

Managing Coleopteran Borers in Woody Ornamentals grown in Ground. **Final**

Ornamental Protocol Number: 09-008

Objective: Determine efficacy of soil drenches or trunk applications with various products against borers in various products to managing borers of ornamental plants.

Experimental Design:

Target Species: Ambrosia beetles or other suitable species

Plot Size: May be individual plants in a field setting.

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: Field in-ground; can be nursery, landscape or forest setting.

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 **OR** Ely Vea, 308 Aston Forest Lane, Crownsville, MD 21032, Phone & FAX#: 410-923-4880, E-mail: evvea@comcast.net.

Revision Date: 3/31/09

Revised By: CLP

Treatments:

Prior ity	#	Product	Rate	Application Instructions	Contact Information to obtain materials and any needed adjuvants
A	1	DPX-E2Y45	0.25 fl.oz. per quart of water	Drench to the soil at the base of the trunk (within one foot) in one quart of solution per foot of height or inch of diameter	Dupont, Chuck Silcox, 302-999-5953, charles.a.silcox@usa.dupont.com
	2	DPX-HGW86	0.25 fl.oz. per quart of water	Drench to the soil at the base of the trunk (within one foot) in one quart of solution per foot of height or inch of diameter	Dupont, Chuck Silcox, 302-999-5953, charles.a.silcox@usa.dupont.com
	3	Flagship 25WG (thiamethoxam)	In-ground application: 17 oz/A or 0.09g/linear ft	Directed application as a banded treatment (2-3 ft band) around base of tree .	Syngenta, Nancy Rechcigl, 941-238-7413, nancy_rehcigl@syngenta.com
	4	Safari 20SG (dinotefuran)	In-ground: 12 grams/ inch dbh for trees and 6 grams/ foot of height shrubs	Apply 1-2 quarts of drench solution/ foot of height for shrubs or inch of trunk diameter for trees. Apply to soil at base of trunk within 1 foot of trunk	Valent, Joe Chamberlin, 770-985-0303, jcham@valent.com
		Optional: Safari 2G (dinotefuran)	120 grams/ inch dbh for trees and 60 grams/ foot of height for shrubs	Broadcast dry by hand to the soil at base of trunk within 1 foot of trunk. Rake back mulch first if more than 1/2"	
	5	Tolfenpyrad	21 fl oz per 100 gal	Apply to run off	Nichino, James Adams, 302-636-9001 x 8, jadams@nichino.net
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, rick.fletcher@clearychemical.com	
B		Discus (imidacloprid + cyfluthrin)	44 ml per inch dbh	Soil drench in suitable volume	OHP, Dick Lindquist, 406-587-2562, rlindquist@olympichort.com
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, nancy_rehcigl@syngenta.com
Standards (Pick	10a	permethrin	See label directions		
	10b	Thiodan (endosulfan)	See label directions		

One)	10c	Onyx (bifenthrin)	<u>Bark Borers:</u> 1 pint per 100 gallons 2 pints per 100 gallons	Apply as a trunk spray	FMC, Bobby Walls, 919-735-3862, bobby_walls@fmc.com
			<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	--	--	--