for the north Texas area as well. Also to the Gregg County Master Gardener Association for their continued support.

### **Disclaimer Clause:**

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