





## **Spring Ornamentals**

BioWorks delivers a full line of biological solutions to control pests, prevent disease and improve plant health. BioWorks products help you grow all season and produce the highest quality spring ornamentals.

	PEST/DEFICIENCY	CROP STAGE					
DISEASES		PROPAGATION SEEDS, CUTTINGS	GROWING ON	FINISHING			
	Soilborne Diseases	RootShield <i>PLUS</i> <sup>+</sup> WP, RootShield <i>PLUS</i> <sup>+</sup> G	RootShield PLUS* WP				
	Powdery Mildew, Downy Mildew	PERpose Plus, CEASE, MilStop SP	MilStop SP + CEA	ASE, PERpose Plus			
	Fungal Leaf Spot		CEASE + MilStop	SP, PERpose Plus			
	Botrytis	BotryStop, PERpose Plus, CEASE, MilStop SP	BotryStop, MilStop SP + CEASE				
	Bacterial Leaf Spot	CEASE, PERpose Plus					
INSECTS / MITES	Aphids, Whiteflies	BotaniGard 22WP	Paranicand Math V. Cuffoil V. Paranicand MAYV				
	Thrips	Botanigaru 22WP	BotaniGard, Molt-X, SuffOil-X, BotaniGard MAXX				
	Fungus Gnats, Shore Flies	NemaShield	NemaShield, Botan	iGard MAXX, Molt-X			
	Mites		Suff	Oil-X			
	Lepidopterans		Molt-X, BotaniGard E	ES, BotaniGard MAXX			
	Mealybugs	BotaniGard 22WP	SuffOil-X, BotaniGard + I	Molt-X, BotaniGard MAXX			
NUTRITION	Efficient nutrient use and stress reduction	ON-Gard					
	Base fertilizer	Verdanta EcoVita, N-Vita					
	Iron (Fe) deficiency	Verdanta OFE					
	Calcium (Ca) deficiency	ON-Gard CALCIUM					

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## **BioWorks**<sup>®</sup>

## Spring Ornamentals Crop Guide

PRODUCT	REI	PHI	PEST/DEFICIENCY	RECOMMENDED RATE	TYPE OF APPLICATION
RootShield® <i>PLUS</i> + WP*	4-hour	0-day	Damping Off, Pythium, Fusarium, Phytophthora	Drench: 4-8 oz/100 gal Dip (unrooted cuttings): 1.5 oz/5 gal	Drench or Dip at seeding, sticking or transplant. Reapply drench application at 8-10 weeks.
RootShield® PLUS+ G*	4-hour	0-day	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1.5-3 lb/cu yd	Incorporate in potting media.
MilStop® SP*	1-hour	0-day	Powdery Mildew, Downy Mildew, Botrytis, Fungal Leaf Spot	1.25-3 lb/100 gal	Foliar application every 7-14 days. Tank mix rates: CEASE 4-6qt/100gal + MilStop SP 1.25-3 lb/100 gal.
CEASE®*	4-hour	0-day	Bacterial and	4-6 qt/100 gal	Foliar application every 3–7 days. Safe for use with young seedlings.
PERpose Plus®*	0-1-hour	0-day	Fungal Leaf Spot, Powdery Mildew, Downy Mildew, Botrytis	1/3–1 fl oz/gal Mist: 1:1000–1:5000	1/3 fl oz/gal preventative application weekly;1 fl oz/gal curative application.  Mist in propagation: Apply 1:1000 for first week;  1:5000 for remainder of propagation.
BotryStop®*	4-hour	0-day	Botrytis	2-4 lb/100 gal	Foliar application every 7-10 days.
BotaniGard® MAXX	12-hour	0-day		0.5-1 qt/100 gal	Foliar application every 5-10 days.
BotaniGard® / Mycotrol®†	4-hour	0-day	Aphids, Whiteflies, Thrips, Mealybugs, Lepidopterans	WP: Foliar:0.5–2 lb/100 gal Dip: 1.5 oz/5 gal	Foliar application every 5-10 days. For thrips use 1-2 lb/100 gal.
				ES: 0.5-2 qts/100 gal	Foliar application every 5-10 days. For thrips use 1-2 qt/100 gal.
Molt-X®*	4-hour	0-day		8-10 fl oz/100 gal	For foliar application. In tank mix, use 1/2 rate.
SuffOil-X®*	4-hour	0-day	Mites, Aphids, Thrips, Whiteflies, Leafminers, Mealybugs, Scales	1-2% v/v	Foliar application every 7 days. Suppresses Powdery Mildew, Rust. Tank mix partner for leafminer control.
NemaShield®	N/A	N/A	Fungus Gnats, Shore Flies	100-300 million/100 gal	Apply as a drench to the substrate as needed.
Molt-X®*	4-hour	0-day		8 fl oz/100 gal	Apply as a drench. In tank mix, use 1/2 rate.
BotaniGard® MAXX 12-hour 0-day		0-day	Shore Tiles	0.5-1 qt/100 gal	Foliar application every 7–10 days to eliminate adults.
ON-Gard®* (5-0-0)	N/A		Nutrition supplement and stress reduction	Foliar Spray/Drench Dip: 1 qt/100 gal	Pre-plant dip or drench at planting. Re-apply as a drench at 2 week intervals. Low Volume (Fogging): 6.4-11.2 fl oz/ 3 L water.
Verdanta® EcoVita®* (7-5-10)			Base fertilization	3.5–8.5 lb/cu yd soil mix	Incorporate in potting media.
Verdanta® N-Vita®* (9-4-3)		N/A			
Verdanta® OFE (3-0-0 + 3% Fe)			Iron (Fe) deficiency	1 qt/100 gal	Foliar application as needed.
ON-Gard® CALCIUM* (1-0-0 + 5% Ca)			Calcium (Ca) deficiency	8-16 fl oz/100 gal	Apply as a foliar spray at 2 week intervals, as needed.



