

WE'VE GOT YOUR CALIFORNIA CROPS COVERED

Protect your crops from disease and pests through all stages of crop growth. Our portfolio features a broad line of biopesticide products including fungicides, insecticides, miticides, nematocides, and herbicides for California growers like you. Many of our products are OMRI Listed®, NOP-Compliant, feature a low REI, 0 day PHI, and are exempt from residue tolerances.

The Certis Portfolio offers flexibility and proven performance, providing tools that are ideal for resistance management and IPM programs.



*Unless Noted

1.800.250.5024 | www.CertisBio.com



FRUITING VEGETABLE PORTFOLIO








PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA	MADE IN CA
Kocide^{3000-O} <small>FUNGICIDE/BACTERICIDE</small>	Copper Hydroxide	Controls a wide variety of fungal and bacterial diseases on fruit, vegetable, vine, tree nut and field crops.	Bacterial leaf spot	24	0	✓	✓	Varies, see label	Varies, see label	✓	
Javelin[®] <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt kurstaki</i> strain SA-11	Biological insecticide that specifically targets caterpillars. Produces Cry1Aa, Cry1Ab, Cry1Ac and Cry2A toxins for high potency and broad spectrum activity, while including other potency factors due to unique “whole culture” processing. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.5-1 lb/acre	Varies, see label	✓	✓
Agree[®] <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt aizawai</i> strain GC-91	Biological insecticide that specifically targets caterpillars. Produces Cry1Ac toxins for high potency and broad spectrum activity. Also includes Cry1C toxins for armyworm activity and resistance management. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.5-2 lbs/acre	3-7 days	✓	✓
Seduce[®] <small>INSECT BAIT</small>	Spinosad	A spinosad bait that attracts and kills ants, earwigs, and cutworms.	Ants, cutworms, and earwigs	4	*	✓	✓	20-44 lbs/acre	Varies, see label	✓	
LifeGard[®] <small>BIOLOGICAL PLANT ACTIVATOR</small>	<i>Bacillus mycoides</i> isolate J	Contains a beneficial bacterium that activates the natural immune defenses within the plant, helping fight against a wide variety of bacterial, fungal, and viral diseases.	<i>Botrytis</i> , Fire blight, fruit rots, powdery mildew, white mold	4	0	✓	✓	4.5 oz/100 gal (1.0 - 4.5 oz/acre)	Varies, see label	✓	✓
Sil-MATRIX[®] <small>FUNGICIDE / MITTICIDE / INSECTICIDE</small>	Potassium Silicate	Forms a physical barrier on the leaf surface that prevents infection by fungal diseases. Also acts as a contact desiccant and feeding deterrent against insects and mites.	Aphids, Mites, Whiteflies, Powdery mildew	4	0	✓	✓	0.25% - 1% vol/vol	7 days		

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 Double Nickel 55 <small>BIOFUNGICIDE</small>	<i>Bacillus amyloliquefaciens</i> strain D747 (BaD747)	A broad spectrum preventive biofungicide for control and suppression of fungal and bacterial plant diseases found in blossoms, on foliage and fruit, or in the soil.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	√	√	0.5-1 lb./acre	Varies, see label	√	√
 AgriPhage <small>BACTERIOPHAGE</small>	Bacteriophage	Contains bacteriophage that specifically target bacterial spot and speck on tomatoes and peppers. A great tool for resistance management.	Tomato bacterial spot and speck, Pepper spot	4	0	√		1-2 pints/acre	2-7 days	√	
 Gemstar <small>INSECTICIDAL VIRUS</small>	<i>Helicoverpa zea</i> NPV	A highly-selective insecticidal virus that infects and kills larvae of the corn earworm (tomato fruitworm), old world bollworm, and tobacco budworm.	Corn earworm (tomato fruitworm), old world bollworm, tobacco budworm	4	0	√	√	4-10 fl oz./acre	2-3 days	√	
 Requiem Prime	Extract of <i>Chenopodium ambrosioides</i>	A contact insecticide for control or suppression of foliage feeding pests.	Mites, thrips, whiteflies	4	0			1 - 4 qts/acre	Varies, see label		
 MeloCon WG <small>BIOLOGICAL NEMATOCIDE</small>	<i>Paecilomyces lilacinus</i>	wA biological nematocide containing a fungus that is highly effective against all stages of plant parasitic nematodes, especially the eggs and cysts.	Nematodes	4	0	√	√	Varies, see label	Varies, see label		

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CITRUS PORTFOLIO



PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA	MADE IN CA
Kocide^{3000-O} <small>FUNGICIDE/BACTERICIDE</small>	Copper Hydroxide	Controls a wide variety of fungal and bacterial diseases on fruit, vegetable, vine, tree nut and field crops.	Bacterial leaf spot	24	0	✓	✓	Varies, see label	Varies, see label	✓	
OSO[®] <small>FUNGICIDE</small>	Polyoxin D zinc salt	The only active ingredient in FRAC group 19, making it an ideal rotational product for resistance management and control of diseases.	Botrytis, fruit rots, gummy stem blight, mummyberry, powdery mildew	4	0	✓	✓	6.5 fl oz./acre	Varies, see label	✓	
Bug-N-Sluggo[®] <small>INSECT, SLUG AND SNAIL BAIT</small>	Spinosad, iron phosphate	Highly compressed, broad-spectrum bait pellet combo that utilizes spinosad to control ants, cutworms, earwigs, pillbugs and sow bugs, and iron phosphate to control slugs and snails. Must be ingested by the pest to be effective.	Ants, cutworms, earwigs, slugs, snails	*	*	✓	✓	20-44 lbs/acre	Varies, see label	✓	
Homeplate[™] <small>NON-SELECTIVE HERBICIDE</small>	Caprylic and capric acids	Non-selective, contact herbicide that provides rapid vegetation burndown on above-ground plant parts for a wide variety of broadleaf weeds and grasses.	Weeds, sucker control, desiccation	24	0	✓	✓	3-9% vol/vol	7-14 days	✓	
Firefighter[™] <small>FIRE ANT BAIT</small>	Spinosad	This light weight bait attracts foraging fire ants and harvester ants. Readily taken back to the nest where it kills the colony, including the queen.	Fire ants, harvester ants	4	*	✓	✓	2.5-5 lbs/acre	14 days	✓	
PFR-97[™] <small>MICROBIAL INSECTICIDE</small>	<i>Isaria fumosorosea</i> Apopka strain 97	Contains a beneficial fungus that infects and kills many devastating pests on contact, including aphids, spider mites, thrips, and whiteflies. Does not need to be ingested for product efficacy.	Aphids, spider mites, thrips, whiteflies	4	0	✓	✓	1-2 lbs/acre	3-10 days	✓	✓

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ROOT VEGETABLE PORTFOLIO



PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA	MADE IN CA
MeloCon^{WG} BIOLOGICAL NEMATOCIDE	<i>Paecilomyces lilacinus</i> strain 251	A biological nematocide containing a fungus that is highly effective against all stages of plant parasitic nematodes, especially the eggs and cysts.	Nematodes	4	0	✓	✓	Varies, see label	Varies, see label		
Kocide^{3000-O} FUNGICIDE/BACTERICIDE	Copper Hydroxide	Controls a wide variety of fungal and bacterial diseases on fruit, vegetable, vine, tree nut and field crops.	Bacterial leaf spot	24	0	✓	✓	Varies, see label	Varies, see label	✓	
ManKocide[®] FUNGICIDE/BACTERICIDE	Copper Hydroxide, Mancozeb	Controls a wide variety of fungal and bacterial diseases on fruit, vegetable, vine, tree nut and field crops.	<i>Botrytis</i> , Downy mildew, Powdery Mildew, Blight, <i>Alternaria</i>	48	*			Varies, see label	Varies, see label	✓	
Double Nickel⁵⁵ BIOFUNGICIDE	<i>Bacillus amyloliquefaciens</i> strain D747 (BaD747)	A broad spectrum preventive biofungicide for control and suppression of fungal and bacterial plant diseases found in blossoms, on foliage and fruit, or in the soil.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	0.5-1 lb./acre	Varies, see label	✓	✓
LifeGard BIOLOGICAL PLANT ACTIVATOR	<i>Bacillus mycoides</i> isolate J	Contains a beneficial bacterium that activates the natural immune defenses within the plant, helping fight against a wide variety of bacterial, fungal, and viral diseases.	<i>Botrytis</i> , Fire blight, fruit rots, powdery mildew, white mold	4	0	✓	✓	4.5 oz/100 gal (1.0-4.5 oz/acre)	Varies, see label	✓	✓
OSO[®] FUNGICIDE	Polyoxin D zinc salt	The only active ingredient in FRAC group 19, making it an ideal rotational product for resistance management and control of diseases.	<i>Botrytis</i> , fruit rots, gummy stem blight, mummyberry, powdery mildew	4	0	✓	✓	6.5 fl oz/acre	Varies, see label	✓	

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COLE CROP PORTFOLIO



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Agree <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt aizawai</i> strain GC-91	Biological insecticide that specifically targets caterpillars. Produces Cry1Ac toxins for high potency and broad spectrum activity. Also includes Cry1C toxins for armyworm activity and resistance management. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.5-2 lbs/acre	3-7 days	✓	✓
Javelin <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt kurstaki</i> strain SA-11	Biological insecticide that specifically targets caterpillars. Produces Cry1Aa, Cry1Ab, Cry1Ac and Cry2A toxins for high potency and broad spectrum activity, while including other potency factors due to unique “whole culture” processing. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.5-2 lbs/acre	Varies, see label	✓	✓
Crymax <small>BIOINSECTICIDE</small>	<i>Bt kurstaki</i> strain EG7841	Biological insecticide that specifically targets caterpillars. Produces Cry1Ac and Cry2A toxins for high potency and broad spectrum activity. Also includes Cry1C toxins for armyworm activity and resistance management. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0			0.5-2 lbs/acre	7 - 10 days, can be shorter	✓	✓
Kocide®3000-O <small>FUNGICIDE/BACTERICIDE</small>	Copper Hydroxide	Controls a wide variety of fungal and bacterial diseases on fruit, vegetable, vine, tree nut and field crops.	Bacterial leaf spot	24	0	✓	✓	Varies, see label	Varies, see label	✓	
Trilogy <small>FUNGICIDE/MITICIDE/INSECTICIDE</small>	Clarified hydrophobic extract of neem oil	Broad spectrum preventive contact fungicide / insecticide / miticide. Desiccates and suffocates soft bodied insects and mites on contact, as well as spores and mycelium of fungi.	<i>Alternaria</i> , <i>Botrytis</i> , Powdery mildew, Aphids, Mealybugs, Mites	4	0	✓	✓	0.5-2% vol/vol	7-21 days	✓	✓
Neemix®4.5 <small>INSECT GROWTH REGULATOR</small>	Azadirachtin	The most potent azadirachtin formulation on the market. A botanical insect growth regulator that controls immature insects by interfering with the molting process.	Aphids, whitefly, thrips, leaf hoppers, mealy bugs	4	0	✓	✓	4.0-16.0 oz./acre	Varies, see label	✓	✓
Cueva <small>FLOWABLE LIQUID COPPER FUNGICIDE</small>	Copper Octanoate	A “copper soap” that penetrates bacterial and fungal cell walls with the efficacy of copper, but with a reduced risk of phytotoxicity and russetting.	Fire blight, powdery and downy mildew	4	0	✓	✓	2-8 qts/acre	Varies by crop, see label	✓	
Double Nickel 55 <small>BIOFUNGICIDE</small>	<i>Bacillus amyloliquefaciens</i> strain D747 (BaD747)	A broad spectrum preventive biofungicide for control and suppression of fungal and bacterial plant diseases found in blossoms, on foliage and fruit, or in the soil.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	0.5-1 lb./acre	Varies, see label	✓	✓

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LEAFY VEGETABLE PORTFOLIO



PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA	MADE IN CA
Double Nickel 55⁵ <small>BIOFUNGICIDE</small>	<i>Bacillus amyloliquefaciens</i> strain D747 (BaD747)	A broad spectrum preventive biofungicide for control and suppression of fungal and bacterial plant diseases found in blossoms, on foliage and fruit, or in the soil.	Botrytis, downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	0.5-1 lb./acre	Varies, see label	✓	✓
Cueva[®] <small>FLOWABLE LIQUID COPPER FUNGICIDE</small>	Copper Octanoate	A “copper soap” that penetrates bacterial and fungal cell walls with the efficacy of copper, but with a reduced risk of phytotoxicity and russetting.	Fire blight, powdery and downy mildew	4	0	✓	✓	2-8 qts/acre	Varies by crop, see label	✓	
Agree[®] <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt aizawai</i> strain GC-91	Biological insecticide that specifically targets caterpillars. Produces Cry1Ac toxins for high potency and broad spectrum activity. Also includes Cry1C toxins for armyworm activity and resistance management. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.5-2lbs/acre	3-7 days	✓	✓
Crymax[®] <small>BIOINSECTICIDE</small>	<i>Bt kurstaki</i> strain EG7841	Biological insecticide that specifically targets caterpillars. Produces Cry1Ac and Cry2A toxins for high potency and broad spectrum activity. Also includes Cry1C toxins for armyworm activity and resistance management. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0			0.5-2 lbs/acre	7 - 10 days, can be shorter	✓	✓
Javelin[®] <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt kurstaki</i> strain SA-11	Biological insecticide that specifically targets caterpillars. Produces Cry1Aa, Cry1Ab, Cry1Ac and Cry2A toxins for high potency and broad spectrum activity, while including other potency factors due to unique “whole culture” processing. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.5-2 lbs/acre	Varies, see label	✓	✓
Seduce[®] <small>INSECT BAIT</small>	Spinosad	A spinosad bait that attracts and kills ants, earwigs, and cutworms.	Ants, cutworms, and earwigs	4	*	✓	✓	20-44 lbs/acre	Varies, see label	✓	
PFR-97[™] <small>MICROBIAL INSECTICIDE</small>	<i>Isaria fumosorosea</i> <i>Apopka strain 97</i>	Contains a beneficial fungus that infects and kills many devastating pests on contact, including aphids, spider mites, thrips, and whiteflies. Does not need to be ingested for product efficacy.	Aphids, spider mites, thrips, whiteflies	4	0	✓	✓	1-2 lbs/acre	3-10 days	✓	✓
Neemix^{4.5} <small>INSECT GROWTH REGULATOR</small>	<i>Azadirachtin</i>	The most potent azadirachtin formulation on the market. A botanical insect growth regulator that controls immature insects by interfering with the molting process.	Aphids, whitefly, thrips, leaf hoppers, mealy bugs	4	0	✓	✓	4-16 oz./acre	Varies, see label	✓	✓

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TREE NUT PORTFOLIO



PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA	MADE IN CA
LifeGard <small>BIOLOGICAL PLANT ACTIVATOR</small>	<i>Bacillus mycoides</i> isolate J	Contains a beneficial bacterium that activates the natural immune defenses within the plant, helping fight against a wide variety of bacterial, fungal, and viral diseases.	<i>Botrytis</i> , Fire blight, fruit rots, powdery mildew, white mold	4	0	✓	✓	4.5 oz/100 gal (1.0 - 4.5 oz/acre)	Varies, see label	✓	✓
Double Nickel 55 <small>BIOFUNGICIDE</small>	<i>Bacillus amyloliquefaciens</i> strain D747 (BaD747)	A broad spectrum preventive biofungicide for control and suppression of fungal and bacterial plant diseases found in blossoms, on foliage and fruit, or in the soil.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	0.5-1 lb./acre	Varies, see label	✓	✓
Kocide 3000-O <small>FUNGICIDE/ACTERICIDE</small>	Copper Hydroxide	Controls a wide variety of fungal and bacterial diseases on fruit, vegetable, vine, tree nut and field crops.	Bacterial leaf spot	24	0	✓	✓	Varies, see label	Varies, see label	✓	
ManKocide <small>FUNGICIDE/ACTERICIDE</small>	Copper Hydroxide, <i>Mancozeb</i>	Controls a wide variety of fungal and bacterial diseases on fruit, vegetable, vine, tree nut and field crops.	<i>Botrytis</i> , Downey mildew, Powdery Mildew, Blight, <i>Alternaria</i>	48	0			Varies, see label	Varies, see label	✓	
Cueva <small>FLOWABLE LIQUID COPPER FUNGICIDE</small>	Copper Octanoate	A "copper soap" that penetrates bacterial and fungal cell walls with the efficacy of copper, but with a reduced risk of phytotoxicity and russetting.	Fire blight, powdery and downy mildew	4	0	✓	✓	2-8 qts/acre	Varies by crop, see label	✓	
PFR-97 <small>MICROBIAL INSECTICIDE</small>	<i>Isaria fumosorosea</i> <i>Apopka</i> strain 97	Contains a beneficial fungus that infects and kills many devastating pests on contact, including aphids, spider mites, thrips, and whiteflies. Does not need to be ingested for product efficacy.	Aphids, spider mites, thrips, whiteflies	4	0	✓	✓	1-2 lbs/acre	3-10 days	✓	✓

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Deliver[®] <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt kurstaki</i> strain SA-12	Biological insecticide that specifically targets caterpillars. Highest potency non-GMO Bt on the market, with 2-3X more Cry1Ac toxin expressed than competitors. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	√	√	0.25-2 lbs/acre	Varies by crop, see label	√	√
Agree[®] <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt aizawai</i> strain GC-91	Biological insecticide that specifically targets caterpillars. Produces Cry1Ac toxins for high potency and broad spectrum activity. Also includes Cry1C toxins for armyworm activity and resistance management. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	√	√	0.5-2 lbs/acre	3-7 days	√	√
Firefighter[™] <small>FIRE ANT BAIT</small>	Spinosad	This light weight bait attracts foraging fire ants and harvester ants. Readily taken back to the nest where it kills the colony, including the queen.	Fire ants, harvester ants	4	*	√	√	2.5-5 lbs/acre	14 days	√	
Seduce[®] <small>INSECT BAIT</small>	Spinosad	A spinosad bait that attracts and kills ants, earwigs, and cutworms.	Ants, cutworms, and earwigs	4	*	√	√	22-44 lbs/acre	Varies, see label	√	
Homeplate[®] <small>NON-SELECTIVE HERBICIDE</small>	Caprylic and capric acids	Non-selective, contact herbicide that provides rapid vegetation burndown on above-ground plant parts for a wide variety of broadleaf weeds and grasses.	Weeds, sucker control, desiccation	24	0	√	√	3-9% vol/vol	7-14 days	√	
Sil-MATRIX[®] <small>FUNGICIDE / MITICIDE / INSECTICIDE</small>	Potassium Silicate	Forms a physical barrier on the leaf surface that prevents infection by fungal diseases. Also acts as a contact desiccant and feeding deterrent against insects and mites.	Aphids, Mites, Whiteflies, Powdery mildew	4	0	√	√	0.25-1% vol/vol	7 days		

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BERRY PORTFOLIO



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Double Nickel 55* <small>BIOFUNGICIDE</small>	<i>Bacillus amyloliquefaciens</i> strain D747 (BaD747)	A broad spectrum preventive biofungicide for control and suppression of fungal and bacterial plant diseases found in blossoms, on foliage and fruit, or in the soil.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	0.5-1 lb./acre	Varies, see label	✓	✓
Cueva* <small>FLOWABLE LIQUID COPPER FUNGICIDE</small>	Copper Octanoate	A “copper soap” that penetrates bacterial and fungal cell walls with the efficacy of copper, but with a reduced risk of phytotoxicity and russetting.	Fire blight, powdery and downy mildew	4	0	✓	✓	2-8 qts/acre	Varies by crop, see label	✓	
OSO® <small>FUNGICIDE</small>	Polyoxin D zinc salt	The only active ingredient in FRAC group 19, making it an ideal rotational product for resistance management and control of diseases.	<i>Botrytis</i> , fruit rots, gummy stem blight, mummyberry, powdery mildew	4	0	✓	✓	6.5 oz/acre	Varies, see label	✓	
Sil-MATRIX® <small>FUNGICIDE / MITTICIDE / INSECTICIDE</small>	Potassium Silicate	Forms a physical barrier on the leaf surface that prevents infection by fungal diseases. Also acts as a contact desiccant and feeding deterrent against insects and mites.	Aphids, Mites, Whiteflies, Powdery mildew	4	0	✓	✓	0.25-1%/acre	7 days		
Agree <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt aizawai</i> strain GC-91	Biological insecticide that specifically targets caterpillars. Produces Cry1Ac toxins for high potency and broad spectrum activity. Also includes Cry1C toxins for armyworm activity and resistance management. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.5-2 lbs/acre	3-7 days	✓	✓
Crymax® <small>BIOINSECTICIDE</small>	<i>Bt kurstaki</i> strain EG7841	Biological insecticide that specifically targets caterpillars. Produces Cry1Ac and Cry2A toxins for high potency and broad spectrum activity. Also includes Cry1C toxins for armyworm activity and resistance management. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0			0.5-2 lbs/acre	7 - 10 days, can be shorter	✓	✓
Javelin® <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt kurstaki</i> strain SA-11	Biological insecticide that specifically targets caterpillars. Produces Cry1Aa, Cry1Ab, Cry1Ac and Cry2A toxins for high potency and broad spectrum activity, while including other potency factors due to unique “whole culture” processing. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	Rates vary, refer to the label	Varies, see label	✓	✓

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Deliver <small>BIOLOGICAL INSECTICIDE</small>	<i>Bt kurstaki</i> strain SA-12	Biological insecticide that specifically targets caterpillars. Highest potency non-GMO Bt on the market, with 2-3X more Cry1Ac toxin expressed than competitors. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.25 -2.0 lbs/acre	Varies by crop, see label	✓	✓
PFR-97 <small>MICROBIAL INSECTICIDE</small>	<i>Isaria fumosorosea</i> <i>Apopka</i> strain 97	Contains a beneficial fungus that infects and kills many devastating pests on contact, including aphids, spider mites, thrips, and whiteflies. Does not need to be ingested for product efficacy.	Aphids, spider mites, thrips, whiteflies	4	0	✓	✓	1-2 lbs/acre	3-10 days	✓	✓
BoteGHA ^{ES} <small>MYCOINSECTICIDE</small>	<i>Beauveria</i> <i>bassiana</i> strain GHA	Contains a naturally occurring fungus that infects and kills soft bodied insects and mites on contact. No feeding is required for product efficacy.	Aphids, mites, thrips, whiteflies	4	0	✓	✓	0.5-2 qts/acre	2-10 days	✓	
Bug-N-Sluggo [®] <small>INSECT, SLUG AND SNAIL BAIT</small>	Spinosad, iron phosphate	Highly compressed, broad-spectrum bait pellet combo that utilizes spinosad to control ants, cutworms, earwigs, pillbugs and sow bugs, and iron phosphate to control slugs and snails. Must be ingested by the pest to be effective.	Ants, cutworms, earwigs, slugs, snails	*	*	✓	✓	20-44 lbs/acre	Varies, see label	✓	
Seduce <small>INSECT BAIT</small>	Spinosad	A spinosad bait that attracts and kills ants, earwigs, and cutworms.	Ants, cutworms, and earwigs	4	*	✓	✓	20-44 lbs/acre	Varies, see label	✓	
Neemix ^{4.5} <small>INSECT GROWTH REGULATOR</small>	Azadirachtin	The most potent azadirachtin formulation on the market. A botanical insect growth regulator that controls immature insects by interfering with the molting process.	Aphids, whitefly, thrips, leaf hoppers, mealy bugs	4	0	✓	✓	4-16 oz/acre	Varies, see label	✓	✓
Trilogy <small>FUNGICIDE MITICIDE/INSECTICIDE</small>	Clarified hydrophobic extract of neem oil	Broad spectrum preventive contact fungicide / insecticide / miticide. Desiccates and suffocates soft bodied insects and mites on contact, as well as spores and mycelium of fungi.	<i>Alternaria</i> , <i>Botrytis</i> , Powdery mildew, Aphids, Mealybugs, Mites	4	0	✓	✓	0.5-2% vol/vol	7-21 days	✓	✓

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* Varies, see label

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GRAPE PORTFOLIO



PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA	MADE IN CA
Double Nickel 55 <small>BIOFUNGICIDE</small>	<i>Bacillus amyloliquefaciens</i> strain D747 (BaD747)	A broad spectrum preventive biofungicide for control and suppression of fungal and bacterial plant diseases found in blossoms, on foliage and fruit, or in the soil.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	0.5-1 lb./acre	Varies, see label	✓	✓
Sil-MATRIX® <small>FUNGICIDE / MITICIDE / INSECTICIDE</small>	Potassium Silicate	Forms a physical barrier on the leaf surface that prevents infection by fungal diseases. Also acts as a contact desiccant and feeding deterrent against insects and mites.	Aphids, Mites, Whiteflies, Powdery mildew	4	0	✓	✓	0.25-1% vol/vol	7 days		
LifeGard <small>BIOLOGICAL PLANT ACTIVATOR</small>	<i>Bacillus mycoides</i> isolate J	Contains a beneficial bacterium that activates the natural immune defenses within the plant, helping fight against a wide variety of bacterial, fungal, and viral diseases.	<i>Botrytis</i> , Fire blight, fruit rots, powdery mildew, white mold	4	0	✓	✓	4.5 oz/100 gal (1.0 - 4.5 oz/acre)	Varies, see label	✓	✓
OSO® <small>FUNGICIDE</small>	Polyoxin D zinc salt	The only active ingredient in FRAC group 19, making it an ideal rotational product for resistance management and control of diseases.	<i>Botrytis</i> , fruit rots, gummy stem blight, mummyberry, powdery mildew	4	0	✓	✓	6.5 fl oz./acre	Varies, see label	✓	
Kocide®3000-O <small>FUNGICIDE/BACTERICIDE</small>	Copper Hydroxide	Controls a wide variety of fungal and bacterial diseases on fruit, vegetable, vine, tree nut and field crops.	Bacterial leaf spot	24	0	✓	✓	Varies, see label	Varies, see label	✓	
Homeplate® <small>NON-SELECTIVE HERBICIDE</small>	Caprylic and capric acids	Non-selective, contact herbicide that provides rapid vegetation burndown on above-ground plant parts for a wide variety of broadleaf weeds and grasses.	Weeds, sucker control, desiccation	24	0	✓	✓	3-9% vol/vol	7-14 days	✓	

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PFR-97™ MICROBIAL INSECTICIDE	<i>Isaria fumosorosea</i> <i>Apopka strain 97</i>	Contains a beneficial fungus that infects and kills many devastating pests on contact, including aphids, spider mites, thrips, and whiteflies. Does not need to be ingested for product efficacy.	Aphids, spider mites, thrips, whiteflies	4	0	✓	✓	1-2 lbs/acre	3-10 days	✓	✓
BoteGHA® ES MYCOINSECTICIDE	<i>Beauveria bassiana strain GHA</i>	Contains a naturally occurring fungus that infects and kills soft bodied insects and mites on contact. No feeding is required for product efficacy.	Aphids, mites, thrips, whiteflies	4	0	✓	✓	0.5-2 qts/acre	2-10 days	✓	
Deliver® BIOLOGICAL INSECTICIDE	<i>Bt kurstaki strain SA-12</i>	Biological insecticide that specifically targets caterpillars. Highest potency non-GMO Bt on the market, with 2-3X more Cry1Ac toxin expressed than competitors. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.25 -2.0 lb./acre	Varies by crop, see label	✓	✓
Agree® BIOLOGICAL INSECTICIDE	<i>Bt aizawai strain GC-91</i>	Biological insecticide that specifically targets caterpillars. Produces Cry1Ac toxins for high potency and broad spectrum activity. Also includes Cry1C toxins for armyworm activity and resistance management. Must be ingested by the larvae to be effective.	Caterpillar pests	4	0	✓	✓	0.5-2 lbs/acre	3-7 days	✓	✓
Seduce INSECT BAIT	Spinosad	A spinosad bait that attracts and kills ants, earwigs, and cutworms.	Ants, cutworms, and earwigs	4	*	✓	✓	20-44 lbs/acre	Varies, see label	✓	
Firefighter™ FIRE ANT BAIT	Spinosad	This light weight bait attracts foraging fire ants and harvester ants. Readily taken back to the nest where it kills the colony, including the queen.	Fire ants, harvester ants	4	*	✓	✓	2.5-5 lbs/acre	14 days	✓	
Trilogy® FUNGICIDE/MITICIDE/INSECTICIDE	Clarified hydrophobic extract of neem oil	Broad spectrum preventive contact fungicide / insecticide / miticide. Desiccates and suffocates soft bodied insects and mites on contact, as well as spores and mycelium of fungi.	<i>Alternaria</i> , <i>Botrytis</i> , Powdery mildew, Aphids, Mealybugs, Mites	4	0	✓	✓	0.5-2% vol/vol	7-21 days	✓	✓
Neemix 4.5 INSECT GROWTH REGULATOR	Azadirachtin	The most potent azadirachtin formulation on the market. A botanical insect growth regulator that controls immature insects by interfering with the molting process.	Aphids, whitefly, thrips, leaf hoppers, mealy bugs	4	0	✓	✓	4-16 oz/acre	Varies, see label	✓	✓

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