

We deliver reliable biological solutions to control pests, prevent disease and improve plant health. For organic and conventional production, our products help you improve yield and grow the highest quality cannabis.



**BioWorks**  
DIVISION OF BIOFIRST GROUP

# CROP GUIDE CANNABIS US INDOOR PRODUCTION

	PEST/DEFICIENCY	CROP STAGE		
		PROPAGATION/SEED/ CLONES	STOCK PLANTS/ VEGETATIVE	HARVEST
<b>DISEASES</b> 	Major root rot and wilt diseases	RootShield® PLUS <sup>+</sup> WP		
	Powdery Mildew, Fungal Leaf Spots	RootShield PLUS <sup>+</sup> G	MilStop® SP, CEASE®, PERpose Plus®	
	Bacterial Leaf Spots		CEASE, PERpose Plus	
	<i>Botrytis</i>		BotryStop® WP, MilStop SP + CEASE	BotryStop WP, MilStop SP + CEASE
	General sanitation; Algae control; Foliar & soil borne fungal & bacterial diseases		PERpose Plus	
<b>INSECTS/ MITES</b> 	Aphids, Thrips, Whiteflies	EpiShield®, PRINCIPLE™ WP	Molt-X®, SuffOil-X®, EpiShield, PRINCIPLE WP	
	Mites	EpiShield	SuffOil-X, EpiShield	
	Caterpillars		Molt-X, PRINCIPLE WP	
	Fungus Gnats		NemaShield®, Molt-X	
<b>NUTRITION</b> 	Increase root development, Enhance nutrient uptake, Improve stress tolerance		ON-Gard®	



ABOVE AND BEYOND IS WHERE WE BEGIN

These products are not approved for use on marijuana (>0.3% THC Cannabis) in all regions. Check with your State Regulatory Agency, Tribe, or county for regulations regarding use of these products on marijuana prior to purchasing or using. Please refer to product labels for complete application instructions. Always read and follow label directions. Additional technical information is available on our website [bioworksinc.com](http://bioworksinc.com) or contact [expert@bioworksinc.com](mailto:expert@bioworksinc.com).

	PRODUCT	REI, PHI	OMRI	PEST/DEFICIENCY	RECOMMENDED RATE	TYPE OF APPLICATION
DISEASES	RootShield PLUS <sup>+</sup> WP <sup>2</sup>	4-hour 0-day	Yes	<i>Phytophthora, Fusarium, Pythium, Rhizoctonia</i> and other soilborne pathogens	Drench: 6 oz/100 gal; or 1.6 g/1 gal (1 level tsp)	Drench in propagation at seeding/sticking clones. Re-apply at transplanting and 6-8 weeks later.
	RootShield PLUS <sup>+</sup> G <sup>2</sup>	4-hour 0-day	Yes		1.5 lb/1 cu yd of mix	Incorporate into growing media prior to planting. Apply RootShield PLUS <sup>+</sup> WP 6-8 weeks after seeding.
	MilStop SP	1-hour 0-day	Yes	Powdery Mildew, <i>Botrytis</i> , Rust, Septoria, Fungal Leaf Spots	1.25-2.5 lb/100 gal/acre; or 0.25-0.5 oz/1 gal/500 sq ft (7-14 g or 0.5-1 Tbsp)	Foliar spray every 1-2 weeks. Spray to glisten, not runoff. Do not add surfactant. Do not lower pH < 8.0. Suspend applications 3 weeks prior to harvest.
	CEASE	4-hour 0-day	Yes	Powdery Mildew, <i>Botrytis</i> , Septoria, Fungal and Bacterial Leaf Spots	4-6 qt/100 gal; or 1.3-1.9 fl oz/1 gal (38-57 ml or 2.5-3.75 Tbsp)	Weekly foliar spray. Shake well before use. Can tank mix with MilStop SP at 1.25 lb/100 gal. Suspend applications 3 weeks prior to harvest.
	PERpose Plus <sup>1</sup>	0-1-hour 0-day	Yes	Algae; Fungal and bacterial diseases; General sanitation	Cutting dip: 1:300 Algae control: 1:100 Foliar spray: 1:100 - 1:300	Foliar spray: Preventative and early flowering 1:300; Curative and late flowering 1:100. Clean up foliar spray: 1:100, 2 times prior to harvest.
	BotryStop WP	4-hour 0-day	Yes	<i>Botrytis, Sclerotinia</i>	3 lb/100 gal/acre; or 0.48 oz/1 gal (13.6 g or 5 tsp)	Preventative foliar spray at onset of flowering. Repeat on 7-10-day intervals or as needed. Suspend applications 4 weeks prior to harvest.
INSECTS / MITES	PRINCIPLE WP	4-hour 0-day	Yes	Aphids, Thrips, Whiteflies, Caterpillars, Root Aphids	0.5-2 lb/100 gal Dip rate: 0.25-0.5 oz/gal	Foliar or drench every 5-10 days. Suspend applications 3 weeks prior to harvest.
	Molt-X <sup>2</sup>	4-hour 0-day	Yes		Foliar spray: 8-10 fl oz/ 100 gal; or 2.4-3 ml/1 gal Drench: 8 fl oz (indoor) or 10 fl oz (outdoor)	Foliar: spray to glisten on a 7-10-day interval. Suspend foliar applications 3 weeks prior to harvest. Drench: use 1 pint/gallon of media; avoid leaching; reapply weekly, 3 times. Optimum pH is 5.5 to 6.5.
	SuffOil-X	4-hour 0-day	Yes	Mites, Aphids, Thrips, Whiteflies; Powdery Mildew	Foliar spray: 1-2 gal/100 gal; or 1.3-2.6 fl oz/1 gal (38-76 ml or 2.5-5 Tbsp)	Spray to glisten, avoid runoff, on 7-10-day intervals. Do not exceed 1% rate in flower. Ensure crop dries in 1-2 hours. Avoid high heat, humidity. Avoid use with sulfur.
	EpiShield	N/A	No	Mites, Aphids, Thrips, Whiteflies, Mealybugs	Foliar spray 9-12 fl oz/100 gal Dip rate 2.7 ml/gal	Foliar spray to glisten on 5-7-day interval or as needed. Do not exceed 9 fl oz rate in flower. Dip unrooted cuttings for 10-30 seconds while moving plants around in solution. Suspend applications 1 week prior to harvest.
	NemaShield	N/A	N/A	Fungus Gnats	100 million/1100-3400 ft <sup>2</sup>	Apply to the substrate every 14 days or as needed.
NUTRITION	ON-Gard (5-0-0) <sup>3</sup>	N/A	Yes	Nutrition supplement and stress reduction	Foliar spray or drench: 5-10 ml/1 gal (1-2 tsp)	Apply to stock plants prior to taking cuttings. Foliar spray or drench on 2-3-week intervals.

Please refer to product labels for complete application instructions. Always read and follow label directions.

<sup>1</sup>Not available for use in CA; <sup>2</sup>Not available for use in AK; <sup>3</sup>Not labeled for use in MT, ND, SD, WY.

Please refer to product labels [bioworksinc.com](http://bioworksinc.com) for fogging application details and rates.

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