



WE'VE GOT YOUR SOUTHWEST 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 Southwest 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

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BRASSICAS PORTFOLIO

PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA
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.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	2-8 qts/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	✓
LifeGard <small>BIOLOGICAL PLANT ACTIVATOR</small>	<i>Bacillus mycooides</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® LC <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	✓	✓	1-2 qts/acre	Varies, see label	✓
Double Nickel 55 <small>BIOFUNGICIDE</small>								0.5-1 lb./acre		
OSO®5%SC <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	✓
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 deterrant against insects and mites.	Aphids, Mites, Whiteflies, Powdery mildew	4	0	✓	✓	0.25% - 1% vol/vol	7 days	
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	✓

 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	√
 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	√
 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	√
 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	√	√	Rates vary, refer to the label	Varies, see label	√
 Neemix 4.5 EC <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	√
 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	√
 PFR-97 20% WDG <small>MICROBIAL INSECTICIDE</small>	<i>Isaria</i> <i>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	√

HEMP PORTFOLIO

PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA
LifeGard <small>BIOLOGICAL PLANT ACTIVATOR</small>	<i>Bacillus mycooides</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.	Botrytis, Fire blight, fruit rots, powdery mildew, white mold	4	0	✓	✓	4.5 oz/100 gal (1.0 - 4.5 oz/acre)	Varies, see label	✓
Carb-O-Nator	Potassium bicarbonate	Provides broad spectrum activity against a variety of fungal pathogens. Disrupts and dehydrates cell walls of pathogens, including spores and mycellum.	Powdery mildew, Downy mildew	4	0	✓	✓	2.5-5 lbs/acre	5-14 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 deterrant against insects and mites.	Aphids, Mites, Whiteflies, Powdery mildew	4	0	✓	✓	0.25% - 1% vol/vol	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	✓	✓	Rates vary, refer to the label	Varies, see label	✓
PFR-97 20% WDG <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	✓
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	✓

■ FUNGICIDES ■ INSECTICIDES

PEANUT PORTFOLIO

PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA
ManKocide <small>FUNGICIDE/BACTERICIDE</small>	Copper Hydroxide, Mancozeb	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	*			Varies, see label	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	✓
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 LC <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	✓	✓	1-2 qts/acre	Varies, see label	✓
Double Nickel 55 <small>BIOFUNGICIDE</small>								0.5-1 lb./acre		
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	✓
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	✓
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	✓
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	✓	✓	Rates vary, refer to the label	Varies, see label	✓
BoteGHA ES <small>MYCOINSECTICIDE</small>	<i>Beauveria 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	✓

■ FUNGICIDES ■ INSECTICIDES

ONION PORTFOLIO

PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA
ManKocide <small>FUNGICIDE/BACTERICIDE</small>	Copper Hydroxide, Mancozeb	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	*			Varies, see label	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	✓
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 LC <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	✓	✓	1-2 qts/acre	Varies, see label	✓
Double Nickel 55 <small>BIOFUNGICIDE</small>								0.5-1 lb./acre		
OSO 5% SC <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	✓
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	

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	✓
BoteGHA^{ES} <small>MYCOINSECTICIDE</small>	<i>Beauveria 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	✓
PFR-97.20% WDG <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	✓
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	✓
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	✓
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	✓
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	✓	✓	Rates vary, refer to the label	Varies, see label	✓

LEAFY VEGETABLE PORTFOLIO

PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA
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.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	2-8 qts/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	✓
LifeGard <small>BIOLOGICAL PLANT ACTIVATOR</small>	<i>Bacillus mycooides</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 LC <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	✓	✓	1-2 qts/acre	Varies, see label	✓
Double Nickel 55 <small>BIOFUNGICIDE</small>								0.5-1 lb./acre		
OSO 5% SC <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	✓
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	
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	✓
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	✓

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	√
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	√
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	√	√	Rates vary, refer to the label	Varies, see label	√
Neemix 4.5 EC <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	√
BoteGHA[®] ES <small>MYCOINSECTICIDE</small>	<i>Beauveria 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	√
PFR-97.20% WDG <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	√
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	√

FUNGICIDES

INSECTICIDES

*Varies, see label



CUCURBIT PORTFOLIO

PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA
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.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	2-8 qts/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	✓
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 LC <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	✓	✓	1-2 qts/acre	Varies, see label	✓
Double Nickel 55 <small>BIOFUNGICIDE</small>								0.5-1 lb./acre		
OSO 5% SC <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	✓
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	
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	✓

DES-X[®] <small>INSECTICIDAL SOAP CONCENTRATE</small>	Potassium salts of fatty acids	An insecticidal soap concentrate that kills on contact to control insect and mite pests. Also an effective feeding deterrent for deer.	Aphids, mites, plant bugs, whiteflies, and powdery mildew	4	0	✓	✓	1-2% v/v	12 hours	✓
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	✓
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	✓
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	✓
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	✓	✓	Rates vary, refer to the label	Varies, see label	✓
Neemix[®] 4.5 EC <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	✓
BoteGHA[®] ES <small>MYCOINSECTICIDE</small>	<i>Beauveria 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	✓
PFR-97[®] 20% WDG <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	✓
MeloCon[®] LC <small>BIOLOGICAL NEMATOCIDE</small>	<i>Purpureocillium lilacinum</i>	Features a beneficial, naturally occurring fungus, <i>Purpureocillium lilacinum</i> (synonym <i>Paecilomyces lilacinus</i>) strain 251, a highly effective parasite that controls all stages of common plant-infecting nematodes, especially immobile stages such as eggs, cysts, and infectious juveniles.	Nematodes	24	0	✓	✓	10.25 fl oz/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% v/v	7-14 days	✓

■ FUNGICIDES
 ■ INSECTICIDES
 ■ NEMATOCIDE
 ■ HERBICIDE

CITRUS PORTFOLIO



PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA
AgriPhage[™]-Citrus Canker <small>Bactericide for use on citrus</small>	Bacteriophage	Contains bacteriophage that specifically target the pathogen that causes citrus canker. A great tool for resistance management.	Citrus Canker	4	0	✓		1-2 quarts/acre	1-7 days	✓
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.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	2-8 qts/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	✓
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[™] LC <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	✓	✓	1-2 qts/acre	Varies, see label	✓
Double Nickel[™] 55[™] <small>BIOFUNGICIDE</small>								0.5-1 lb./acre		
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	
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	✓
DES-X[™] <small>INSECTICIDAL SOAP CONCENTRATE</small>	Potassium salts of fatty acids	An insecticidal soap concentrate that kills on contact to control insect and mite pests. Also an effective feeding deterrent for deer.	Aphids, mites, plant bugs, whiteflies, and powdery mildew	4	0	✓	✓	1-2% v/v	12 hours	✓
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	✓

Deliver BIOLOGICAL INSECTICIDE	<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	✓
Javelin BIOLOGICAL INSECTICIDE	<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	✓
Crymax BIOINSECTICIDE	<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	✓	✓	Rates vary, refer to the label	Varies, see label	✓
Neemix 4.5 EC 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	✓
BoteGHA ES MYCOINSECTICIDE	<i>Beauveria 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	✓
PFR-97 20% WDG MICROBIAL INSECTICIDE	<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	✓
MeloCon LC BIOLOGICAL NEMATOCIDE	<i>Purpureocillium lilacinum</i>	Features a beneficial, naturally occurring fungus, <i>Purpureocillium lilacinum</i> (synonym <i>Paecilomyces lilacinus</i>) strain 251, a highly effective parasite that controls all stages of common plant-infecting nematodes, especially immobile stages such as eggs, cysts, and infectious juveniles.	Nematodes	24	0	✓	✓	10.25 fl oz/acre	Varies, see label	
Homeplate NON-SELECTIVE HERBICIDE	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% v/v	7-14 days	✓

■ FUNGICIDES
 ■ INSECTICIDES
 ■ NEMATOCIDE
 ■ HERBICIDE

STRAWBERRY PORTFOLIO

PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA
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.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	2-8 qts/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	✓
LifeGard <small>BIOLOGICAL PLANT ACTIVATOR</small>	<i>Bacillus mycooides</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 LC <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	✓	✓	1-2 qts/acre	Varies, see label	✓
Double Nickel 55 <small>BIOFUNGICIDE</small>								0.5-1 lb./acre		
Carb-O-Nator <small>FUNGICIDE</small>	Potassium bicarbonate	Provides broad spectrum activity against a variety of fungal pathogens. Disrupts and dehydrates cell walls of pathogens, including spores and mycelium.	Powdery mildew, Downy mildew	4	0	✓	✓	Varies, see label	Varies, see label	✓
OSO 5% SC <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	✓
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	✓
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	✓
DES-X <small>INSECTICIDAL SOAP CONCENTRATE</small>	Potassium salts of fatty acids	An insecticidal soap concentrate that kills on contact to control insect and mite pests. Also an effective feeding deterrent for deer.	Aphids, mites, plant bugs, whiteflies, and powdery mildew	4	0	✓	✓	1-2% v/v	12 hours	✓

Agree BIOLOGICAL INSECTICIDE	<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	✓
Deliver BIOLOGICAL INSECTICIDE	<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	✓
Javelin BIOLOGICAL INSECTICIDE	<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	✓
Crymax BIOINSECTICIDE	<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	✓	✓	Rates vary, refer to the label	Varies, see label	✓
Neemix 4.5 EC 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	✓
BoteGHA ES MYCOINSECTICIDE	<i>Beauveria 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	✓
PFR-97 20% WDG MICROBIAL INSECTICIDE	<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	✓
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	✓
MeloCon LC BIOLOGICAL NEMATOCIDE	<i>Purpureocillium lilacinum</i>	Features a beneficial, naturally occurring fungus, <i>Purpureocillium lilacinum</i> (synonym <i>Paecilomyces lilacinus</i>) strain 251, a highly effective parasite that controls all stages of common plant-infecting nematodes, especially immobile stages such as eggs, cysts, and infectious juveniles.	Nematodes	24	0	✓	✓	10.25 fl oz/acre	Varies, see label	

■ FUNGICIDES
 ■ INSECTICIDES
 ■ NEMATOCIDE
 ■ HERBICIDE

FRUITING VEGETABLE PORTFOLIO

PRODUCT	ACTIVE INGREDIENT	DESCRIPTION	KEY PEST/DISEASES CONTROLLED	REI	PHI	NOP COMPLIANT	OMRI LISTED®	SUGGESTED RATE	APPLICATION INTERVAL	MADE IN USA
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.	<i>Botrytis</i> , downy mildew, early blight, fire blight, powdery mildew, <i>Rhizoctonia</i> , white mold	4	0	✓	✓	2-8 qts/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	✓
LifeGard <small>BIOLOGICAL PLANT ACTIVATOR</small>	<i>Bacillus mycooides</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 LC <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	✓	✓	1-2 qts/acre	Varies, see label	✓
Double Nickel 55 <small>BIOFUNGICIDE</small>								0.5-1 lb./acre		
OSO 5% SC <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	✓
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	✓
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	✓
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	✓
DES-X <small>INSECTICIDAL SOAP CONCENTRATE</small>	Potassium salts of fatty acids	An insecticidal soap concentrate that kills on contact to control insect and mite pests. Also an effective feeding deterrent for deer.	Aphids, mites, plant bugs, whiteflies, and powdery mildew	4	0	✓	✓	1-2% v/v	12 hours	✓

Deliver BIOLOGICAL INSECTICIDE	<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	✓
Javelin BIOLOGICAL INSECTICIDE	<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	✓
Crymax BIOINSECTICIDE	<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	✓	✓	Rates vary, refer to the label	Varies, see label	✓
Gemstar INSECTICIDAL VIRUS	<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	✓
Neemix 4.5 EC 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	✓
BoteGHA ES MYCOINSECTICIDE	<i>Beauveria 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	✓
PFR-97 20% WDG MICROBIAL INSECTICIDE	<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	✓
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	✓
MeloCon LC BIOLOGICAL NEMATOCIDE	<i>Purpureocillium lilacinum</i>	Features a beneficial, naturally occurring fungus, <i>Purpureocillium lilacinum</i> (synonym <i>Paecilomyces lilacinus</i>) strain 251, a highly effective parasite that controls all stages of common plant-infecting nematodes, especially immobile stages such as eggs, cysts, and infectious juveniles.	Nematodes	24	0	✓	✓	10.25 fl oz/acre	Varies, see label	✓
Homeplate NON-SELECTIVE HERBICIDE	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% v/v	7-14 days	✓

■ FUNGICIDES
 ■ INSECTICIDES
 ■ NEMATOCIDE
 ■ HERBICIDE

* Varies, see label



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