



Environmental Horticulture Program Research Project Sheet

<https://www.ir4project.org/ehc/ehc-registration-support-research/env-hort-extension-resources/>

Project Name: Bactericide Crop Safety – New Products

New	Ongoing	X	Completed	Duration if ongoing or completed:	2016-2018
------------	----------------	---	------------------	------------------------------------------	-----------

Project Description:

While labels allowing the use of bactericides generally for environmental horticulture crops is fairly common, developing crop safety data is still critical to support these ‘open’ labels. Many labels list the tested crops along with the plant type as well as any crops that might be injured after application. From 2016 through 2018, IR-4 tested one new bactericide to determine impact on potentially sensitive crops.

Research Project Abstract (if available):

Abstract from 2022 TDA-01 Crop Safety Summary

TDA-01 is a new active ingredient for foliar plant pathogens such as bacteria. The IR-4 Project has screened 3 different formulations, completing 28 crop safety trials on 9 environmental horticulture plant species or genera from 2017 through 2021. The first two formulations caused moderate to severe injury, so a third formulation was developed. For TDA-NC-1, only one crop (*Begonia sp.*) exhibited no injury after three consecutive foliar sprays applied at 2 week intervals. The eight other crops have been screened in less than three trials, so no conclusions can be drawn yet.

Target Species (Phytotoxicity, or common and Latin name of arthropod, pathogen, weed):

Crop Safety

Target Crops (list tested crops if ongoing or completed project)

See “IR-4 Crop Safety to Date” below

Target Product(s) (list tested products or numbered compounds if ongoing or completed project)

TDA NC1

Product Registration and Research Status

	Registration Status
Labeled & Commercialized Wide range of ornamental horticulture crops listed	
Labeled & Commercialized Opportunity to add additional ornamental horticulture crops	
Labeled But NOT Commercialized Not yet registered or labeled	TDA NC1
* IR-4 Data contributed to registration decision – either adding pest to label or not pursuing further research	

Other:

Project Pros	Project Cons
1	1

IR-4 Crop Safety Trials to Date

Average rating on a scale of 1 – 5 with 1 = 0 to about no injury and 5 = severe injury and mortality; minimum to maximum rating; number of trials. A rating of 3 or higher is considered commercially unacceptable (*red text*). A rating of 1 or 2 is considered commercially acceptable and those with more than 3 trials are complete (*green text*). ‘Labeled’ indicates that IR-4 generated data in at least one trial and that this crop is listed on the label. For crop/product combinations that are blank, IR-4 has not screened this combination.

Table 1. Bacterial Product Crop Safety

Crop	TDA01 (TDA01)	TDA02 (TDA01)	TDA-NC-1 (TDA)
<i>Begonia sp.</i>	3.0 (3 - 3) n1		1.0 (1 - 1) n3
<i>Capsicum annuum</i>			1.0 (1 - 1) n1
<i>Dahlia sp.</i>	3.0 (3 - 3) n1		1.0 (1 - 1) n1
<i>Euphorbia pulcherrima</i>	3.0 (3 - 3) n1		1.3 (1 - 2) n3
<i>Hydrangea sp.</i>			1.0 (1 - 1) n2
<i>Impatiens hawkeri</i>	3.0 (3 - 3) n1		1.7 (1 - 2) n3
<i>Pelargonium x domesticum</i>	3.0 (3 - 3) n1		2.0 (2 - 2) n1
<i>Pelargonium x hortorum</i>	4.0 (4 - 4) n1	4.0 (4 - 4) n1	1.0 (1 - 1) n1
<i>Zinnia elegans</i>	3.0 (3 - 3) n1	4.0 (4 - 4) n1	1.0 (1 - 1) n1