Managing Foliar Feeding Beetles in Woody Ornamentals. FINAL

Ornamental Protocol Number: 09-017
Objective: Determine efficacy of various products against foliar feeding beetles of ornamental plants.

Experimental Design:

Target Species: Japanese Beetle Adults

Plot Size: Suitable for appropriate data collection.

Replicates: Minimum of 6 replications if using insects caged on treated plants. A minimum of 8 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 scale species, recording species and variety used.

Use Site: Field in-ground or container.

Evaluations: Use suitable rating scheme to evaluate efficacy at 0, 1 week, 2 weeks, 1 month, and, if suitable with target species, 3 and 6 months after application. 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.

Revision Date: 1/21/09
Revised By: CLP

Treatments:

Priority	#	Product	Rate	Application Instructions	Contact Information to obtain materials and any needed adjuvants
A	1	BAS 320i (metaflumizone)	16 oz per 100 gal	Foliar spray. Use 2 – 4 applications at 7 day intervals, based on pest pressure.	BASF, Kathie Kalmowitz, 919-270-4592, kathie.kalmowitz@basf.com
	2	Celero 16WSG (clothianadin)	4 oz per 100 gal		Arysta, Doug Houseworth, 904-321-0795, LlHouse9@aol.com
	3	DPX-E2Y45	10 fl oz per 100 gal	Apply to run off	Dupont, Chuck Silcox, 302-999-5953, charles.a.silcox@usa.dupont.com
	4	Safari 20SG (dinotefuron) Choose one of the three methods:	8 oz/ 100 gal	Foliar spray	Valent, Joe Chamberlin, 770-985-0303, jcham@valent.com
			24 oz/ 100 gal	Container soil drench: 4 oz solution/ gallon of potting media	
			In-ground soil drench: 12 grams/ inch dbh for trees and 6 grams/ foot of height shrubs.	Apply 1-2 quarts/ foot of height for shrubs or inch of trunk diameter for trees. Apply to soil at base of trunk within 1 foot of trunk.	
		Optional: V-10112 2G (dinotefuron)	120 grams/ inch dbh for trees and 60 grams/ foot of height for shrubs. Container: 2.2 grams / gallon of potting media	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	Tick-EX EC (Metarhizium anisopliae F52)	29 oz per 100 gal	Apply to run off	Novozymes Biologicals Inc., Jarrod Leland, 540-302-1225, JRRL@novozymes.com
	6	Tolfenpyrad	14 fl oz per 100 gal OR 21 fl oz per 100 gal	Apply to run off	Nichino, Marie Maks, 302-636-9001 x 3, mmaks@nichino.net
B		Discus (imidacloprid + cyfluthrin)	50 fl oz per 100 gal	Two applications 14 days apart. Do not use wetting agent.	OHP, Dick Lindquist, 406-587-2562, rlindquist@olympichort.com
C		Flagship 25WG (thiamethoxam)	Container: 8 oz/100gal	Apply a volume of solution that is 1/3 the drench volume.	Syngenta, Nancy Rechsigl, 941-708-9338, nancy.rechcigl@syngenta.com
			In-ground and trunk application: 16 oz/A	Directed application as a banded treatment (2-3 ft band) treating 18" up the trunk and ground	
		Allectus (imidacloprid + bifenthrin)	21.3 fl oz per 100 gal	Foliar spray	Bayer, Mike Gorrell, 919-549-2423, mike.gorrell@bayercropscience.com
			27 ml/in dbh	Soil injection	
		UPI 301 (imidacloprid + acephate)	Contact manufacturer for use rates and directions		UPI, Don Guy, 919-567-1489, dguy@upi-usa.com
Standards	10a	bifenthrin	See label directions		

(Pick One)	10b	imidacloprid	See label directions		
	10c	permethrin	See label directions		
	10d	Scimitar (lambda-cyhalothrin)	See label directions		
	10e	Thiodan (endosulfan)	See label directions		
	10f	TriStar (acetamiprid)	96 g per 100 gal	Two sprays 14 days apart. Include wetting agent such as Capsil.	Cleary Chemical, Rick Fletcher, 732-329-8399, rick.fletcher@clearychemical.com
	11	Untreated	--	--	--