

# Managing Coleopteran Borers in Woody Ornamentals grown in Containers. **Final**

## **Ornamental Protocol Number: 09-004**

**Objective:** Determine efficacy of soil drenches or trunk applications with various products to manage borers of ornamental plants grown in containers. Do not use for field-in-ground plants.

## **Experimental Design:**

**Target Species:** Ambrosia beetles or other suitable species

**Plot Size:** typical group of plants under grower conditions.

**Replicates:** A minimum of 6 replications required if relying on natural field populations.

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

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

**Use Site:** Nursery Container.

**Evaluations:** Use suitable rating scheme to evaluate efficacy within 60 days after adult emergence. Record plant height & width at initial and final evaluations only. 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:**

Prior ity	#	Product	Rate	Application Instructions	Contact Information to obtain materials and any needed adjuvants
		BeetleBlock (verbenone)		If interested in this, contact Ornamental Horticulture Manager. This treatment requires very different applications parameters.	AgBio, Jan Meneley, 303-469-9221, <a href="mailto:agbio@agbio-inc.com">agbio@agbio-inc.com</a>
A	1	DPX-E2Y45	1 quart per 100 gallons	Drench at 4 fl.oz. per gallon of potting media	Dupont, Chuck Silcox, 302-999-5953, <a href="mailto:charles.a.silcox@usa.dupont.com">charles.a.silcox@usa.dupont.com</a>
	2	DPX-HGW86	1 quart per 100 gallons	Drench at 4 fl.oz. per gallon of potting media	Dupont, Chuck Silcox, 302-999-5953, <a href="mailto:charles.a.silcox@usa.dupont.com">charles.a.silcox@usa.dupont.com</a>
	3	Flagship 25WG (thiamethoxam)	8 oz/100 gal	Single soil drench - apply enough solution to sufficiently wet ½ the root zone.	Syngenta, Nancy Rechcigl, 941-238-7413, <a href="mailto:nancy_rehcigl@syngenta.com">nancy_rehcigl@syngenta.com</a>
	4	Safari 20SG (dinotefuran)	Container: 24 oz/100 gal	Single soil drench: apply 4 fl oz of drench solution/ gal of potting media. Evenly apply to soil surface.	Valent, Joe Chamberlin, 770-985-0303, <a href="mailto:jcham@valent.com">jcham@valent.com</a>
		Optional: Safari 2G (dinotefuran)	Container: 2.2 grams per gal of potting media	Evenly sprinkle granules on potting media surface. Do not mix with water.	
	5	Tolfenpyrad	21 fl oz per 100 gal	Apply to run off.	Nichino, James Adams, 302-636-9001 x 8, <a href="mailto:jadams@nichino.net">jadams@nichino.net</a>
6	TriStar 30SG (acetamiprid)	3 – 4 fl oz per inch dbh	Make two applications 28 days apart for best results. Using a low pressure (10-25 PSI), small volume handcan or backpack sprayer, mix 4-8 oz TriStar 30 SG and 3 fl oz (2.5% v/v) of an organo-silicate adjuvant such as Capsil or Pentra-bark per gallon of water. Apply as a full coverage spray starting at the top of the application zone and working downwards to the root flair. One gallon should treat approximately 36-42 total inches of treatment DBH depending on bark surface.	Cleary Chemical, Rick Fletcher, 732-329-8399, <a href="mailto:rick.fletcher@clearychemical.com">rick.fletcher@clearychemical.com</a>	
B		Discus (imidacloprid + cyfluthrin)	44 ml per inch dbh	Soil drench in suitable volume (1 liter per pot)	OHP, Dick Lindquist, 406-587-2562, <a href="mailto:rlindquist@olympichort.com">rlindquist@olympichort.com</a>
C		Scimitar (lambda-cyhalothrin)	5oz/100 gal	Directed spray to the trunk. Use a NIS or Silicone surfactant Application should target ovipositional period.	Syngenta, Nancy Rechcigl, 941-238-7413, <a href="mailto:nancy_rehcigl@syngenta.com">nancy_rehcigl@syngenta.com</a>
Standards	10a	permethrin	See label directions		

(Pick One)	10b	Thiodan (endosulfan)	See label directions		FMC, Bobby Walls, 919-735-3862, <a href="mailto:bobby_walls@fmc.com">bobby_walls@fmc.com</a>
	10c	Onyx (bifenthrin)	<u>Bark Borers:</u> 1 pint per 100 gallons 2 pints per 100 gallons	Apply as a trunk spray	
			<u>Other borers:</u> Ash borer, banded ash clearwing borer, Dogwood borer, Lesser peachtree borer, Lilac borer, Oak borer, Bronze Birch Borer, and Flatheaded appletree borer.		
			8 oz per 100 gal 12.8 oz per 100 gal		
	11	Untreated	--	--	--