

Scale Insect control

New Scales on Trees and Shrubs

- Crepe Myrtle Bark Scale
- Japanese Maple Scale

During recent years two species of exotic scale-insect pests have continued to expand their range and cause significant damage in nursery and landscape settings: the Crepe Myrtle Bark Scale (CMBS) and the Japanese Maple Scale (JMS). While many scale pests can be found in trees and shrubs these two new scales have moved to the top of the concern list. JMS are found over most of the Eastern US while CMBS is mostly a problem in the South, but spreading rapidly. While these pests represent two distinct groups of scales, they share much of the same life-history and biology. Pest population outbreaks can be controlled using similar programs.

Scale insects feed on sap drawn directly from the plant's vascular system, weakening and inhibiting normal plant growth. Large infestations make plants unattractive and may lead to plant losses. Honeydew produced as a by-product of feeding scales including CMBS may cover plant surfaces including stems, branches, leaves and flowers, and it is a substrate for unsightly, black sooty mold growth development.

Scales develop through three life stages: egg, nymphs, (first instars called crawlers), and adults. Scale development time varies greatly with temperature and other weather conditions and with the host plant but in general scales may survive the winter as adult females or even as eggs or crawlers. As soon as temperatures start to rise in the spring, first generation crawlers begin to establish on new plant tissues and then molt into their true scale form and continue to feed and grow. Males pupate and become winged during the last molt. Females remain sessile and coat themselves with white wax. JMS has 1 to 2 generations per year whereas CMBS may have 2 to 4 generations per year in warmer climates.



Crepe Myrtle Bark Scale – courtesy of Bugwood



Japanese Maple Scale – photo credit- Adam Blalock

Control Strategy for Scales

The key to controlling scale pests is to target the immature stages or crawlers. Crawlers are responsible for the local spread of the pests and are easier to control than later life stages which are protected by a waxy cover. Since there may be multiple generations per year, monitoring to detect active crawlers will determine the best time to take action. The crawlers can be found under loose bark, in cracks and crevices and sheltered under the adult female scales. Dormant oil sprays during the winter or before bud break in the spring can reduce populations of JMS but have not been as effective against CMBS. Systemic insecticides in the spring may help control more than one generation of the pest. Timely applications of insect growth regulators (IGRs) targeting the crawlers have demonstrated efficacy and compatibility with natural enemies and biological control agents.

OHP products registered for control of Scale Insects

OHP Products	Group	Chemical Class	MOA Group	Residual	REI
Triact® 70	Horticultural Oil	Oils	UNE	3 to 7 days	4
Fulcrum®	IGR	Pyridine insect growth regulators	7C	7 to 14 days	12
Discus® L	Insecticide	Pyrethroid + Neonicotinoid	3 + 4A	60 to 90 days	12

OHP Recipe for Success on Scales:

1. Early Spring or late Winter – application of Dormant or Horticultural oil
2. Foliar applications in late Spring or Summer – application of a Horticultural oil, or an appropriate spreader sticker, + Insect Growth Regulator (IGR)
3. Scale infestations can also be addressed with drench applications of systemic insecticide in early spring

OHP Recipe for Success on controlling Scale Insects

Application	Rate per 100 gallons	Rate per gallon	Rate per gallon metric	Remarks
1.) Triact® 70	½ to 1 gal.	3¾ tsp to 7½ tsp	15.75 mL to 37.5 mL	Avoid applications above 90 F or in drought stressed conditions
2.) Triact® 70 + Fulcrum®	½ to 1 gal. + 8 to 12 fl. oz.	3¾ tsp to 7½ tsp + ½ tsp to ¾ tsp	15.75 mL to 37.5 mL + 2.4 mL to 3.6 mL	Apply during active crawler stage
3.) Discus® L	3.4 to 5.6 fl. oz. per 1000 sq ft or 1.1 to 1.9 gal. per acre	0.75 to 1.5 fl. oz. per inch of trunk DBH or per foot of shrub height	22 to 44 mL per inch of trunk DBH or per foot of shrub height	Drench application – Early spring Optimal control achieved with 10 gallons of drench solution per 1000 sq feet

TBS = tablespoon tsp = teaspoon mL = milliliter 1 fl oz = 29.6 mL 1 tsp = 5 mL

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