

**132+**  
EMPLOYEES

More than 132 employees are based at Certis Biologicals headquarters in Maryland, manufacturing plant in California and throughout the United States.

**20**  
SALES AND  
MARKETING  
EMPLOYEES

Twenty sales and marketing employees steward products in the NAFTA region.

**3**  
DEDICATED  
PRODUCTION  
PLANTS

Certis Biologicals owns and operates 3 dedicated production plants. Two are for fermentation and one is for plant extraction of neem-based products.

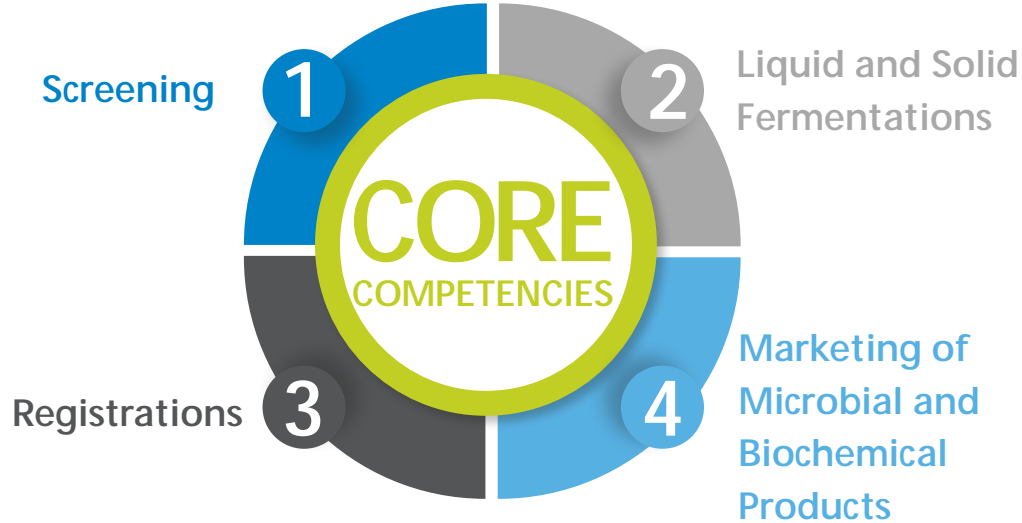
**30+**  
BIOLOGICAL  
PRODUCTS

OMRI LISTED

Certis Biologicals features the broadest OMRI Available™ biological offerings in the industry. And most are Residue Exempt.



Certis has performed more than 6,000 field trials of biopesticides since 1997.



**6,000+**  
FIELD TRIALS

We are wholly owned by Mitsui & CO., Ltd. one of the world's most diversified trading, investment and services companies. It has a global network of 150 offices in 67 countries, as well as about 320 associated companies worldwide.

WHOLLY OWNED BY

MITSUI & CO.



## INSECTICIDES

### BT BIOLARVICIDES

Agree®  
**A\***  
*Bt aizawai*

Crymax®  
**CM**  
*Bt kurstaki*

Deliver®  
**De\***  
*Bt kurstaki*

Javelin® WG  
**J\***  
*Bt kurstaki*

BoteGHA® ES  
**Bb\***  
*Beauveria bassiana strain GHA*

Requiem Prime®  
**RP**  
Extract of Chenopodium ambrosioides

PFR-97™ 20% WDG  
**PFR\***  
*Isaria fumosorosea Apopka strain 97*

### INSECTICIDAL VIRUSES

CYD-X®  
**CX\***  
*Cydia pomonella*

Gemstar® LC  
**G\***  
*Helicoverpa zea*

Madex® HP  
**Ma\***  
*Cydia pomonella*

DES-X®  
**DX\***  
Potassium salts of fatty acids

### INSECTICIDAL AND MOLLUSCIDAL BAITS

Bug-N-Sluggo®  
**BNS\***  
Spinosad and iron phosphate

Firefighter™  
**Ff**  
Spinosad

Seduce®  
**Se\***  
Spinosad

Sluggo®  
**SL\***  
Iron phosphate

Neemix 4.5®  
**Nx\***  
Azadirachtin

### BIONUTRIENTS

AgSil® 16H  
**AS<sup>16</sup>**  
Potassium silicate

AgSil® 21  
**AS<sup>21</sup>**  
Potassium silicate

AgSil® 25  
**AS<sup>25</sup>**  
Potassium silicate

### NEMATOCIDE

MeloCon® WG  
**MC\***  
*Paecilomyces lilacinus*

### HERBICIDES

Final-San-0®  
**FSO\***  
Ammoniated soap of fatty acids

Homeplate®  
**HP\***  
Non-selective herbicide

### BIOLOGICAL PLANT ACTIVATOR

LifeGard® WG  
**LG\***  
*Bacillus mycoides*

### MITICIDES

Trilogy®  
**Tr\***  
Clarified hydrophobic extract of neem oil

Sil-MATRIX® LC  
**SM\***  
Potassium silicate

## FUNGICIDES / BACTERICIDES

### BIOFUNGICIDES

Double Nickel®  
**DN\***  
*Bacillus amyloliquefaciens*

### BIOCHEMICALS

Cueva®  
**Cu\***  
Copper octanoate

Carb-0-Nator®  
**CON\***  
Potassium bicarbonate

Kocide HCu  
**KHCu**  
Copper Hydroxide

Kocide® 2000-0  
**K2\***  
Copper hydroxide

Kocide® 3000-0  
**K3\***  
Copper hydroxide

ManKocide®  
**MK**  
Mancozeb and copper hydroxide

OSO® 5% SC  
**O\***  
Polyoxin D zinc salt

SoilGard®  
**SG\***  
*Glodadium virens*

AgriPhage™  
**AP**  
Bacteriophage

AgriPhage CMM™  
**AP<sup>CMM</sup>**  
Bacteriophage

AgriPhage Citrus Canker™  
**AP<sup>CC</sup>**  
Bacteriophage

AgriPhage Fireblight™  
**AP<sup>FB</sup>**  
Bacteriophage



Active Ingredient	Pest Controlled	OMRI Listed <sup>®</sup>	NOP Compliant	Residue Exempt	REI	PHI	Application Interval <sup>1</sup>
<b>BIOLOGICAL PLANT ACTIVATOR</b>							
LifeGard <sup>®</sup> WG	<i>Bacillus mycooides</i> isolate J	Early blight, late blight, white mold, PVY potato virus Y (seed potatoes), <i>Cercospora</i> blight, fire blight, bacterial disorders, downy mildew	✓	✓	✓	4 hrs. 0	7-10 days
<b>INSECTICIDES</b>							
<b>Bt Biolarvicides</b>							
Agree <sup>®</sup> WG	<i>Bt aizawai</i> strain GC91	Lepidoptera (caterpillar) pests	✓	✓	✓	4 hrs. 0	3-14 days
Crymax <sup>®</sup>	<i>Bt kurstaki</i> strain EG7841	Lepidoptera (caterpillar) pests	—	—	✓	4 hrs. 0	3-14 days
Deliver <sup>®</sup>	<i>Bt kurstaki</i> strain SA-12	Lepidoptera (caterpillar) pests	✓	✓	✓	4 hrs. 0	3-14 days
Javelin <sup>®</sup> WG	<i>Bt kurstaki</i> strain SA-11	Lepidoptera (caterpillar) pests	✓	✓	✓	4 hrs. 0	3-14 days
<b>Bioinsecticides</b>							
BoteGHA <sup>®</sup> ES	<i>Beauveria bassiana</i> strain GHA	Whiteflies, aphids, thrips, psyllids, mealybugs, leafhoppers	✓	✓	✓	4 hrs. 0	5-10 days
PFR-97 <sup>™</sup> 20% WDG	<i>Isaria fumosorosea</i> Apopka strain 97	Aphids, whiteflies, thrips, mites, psyllids, root aphids, phorid flies	✓	✓	✓	4 hrs. 0	7-10 days
Requiem Prime <sup>®</sup>	Extract of <i>Chenopodium ambrosioides</i>	Mites, Thrips, White Flies	—	—	✓	4 hrs. 0	As Needed
<b>Insect Growth Regulator</b>							
Neemix <sup>®</sup> 4.5	Azadirachtin	Leafminers, whiteflies, aphids	✓	✓	✓	4 hrs. 0	7-21 days
<b>Insecticidal Viruses</b>							
CYD-X <sup>®</sup> and CYD-X <sup>®</sup> HP	<i>Cydia pomonella</i> GV	Codling moth larvae	✓	✓	✓	4 hrs. 0	7-14 days
Gemstar <sup>®</sup> LC	<i>Helicoverpa zea</i> NPV	Corn earworm larvae, earworm, bollworm, budworm, tomato fruitworm	✓	✓	✓	4 hrs. 0	7-14 days
Madex <sup>®</sup> HP	<i>Cydia pomonella</i> CpGV V-22	Codling moth, Oriental fruit moth larvae	✓	✓	✓	4 hrs. 0	7-14 days
<b>Insecticidal Soaps and Oils</b>							
DES-X <sup>®</sup>	Potassium salts of fatty acids	Aphids, whiteflies, powdery mildew	✓	✓	✓	12 hrs. 0	7-21 days
Trilogy <sup>®</sup>	Clarified hydrophobic extract of neem oil	Aphids, whiteflies, mites, thrips	✓	✓	✓	4 hrs. 0	7-21 days
<b>Insecticidal and Molluscicidal Baits</b>							
Bug-N-Sluggo <sup>®</sup>	Spinosad, iron phosphate	Ants, earwigs, cutworms, slugs, snails, pillbugs, sowbugs	✓	✓	✓	4 hrs. Varies	14-28 days
Firefighter <sup>™</sup>	Spinosad	Harvester Ants and Fire Ants	—	—	—	4 hrs. 0	14 days
Seduce <sup>®</sup>	Spinosad	Ants, earwigs, cutworms	✓	✓	—	4 hrs. Varies	14-28 days
Sluggo <sup>®</sup> (Eastern U.S. only)	Iron phosphate	Slugs, snails	✓	✓	✓	0 hrs. 0	14-28 days
<b>FUNGICIDES and/or BACTERICIDES</b>							
<b>Biofungicides</b>							
Double Nickel 55 <sup>®</sup> WG	<i>Bacillus amyloliquefaciens</i> strain D747 (Ba D747)	Powdery mildew, <i>Botrytis</i> , bacterial disorders, foliar diseases	✓	✓	✓	4 hrs. 0	7-10 days
Double Nickel <sup>®</sup> LC	<i>Bacillus amyloliquefaciens</i> strain D747 (Ba D747)	<i>Rhizoctonia</i> , <i>Phytophthora</i> , <i>Sclerotinia</i> , <i>Pythium</i> , <i>Fusarium</i> , soil diseases	✓	✓	✓	4 hrs. 0	7-10 days
OSO <sup>®</sup> 5% SC	Polyoxin D zinc salt	Anthraxnose, <i>Botrytis</i> , powdery mildew, fruit rots, sooty blotch, flyspeck	✓	✓	✓	4 hrs. 0	7-14 days
SoilGard <sup>®</sup>	<i>Gliricium virens</i> GL-21	Damping off and other soil-borne diseases	✓	✓	✓	0 hrs. 0	7-28 days
Trilogy <sup>®</sup>	Clarified hydrophobic extract of neem oil	Powdery mildew, rust, black spot	✓	✓	✓	4 hrs. 0	7-14 days
<b>Biochemicals</b>							
Carb-O-Nator <sup>®</sup>	Potassium bicarbonate	Powdery mildew, <i>Botrytis</i>	✓	✓	✓	4 hrs. 0	5-14 days
Cueva <sup>®</sup>	Copper octanoate	Bacterial disorders, downy mildew, powdery mildew	✓	✓	✓	4 hrs. 0 <sup>3</sup>	7-10 days
Kocide HCu	Copper hydroxide	Bacterial disorders, fire blight	—	—	✓	4 hrs. 0	7-10 days
Kocide <sup>®</sup> 2000-O	Copper hydroxide	Bacterial disorders, fire blight	✓	✓	✓	48 hrs. 0 <sup>3</sup>	7-10 days
Kocide <sup>®</sup> 3000-O	Copper hydroxide	Bacterial disorders, fire blight	✓	✓	✓	48 hrs. 0 <sup>3</sup>	7-10 days
ManKocide <sup>®</sup>	Copper hydroxide and mancozeb	<i>Alternaria</i> , powdery mildew, <i>Botrytis</i> , purple blotch	—	—	—	48 hrs. Varies	5-14 days
Sil-MATRIX <sup>®</sup> LC	Potassium silicate	Powdery mildew, <i>Botrytis</i> , mites, aphids	✓	✓	✓	4 hrs. 0	7-10 days
<b>Bacteriophages</b>							
AgriPhage <sup>™</sup>	Bacteriophage	Bacterial spot and speck on tomatoes and peppers	—	✓	✓	4 hrs. 0	3-7 days
AgriPhage <sup>™</sup> CMM	Bacteriophage	Bacterial canker disease on tomatoes	—	✓	✓	4 hrs. 0	3-7 days
Agriphage Citrus Canker <sup>™</sup>	Bacteriophage	Citrus Canker	—	✓	✓	4 hrs. 0	3-7 days
Agriphage Fireblight <sup>™</sup>	Bacteriophage	Fire Blight	—	✓	✓	4 hrs. 0	3-7 days
<b>MITICIDES (Acaricides)</b>							
PFR-97 <sup>™</sup> 20% WDG	<i>Isaria fumosorosea</i> Apopka strain 97	Mites, aphids, whiteflies, thrips, psyllids	✓	✓	✓	4 hrs. 0	7-10 days
Sil-MATRIX <sup>®</sup> LC	Potassium silicate	Mites, powdery mildew, <i>Botrytis</i> , aphids	✓	✓	✓	4 hrs. 0	7-10 days
Trilogy <sup>®</sup>	Clarified hydrophobic extract of neem oil	Spider mites, broad mites, rust mites	✓	✓	✓	4 hrs. 0	7-21 days
<b>NEMATOCIDES</b>							
MeloCon <sup>®</sup> WG	<i>Paecilomyces lilacinus</i>	Plant parasitic nematodes, including root knot, burrowing, cyst, root lesion, false root knot and sting nematodes	✓	✓	✓	4 hrs. 0	4-6 weeks
<b>HERBICIDES</b>							
Final-San-O <sup>®</sup>	Ammoniated soap of fatty acids	Grasses and broadleaf weeds	✓ <sup>2</sup>	✓	✓	24 hrs. 0	14-21 days
Homeplate <sup>®</sup>	Fatty acid (caprylic and capric acid blend)	Broadleaf weeds, grasses, algae and moss	✓ <sup>2</sup>	✓	n/a	24 hrs. 0	n/a
<b>SILICON AND POTASSIUM BIONUTRIENT SOURCE</b>							
AgSil <sup>®</sup> 16H	Potassium silicate	Stress, drought, salinity, metal toxicity management	—	—	✓	n/a n/a	n/a
AgSil <sup>®</sup> 21	Potassium silicate	Stress, drought, salinity, metal toxicity management	—	—	✓	n/a n/a	n/a
AgSil <sup>®</sup> 25	Potassium silicate	Stress, drought, salinity, metal toxicity management	—	—	✓	n/a n/a	n/a



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<sup>1</sup> These intervals are for general information purposes. Actual use patterns may vary according to pest pressure, crop growth stage, and other circumstances. All applications must be consistent with label use instructions.  
<sup>2</sup> OMRI Listed<sup>®</sup> with conditions.  
<sup>3</sup> PHI is 0 unless otherwise noted on product label. Always read and carefully follow label instructions.