Objective: Determine efficacy of new active ingredient formulations and new biopesticides for managing powdery mildew.

Experimental Design:

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

Replicates: Minimum of 4.

Application Instructions: Foliar application using approximately 100 gal per acre or the volume needed to achieve full coverage with no runoff. Applications should be made using application equipment consistent with conventional commercial equipment. Calibrate application equipment prior to application. Read available labels before making applications. Avoid treating plants under unusually extreme environmental conditions.

Target Species: *Powdery Mildew*.

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

Use Site: Field Container.

Evaluations: Record disease severity on a scale of 0 to 10 every 7 days until no more meaningful data can be collected. If phytotoxicity is observed in treated plants, take pictures comparing treated and untreated plant material. Record phytotoxicity at each rating date on a scale of 0 to 10 (0 = no phytotoxicity; 10 = complete kill).

Recordkeeping:

All operations, data and observations appropriate to this study should be recorded. It is helpful to review the Ornamental 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, 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:

Priority	#	Product	Rates	0 d	7 d	14 d	21 d	28 d	35 d	42 d
A	1	F9110	20 fl oz per 100 gal	A/e	A/e	A/e	A/e	A/e	e	e
	2	F9110	46 fl oz per 100 gal	A/e	A/e	A/e	A/e	A/e	e	e
	3	IKI-309	3.84 fl oz per 100 gal (30 mL per 100 L)	A/e	A/e	A/e	A/e	A/e	e	e
	4	IKI-309	5.76 fl oz per 100 gal (45 mL per 100 L)	A/e	A/e	A/e	A/e	A/e	e	e
	5	IKI-309	11.52 fl oz per 100 gal (90 mL per 100 L)	A/e	A/e	A/e	A/e	A/e	e	e
B	6	Mural (X4602B)	4.25 oz per 100 gal	A/e	e	A/e	e	A/e	e	e
	7	NF-149 (cyflufenamid)	3.4 fl oz per 100 gal	A/e	e	A/e	e	A/e	e	e
	8	Orkestra	6 fl oz per 100 gal	A/e	e	A/e	e	A/e	e	e
Experimental Controls	9	Chemical Standard (see below)	--							
	10	Water sprayed	--							
Standards (Choose 1 or more)		Banner Maxx (propiconazole)	5 fl oz per 100 gal	A/e	e	A/e	e	A/e	e	e
		Heritage (azoxystrobin)	4 oz per 100 gal	A/e	e	A/e	e	A/e	e	e

A = foliar application at 100 gal per acre or to volume needed to reach full coverage
e = evaluation of visible powdery mildew on plants on a scale of 0 to 10 with 0 = no mildew present and 10 = 100% of foliage covered

Sources for Products:

Product	Contact	Phone	Email
Orkestra	BASF, Kathie Kalmowitz	919-270-4592	kathie.kalmowitz@basf.com
F9110	FMC, Bobby Walls	919-735-3862	bobby.walls@fmc.com
NF-149	Nisso, Pedro Perdomo	212-490-0317	p.perdomo@nissoamerica.com
Mural	Syngenta, Steve Cosky	336-632-7148	steve.cosky@syngenta.com
IKF-309	ISK, Chris Gee	816-635-2040	GeeC@iskbc.com

Reports:

Reports are due 60 days after last data collection date.

Submit reports electronically on the standard IR-4 Ornamental 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 or other suitable program such as ARM, and photographs can be submitted as picture embedded in the report or as separate jpg, bmp, or tiff files.

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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