Objective: Determine phytotoxicity of several new insecticides and miticides as foliar applications to select flowering environmental horticulture plants.

Experimental Design:

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

Replicates: Randomized block design with a minimum of 4 plants per 3 blocks OR completely randomized design with a minimum of 10 plants.

Plant Materials: The list is quite extensive. Please visit the IR-4 website or contact your regional coordinator.

Treatments: See Treatment Table on next page. Test materials should have been stored for no more than 2 years prior to start of experiment. Biological test materials should be requested within 2 weeks prior to first application unless otherwise directed by manufacturer.

Application Instructions: Apply first foliar applications prior to flower bud opening. Repeat applications as noted in the treatment table below. *Add a surfactant to the spray solution* for the foliar applications. Add a surfactant only control to the treatment list if a surfactant is used. Read available labels before making applications. Avoid treating plants under unusually extreme environmental conditions.

Use Site(s): Greenhouse, field container or field in-ground. Please specify in final report.

Evaluations: Record plant height & width at initial and final evaluations. At 1, 2, 3, 4, 5, and 6 weeks after initial application, record phytotoxicity on a scale of 0 to 10 (0 = No phytotoxicity; 10 = Complete kill). If appropriate, also include ratings for chlorosis, defoliation, discoloration, stunting or other growth effects on a scale of 0 to 10 (0 = No effect; 10 = Complete plant affected). A set of photos of plants representing phytotoxicity ratings is encouraged. Please record any issues with flowers, such as damage or flower bud development. If any phytotoxicity is observed in treated plants, take pictures comparing treated and untreated plant material.

Maintenance Applications: Applications during an experiment to manage non target diseases, pests or weeds may be needed to appropriately evaluate efficacy or crop safety. Because of potential negative impacts due to simultaneous or sequential applications of certain products with test materials please avoid applying the following: *None specified.*

If applications must be made of any products on the above list, please contact IR-4 prior to application.

Recordkeeping: All operations, data and observations appropriate to this study should be recorded. It is helpful to preview the Environmental Horticulture Research Report Form in advance. Keep detailed records of weather conditions including temperature, precipitation and/or irrigation, and relative humidity with a minimum of high, low and average daily temperatures. Other information to record includes soil-type or soil-less media, application equipment, irrigation (type & frequency), liner size, plant height & width, and plant growth stage at application and data collection dates. Content of reports should be sufficient to fully understand how the experiment was conducted.

Photographs often illustrate experimental design, site conditions, sampling methods, and impacts of treatments very well. It is encouraged to include a picture or two of the greenhouse, field or landscape where the experiment is sited. It is highly encouraged that pictures illustrating treatment effects are taken if and when these impacts are visually apparent.

If different application methods or evaluations are made, please clearly specify differences in final report and explain reason for change.

Treatments:

Product	Rates (per 100 gal)	Special Instructions
ANEEM	64 fl.oz	Apply 3 times at weekly interval as a foliar spray
	128 fl.oz	
	256 fl.oz	
ISM-555 + Capsil@0.05%	11.5 fl oz	Apply 2 times at 7 day intervals. Apply in sufficient water volume to achieve full coverage.
	23.0 fl oz	
	46.0 fl oz	
Pradia aka IKI 3326 (cyclaniliprole + flonicamid)	12 fl oz	Apply 2 times, 14 days apart. Apply as foliar spray with a minimum water volume of 50 gallons per acre to achieve full coverage
	24 fl oz	
	48 fl oz	
PyClear	7.5 fl.oz	Apply 3 times at weekly interval as a foliar spray
	15 fl.oz	
	30 fl.oz	
SP3014	10 fl oz	Apply 2-3 times on 7-10 day intervals. Use of NIS is preferred.
	20 fl oz	
	40 fl oz	
TetraCURB Concentrate	64 fl oz	No surfactant needed. Apply 3 times at weekly intervals.
	128 fl oz	
	256 fl oz	
TetraCURB Organic	64 fl oz	Surfactant needed. Apply 3 times at weekly intervals.
	128 fl oz	
	256 fl oz	
V-10433 4.23% EC (V-10433)	11 fl oz	Apply 3 times at weekly intervals
	22 fl oz	
	44 fl oz	
Velifer	13 fl oz	
	26 fl oz	
	52 fl oz	
Ventigra (afidopyropen) aka BAS 440 00I	7 fl oz	Apply 2 – 3 times with 7 – 10 day intervals. Make observations on flower buds, flower color and overall plant quality following applications
	14 fl oz	
	28 fl oz	
Untreated	--	--

Sources for Products:

When placing requests for samples, please ensure you include:

- Product
- Amount needed
- First planned application date
- Recipient name
- Recipient shipping address
- Recipient phone number.

Product	Contact	Phone	Email
ANEEM	BioSafe, Vijay Choppakatla		vijayc@biosafesystems.com
ISM-555 & Capsil	Syngenta, Steve Cosky	336-632-7148	steve.cosky@syngenta.com
Pradia	OHP, Carlos Bogran		cbogran@ohp.com
PyClear	BioSafe, Vijay Choppakatla		vijayc@biosafesystems.com

SP3014	SePro, Kyle Briscoe	252-947-5790	kyleb@sepro.com
TetraCURB	Kemin, Emily Fuerst	515-559-5301	Emily.Fuerst@kemin.com
V-10433	Valent, John Pawlak		John.Pawlak@valent.com
Velifer	BASF, Kate Venner	919-547-2916	katelyn.venner@basf.com
Ventigra	BASF, Kate Venner	919-547-2916	katelyn.venner@basf.com

Reports:

*Reports are due **60 days** after last data collection date*.

Submit reports electronically on the standard IR-4 Environmental Horticulture Research Report Form. The basic report can be sent in MS Word, the recordkeeping information as pdf or other electronic documents, the raw data in MS Excel, and photographs can be submitted as picture embedded in the report or as separate jpg, bmp, or tiff files.

Please direct questions to:

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OR
Ely Vea: 410-562-2311, evvea@njaes.rutgers.edu .

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