

Efficacy of Management Tools for Bacteria. **Final**

Ornamental Protocol Number: 09-002

Objective: Determine efficacy of new active ingredient formulations and new biopesticides for managing bacterial diseases.

Experimental Design:

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

Replicates: Minimum of 4 replications

Application Instructions: See instructions below.

Target Species: *tbd*

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

Use Site: May be greenhouse, field container or field in-ground. Please specify in final report.

Evaluations: Record disease severity and incidence 0, 7, 14, and 28 days after application for herbaceous plant material. For woody plant material, record disease severity and incidence 0, 14, 28, 42 and 56 days after initial 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 including temperature and precipitation, soil-type or soil-less media, application equipment, application volume per area, irrigation, pot/liner size, plant height & width, and plant growth stage at application and data collection dates.

If different application methods or evaluations are made, please clearly specify differences in final report and explain how they enhanced results.

Treatments:

See tables on the following pages. Standards and A priority treatments are in the first table. B and C priority treatments are in the second table.

Reports:

Reports submitted on the standard IR-4 Ornamental Horticulture Research Report Form are preferred. However, reports in the F&N 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.

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Revised By: CLP

Priority A and Standard Treatments List with rates, special application instructions, and contact information to obtain product and any suitable adjuvant needed.

Priority	#	Product	Rates	Reapplication Interval	Special Application Instructions	Contact Information to obtain materials and any needed adjuvants
A	1	Actigard (acibenzolar)	Use 1oz/100 gal for woodies Rate for geranium TBD Use 0.75 oz/100 gal for other herbaceous plants	7 day interval	Make two applications prior to inoculating with the bacterial pathogen—Continue to reapply for 3 -4 weeks on a 7-day interval	Syngenta, Nancy Rechcigl, 941-238-7413, nancy.rehcigl@syngenta.com
	2	Citrex	150 cc /100 liters of water	7 day interval	2 applications prior to inoculating with the bacterial pathogen. Re-apply for 4 weeks on a 7-day interval. Regulate pH at 5.0. An adjuvant is recommended for best results especially in waxy plants	Citrex, Eddie Rutz, 305-857-9830 x208, eddie@citrex.com
	3	HM-0736 (laminarin)	14.4 fl oz/100 gal	7 day interval	2 sprays before inoculation and re-apply for 3 - 4 weeks on a 7 day interval	Agrimar, Ed Hensley, 404-797-3291, Goemar@aol.com
	4	Kasumin (kasugamycin)	45 fl oz/100 gal	7 day interval		Arysta, Doug Houseworth, 904-321-0795, LJHouse9@aol.com
	5	SP2015 (cymoxanil + famoxadone)	12 oz/100 gal	7 day interval		SePro, Todd Bunnell, 317-216-5667, toddb@sepro.com
	6	Taegro (<i>Bacillus subtilis</i> var. <i>amyloliquefaciens</i>)	3.5 oz/100 gal	14 d	Apply Taegro as alternate drench and foliar spray applications. Two drench and 3 foliar applications should be optimal for bacterial disease suppression	Novozymes Biologicals, Lee West, 540-309-3353, LWes@novozymes.com
	7	Tank Mix: SP2015 + CuPRO (cymoxanil + famoxadone + copper hydroxide)	8 oz + 2 lb per 100 gal	7 day interval		SePro, Todd Bunnell, 317-216-5667, toddb@sepro.com
A/B	8	NAI-4201 (tiadanil)	5 fl oz / 100 gals	14 day int	Make all applications as a drench. Make first appl. 14 days prior to inoculation and continue on a 14 day schedule thereafter	Nichino, James Adams, 302-636-9001, jadams@nichino.net
B	9a	cg100	0.8% v:v	7 day interval		Summerdale, Bob Coleman, 608-826-6667, colema95@msu.edu
	9b	Regalia SC (MOI 106)	1%v:v	7 day interval	Apply to near run-off.	Marrone Organic Innovations, Tim Johnson, 570-441-8775, tjohnson@marroneorganics.com
Standards	10	Standard Control 1*	See below	See below	See below	See below

Priority	#	Product	Rates	Reapplication Interval	Special Application Instructions	Contact Information to obtain materials and any needed adjuvants
	11	Standard Control 2*	See below	See below	See below	See below
	12	Untreated Uninoculated	--	--	--	
	13	Untreated Inoculated	--	--	--	

* Select 2 of the four standards below						
Standards	a	Aliette (fosetyl Al)	6.4 to 12.8 oz/100 gal		Apply 2 pints solution per sq ft	Bayer, Mike Gorrell, , mike.gorrell@bayercropscience.com
	b	Cease + Milstop	1% to 2% + 2.5 per 100 gal		Apply as preventative and curative add surfactant Refer to label for specific directions; if host plant is geraniums call contact	BioWorks, Marla Faver, 251-228-1012, mfaver@bioworksinc.com
	c	Dithane, Protect (mancozeb)	See label for specific rate based on plant		Refer to label for directions Protect T/O: Foliar: Tank mix with Alude using 1 pint/100 gallons	Protect T/O: Cleary, Rick Fletcher 800-524-1662 rick.fletcher@clearychemical.com
	d	Copper Compounds	See label for specific rate based on plant		Refer to label for directions	