

## **Efficacy of Management Tools for Armored Scale in Containers Final**

**Ornamental Protocol Number: 09-005**

**Objective:** Determine efficacy of various products against armored scale on ornamental plants in containers. Do not conduct this protocol with in-ground plants..

**Experimental Design:**

**Plot Size:** Must be adequate to reflect actual use conditions.

**Replicates:** Minimum of 6 replications

**Application Instructions:** Applications should be made targeting crawler stage and using application equipment consistent with conventional commercial equipment.

**Target Species:** Camellia, Euonymus, Japanese Maple, and Tea scales. Contact your regional coordinator if other target species are of interest.

**Plant Hosts:** Use a plant host suitable for target scale species, recording species and variety used.

**Use Site:** May be greenhouse or field container . For field in-ground, refer to protocol 09-009.

**Evaluations:** Record initial insect counts and then 7, 14 (prior to 2<sup>nd</sup> application), 28 and 42 days after initial application. Record phytotoxicity at each rating date on a scale of 0 to 10 (0 = no phytotoxicity; 10 = complete kill). If phytotoxicity is observed in treated plants, take pictures comparing treated and untreated plant material.

**Recordkeeping:** Keep detailed records of weather conditions throughout the test including temperature and precipitation, soil-type or soil-less media, application equipment, application volume per acre, irrigation, liner size, plant height & width, and plant growth stage at application and data collection dates.

**Reports:**

Reports submitted on the standard IR-4 Ornamental Horticulture Research Report Form are preferred. However, reports in the AMT Tests format are acceptable as long as those reports are amended with detailed experimental design and materials and methods, along with raw data, recordkeeping information, and any pictures.

A report submitted electronically is preferred but not required. If the report is provided electronically, the basic report can be sent in MS Word or WordPerfect, the recordkeeping information as pdf or other electronic documents, and the raw data in MS Excel or other suitable program such as ARM.

**Please direct questions to:** Cristi Palmer, IR-4 HQ, Rutgers University, 500 College Road East, Suite 201W, Princeton, NJ 08540, Phone 732-932-9575 x4629, [palmer@aesop.rutgers.edu](mailto:palmer@aesop.rutgers.edu) **OR** Ely Vea, 308 Aston Forest Lane, Crownsville, MD 21032, Phone & FAX#: 410-923-4880, E-mail: [evvea@comcast.net](mailto:evvea@comcast.net).

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Revised By: CLP

**Treatments:**

Priority	#	Product	Rate	Application Instructions	Contact Information to obtain materials and any needed adjuvants
A	1	Distance (pyriproxifen)	12 fl oz per 100 gal	Two foliar sprays on a 21 day interval	Valent, Joe Chamberlin, 770-985-0303, <a href="mailto:jcham@valent.com">jcham@valent.com</a>
A	2	Flagship 25WG (thiamethoxam)	8 oz per 100 gal + NIS 0.25% or Capsil at 6-8oz/100 gal	Two foliar sprays on a 14 day interval using 100 gal per acre. Spray to point of runoff to ensure good coverage.	Syngenta, Nancy Rechcigl, 941-238-7413, <a href="mailto:nancy.rehcigl@syngenta.com">nancy.rehcigl@syngenta.com</a>
A	3	Flagship G (thiamethoxam)	20 gm/1 gal container 40 gm/2gal container 60gm/3 gal container	Broadcast evenly around the surface of the growing media	Syngenta, Nancy Rechsigl, 941-708-9338, <a href="mailto:nancy.rehcigl@syngenta.com">nancy.rehcigl@syngenta.com</a>
A	4	NNI-0101 (pyrifluquinazon)	18 fl oz per 100 gal	Foliar	Nichino, James C. Adams, 302-636-9001, <a href="mailto:jadams@nichino.net">jadams@nichino.net</a>
A	5	Safari 20SG (dinotefuran)	Container: 24 oz/ 100 gal	Single soil drench: 4 fl oz of drench solution/ gallon of potting media. Apply evenly to soil surface.	Valent, Joe Chamberlin, 770-985-0303, <a href="mailto:jcham@valent.com">jcham@valent.com</a>
A	6	Safari 2G (dinotefuran)	2.6 grams/ gallon of potting media.	Broadcast with hand shaker around base	Valent, Joe Chamberlin, 770-985-0303, <a href="mailto:jcham@valent.com">jcham@valent.com</a>
S/A	7	Talus (buprofezin)	21.5 fl oz/100 gal	Foliar application	SePro, Todd Bunnell, 317-216-5667, <a href="mailto:toddb@sepro.com">toddb@sepro.com</a>
A	8	TriStar 30SG (acetamiprid)	8 oz per 100gal	Spray to wet; two foliar sprays on a 14 d interval with a wetting agent such as Capsil.	Cleary Chemical, Rick Fletcher, 732-329-8399, <a href="mailto:rick.fletcher@clearychemical.com">rick.fletcher@clearychemical.com</a>
Standards (Pick One)	9a	Orthene TTO	See label directions		
	9b	Horticultural Oil	See label directions		
	9c	Acephate E 75 WP (75% acephate)	0.67 lbs/100 gal	Full coverage spray at crawler stage and every 4 weeks for a maximum of 3 applications.	Nufarm, Darin Allred, 919-655-0061, <a href="mailto:darin.allred@us.nufarm.com">darin.allred@us.nufarm.com</a>
	9d	Chlorpyrifos E-Pro 2 (2 lb ai/gal chlorpyrifos)	2 qts/100 gal	Full coverage spray at crawler stage or early stages of settled scales.	Nufarm, Darin Allred, 919-655-0061, <a href="mailto:darin.allred@us.nufarm.com">darin.allred@us.nufarm.com</a>
	10	Untreated	--	--	--
B		Kontos	3.4	Foliar	OHP, Jeff Dobbs, 770-992-0121, <a href="mailto:jdobbs@OHP.com">jdobbs@OHP.com</a>
		Optional (Kontos)	3.4	Drench	OHP, Jeff Dobbs, 770-992-0121, <a href="mailto:jdobbs@OHP.com">jdobbs@OHP.com</a>