



Listen • Learn • Deliver

CROP PROTECTION GUIDE





ADAMA

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Partnership in Crop Protection



SEE MORE

A Renewed Commitment to Our Partners.

The ag business is more challenging than ever. That's why at ADAMA, we're focusing more on equipping growers with the right solutions through our distribution and ag retailer partners. No one knows the conditions and economies of farming better than growers and their local ag partners. By connecting into the knowledge and experiences of our growers and partners, we gain unique perspectives and a deeper understanding of what's needed for them to collectively succeed. These relationships are what drive the future of ADAMA's crop protection business.

We're committed to bring our best to you. A growing array of quality crop protection solutions and proprietary formulations with competitive pricing. Innovative brands and chemistries from the industry's largest portfolio of active ingredients. And, uncompromised service and customer experience for both our channel and the growers. In an increasingly complex ag environment, you need a partner that is focused on localized solutions that make a difference to the unique challenges growers face.

That's why ADAMA is continuously evolving, innovating and improving. We're aligning our business and activities to focus on:

- Ensuring availability by taking steps to mitigate industry supply chain challenges and potential future disruptions
- Delivering innovation faster, accelerating product development and building upon our vast portfolio of branded protection solutions that precisely target evolving crop threats
- Enhancing our local partnership focus with additional service resources, dealer and grower support programs and dedicated customer interaction

Solutions for Seasonal Moments that Matter.

Most of all, ADAMA is passionate about understanding and is empowered to fulfill local farmer and customer needs. Through listening and learning from you, our customers, we're able to deliver solutions that fuel your success.

We Don't Tolerate Weeds

An early start with the right herbicide is the smart way to manage the emergence of troublesome weeds and grasses. ADAMA herbicides prevent weeds from the start and let you treat as needed.

Herbicides



SEE MORE

HERBICIDES

Visit ADAMA.COM for more information.

HERBICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Arrow® 2EC / Clethodim	✓	4 x 1 gal	29 Fruiting Vegetables 34 Potatoes 37 Soybeans Plus More
Cotoran® 4L / Fluometuron		2 x 2.5 gal 125 gal	27 Cotton
Defy® Amine 4 / 2, 4-D	✓	2 x 2.5 gal 270 gal	33 Pome 35 Rice 38 Stone Fruit 41 Tree Nuts Plus More
Defy® LV-6 / 2, 4-D		2 x 2.5 gal 270 gal	26 Corn 36 Sorghum 37 Soybeans Plus More

Herbicides

HERBICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Direx® 4L / Diuron	✓	2 x 2.5 gal 270 gal	25 Citrus 27 Cotton
Diverge™ EC / Propanil	✓	2 x 1 gal	35 Rice
Diverge™ Silk / Propanil	✓	2 x 1 gal	35 Rice
FirstAct™ / Quizalofop		2 x 1 gal	36 Sorghum
FullScript™ / Imazamox + Quinclorac		2 x 2.5 gal	35 Rice
Galigan® 2E / Oxyfluorfen	✓	2 x 2.5 gal	22 Beans 33 Pome 37 Soybeans 41 Tree Nuts Plus More
Galigan® H20 / Oxyfluorfen	✓	2 x 2.5 gal	26 Corn 27 Cotton 35 Rice 37 Soybeans Plus More

HERBICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Glory® / Metribuzin	✓	4 x 5 lb 2 x 25 lb	26 Corn 34 Potatoes 37 Soybeans 43 Wheat & Barley
Glory® 4L / Metribuzin		2 x 2.5 gal 270 gal	26 Corn 34 Potatoes 37 Soybeans 43 Wheat & Barley
Glory® FDF / Metribuzin	✓	4 x 5 lb 2 x 25 lb	26 Corn 34 Potatoes 37 Soybeans 43 Wheat & Barley
Highcard™ / Quizalofop + Safener		2 x 1 gal	35 Rice
Impose® / Imazapic		2 x 1 gal	32 Peanuts 33 Pome 41 Tree Nuts
Karmex® DF / Diuron	✓	10 x 5 lb 25 lb	25 Citrus 27 Cotton Plus More

Herbicides

HERBICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Parallel® / Metolachlor + Safener	✓	2 x 2.5 gal 270 gal Bulk	25 Beans 26 Corn 27 Cotton 32 Peanuts 34 Potatoes 37 Soybeans
Parallel® PCS / Metolachlor	✓	2 x 2.5 gal 270 gal	25 Beans 26 Corn 27 Cotton 32 Peanuts 34 Potatoes 37 Soybeans
Parallel® Plus / Metolachlor + Safener + Atrazine		2 x 2.5 gal 270 gal Bulk	26 Corn 36 Sorghum
Postscript™ / Imazamox*		2 x 1 gal	35 Rice
Preface™ / Imazethapyr*		2 x 1 gal	35 Rice

*Following many years of continuous use of this product and chemically related products, weed biotypes have been reported which cannot be effectively controlled by Preface or Postscript and related herbicides. Any weed population may contain or develop plants naturally resistant to Preface and other Group 2 herbicides (ALS-inhibitors).

HERBICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Pruvin® / Rimsulfuron	✓	10 x 20 oz	29 Fruiting Vegetables 30 Grapes 33 Pome 34 Potatoes 38 Stone Fruit 41 Tree Nuts Plus More
Tailwind® / Metolachlor + Metribuzin		2 x 2.5 gal 260 gal	34 Potatoes 37 Soybeans Plus More
Zurax™ L / Quinclorac		2 x 2.5 gal	35 Rice 36 Sorghum 43 Wheat & Barley

Overpower Pest Pressures

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A versatile lineup of insecticides from ADAMA target different stages of insect development to help you effectively treat pest pressures as they emerge, while providing options to prevent resistance issues.

Insecticides



SEE MORE

INSECTICIDES

Visit ADAMA.COM for more information.

INSECTICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Acephate 90 Prill / Acephate		8 x 5 lb 2 x 10 lb 2 x 20 lb	27 Cotton 32 Peanuts 37 Soybeans
Acephate 97 WDG / Acephate		8 x 5 lb 2 x 10 lb 2 x 20 lb	27 Cotton 32 Peanuts 37 Soybeans
Alias® 4F / Imidacloprid	✓	4 x 1 qt 4 x 1 gal	25 Citrus 27 Cotton 29 Fruiting Vegetables 30 Grapes 34 Potatoes Plus More
Apollo® SC / Clofentezine	✓	3 x 4 x 1 qt	30 Grapes 41 Tree Nuts
Armor® / Cyromazine	✓	2 x 2.5 gal	See Website
Cormoran® / Novaluron + Acetamiprid	✓	4 x 1 gal 2 x 2.5 gal	27 Cotton 28 Cucurbits 29 Fruiting Vegetables 33 Pome 34 Potatoes 39 Strawberries Plus More

Insecticides

INSECTICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Diamond® / Novaluron	✓	2 x 2.5 gal	27 Cotton 32 Peanuts 36 Sorghum 37 Soybeans Plus More
Diazinon 50W / Diazinon	✓	8 x 5 x 1 lb	22 Beans 28 Cucurbits 29 Fruiting Vegetables 38 Stone Fruit Plus More
Diazinon AG500 / Diazinon	✓	2 x 2.5 gal	29 Fruiting Vegetables 34 Potatoes 38 Stone Fruit 41 Tree Nuts Plus More
Fanfare® EC / Bifenthrin	✓	4 x 1 gal 270 gal	26 Corn 27 Cotton 37 Soybeans 39 Strawberries 41 Tree Nuts Plus More
Fulfill® / Pymetrozine	✓	27.5 oz	27 Cotton 28 Cucurbits 29 Fruiting Vegetables 31 Leafy Greens Plus More

INSECTICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Silencer® / Lambda-Cyhalothrin	✓	4 x 1 qt 4 x 1 gal 260 gal	26 Corn 29 Fruiting Vegetables 35 Rice 37 Soybeans 40 Sunflowers Plus More
Silencer® VXN / Lambda-Cyhalothrin	✓	4 x 1 gal 125 gal	26 Corn 35 Rice 36 Sorghum 37 Soybeans 41 Tree Nuts Plus More
Skyraider™ / Bifentrin + Imidacloprid		4 x 1 gal 260 gal	22 Beans 25 Citrus 27 Cotton 31 Leafy Greens Plus More
Trigard® / Cyromazine	✓	17.955 lbs (18 x 6 x 2.66 oz)	28 Cucurbits 29 Fruiting Vegetables 31 Leafy Greens Plus More

Stop Diseases Before They Spread

The spread of bacteria and fungi affects marketable yields and product quality. Be ready to fight with fungicides from ADAMA that offer disease control you can count on.

Fungicides



SEE MORE

FUNGICIDES

Visit ADAMA.COM for more information.

FUNGICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Bravo Ultrex® / Chlorothalonil	✓	27.4 lb	26 Corn 28 Cucurbits 31 Leafy Greens 32 Peanuts 34 Potatoes 41 Tree Nuts Plus More
Bravo Weather Stik® / Chlorothalonil	✓	2 x 2.5 gal Bulk	23 Brassicas 26 Corn 28 Cucurbits 31 Leafy Greens 32 Peanuts 37 Soybeans 38 Stone Fruit Plus More
Bravo® ZN / Chlorothalonil		Bulk	29 Fruiting Vegetables 34 Potatoes 42 Watermelon
Captan Gold® 80WDG / Captan	✓	2 x 2.5 gal	33 Pome 38 Stone Fruit 39 Strawberries
Captan Gold® 4L / Captan	✓	2 x 2.5 gal	33 Pome 38 Stone Fruit 39 Strawberries

Fungicides

FUNGICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Harbour® / Ag Streptomycin Sulfate	✓	10 x 2 lb	29 Fruiting Vegetables 34 Potatoes Plus More
Incognito® 4.5 F / Thiophanate-Methyl	✓	2 x 2.5 gal 270 gal	22 Beans 28 Cucurbits 41 Tree Nuts Plus More
Incognito® 85 WDG / Thiophanate-Methyl	✓	2 x 2.5 gal 270 gal 5 lb	22 Beans 28 Cucurbits 41 Tree Nuts Plus More

FUNGICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Mastercop® / Copper Sulfate Pentahydrate	✓	2 x 2.5 gal	25 Citrus 28 Cucurbits 29 Fruiting Vegetables 30 Grapes 31 Leafy Greens 33 Pome 39 Strawberries Plus More
Vantana™ / Fluazinam		2 x 2.5 gal	32 Peanuts

HARVEST AIDS

Visit ADAMA.COM for more information.

Maximize Yields and Optimize Timing at Harvest

Harvest aids from ADAMA help you bring in your crops on your schedule. From defoliation to earlier ripening and maturation, we help make harvesting easier and faster.

Harvest Aids



SEE MORE

HARVEST AIDS

Visit ADAMA.COM for more information.

HARVEST AID / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
Ethephon 2SL / Ethephon	✓	4 x 1 gal 2 x 2.5 gal	29 Fruiting Vegetables 33 Pome
Klean-Pik® 500 SC / Thidiazuron	✓	4 x 1 gal	27 Cotton
Redi-Pik® 1.5 EC / Thidiazuron + Diuron	✓	2 x 2.5 gal	27 Cotton
Setup® 6L / Ethephon	✓	2 x 2.5 gal 270 gal	27 Cotton

NEMATOCIDE

Visit ADAMA.COM for more information.

Vanquish the Hidden Enemy

Don't let what you can't see damage your crops and limit your marketable yields. Nematicides from ADAMA help you control harmful nematodes and prevent damage before it appears.

Nematicide



NEMATICIDE / ACTIVE INGREDIENT	REG. IN CA.	CONTAINER SIZE	SEE CROP PAGES
NIMITZ® / Fluensulfone	✓	2 x 2.5 gal	28 Cucurbits 29 Fruiting Vegetables 39 Strawberries 42 Watermelon Plus More

Protect Your Crop Before Harmful Nematodes Cause Costly Damage.

Fast-acting NIMITZ kills nematodes within 24-48 hours when applied before planting, and residual activity continues into the growing season.

For healthier crops and improved yield, NIMITZ is a highly effective, non-fumigant nematicide. It's applied pre-planting to target harmful nematodes – without affecting beneficial ones. And now, NIMITZ is registered for citrus, peaches and pecans!

NIMITZ simplifies every aspect of nematode control. It's easy to apply, with less stringent regulatory restrictions and reporting guidelines.

- No specialized equipment needed
- No training required
- No buffers
- 12-hr REI
- No Fumigant Management Plans or complicated PPE

Beans Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Goosegrass, Johnsongrass (Seedling), Junglerice, Ryegrass (Hardy, Italian), Watergrass	AI: Clethodim HRAC GROUP: 1
Galigan® 2E	Mallow (Little, Preemergence)	AI: Oxyfluorfen HRAC GROUP: 14
Parallel®	Barnyardgrass, Crabgrass, Foxtail (Giant, Green, Yellow), Nightshade (Eastern Black), Pigweed	AI: Metolachlor + Safener HRAC GROUP: 15
Parallel® PCS	Preemergence: Crabgrass, Foxtail (Giant, Green, Yellow), Nightshade (Eastern Black), Pigweed	AI: Metolachlor HRAC GROUP: 15

INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Leafhopper, Thrips (Foliage-Feeding), Whitefly	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Aphid, Caterpillar, Lygus	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diazinon 50W Diazinon AG500	Cutworm, Wireworm	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Beetle (Japanese), Grasshopper, Leafhopper, Stink Bug	AI: Bifenthrin IRAC GROUP: 3A
Fulfill®	Aphid, Whitefly (Suppression)	AI: Pymetrozine IRAC GROUP: 9B
Skyraider™	Aphid, Beetle (Japanese), Leafhopper	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
Trigard®	Leafminer	AI: Cyromazine IRAC GROUP: 17

FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo Ultrex® Bravo Weather Stik® Bravo® ZN	Blight (Ascochyta), Downy Mildew	AI: Chlorothalonil FRAC GROUP: M5
Incognito® 4.5 F Incognito® 85 WDG	Mold, Spot (Brown)	AI: Thiophanate-Methyl FRAC GROUP: 1
Vantana™	Mold (Gray, White)	AI: Fluazinam FRAC GROUP: 29

NEMATICIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ®	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Brassicas Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Goosegrass, Johnsongrass (Rhizome, Seedling), Junglerice, Ryegrass (Hardy, Italian), Watergrass	AI: Clethodim HRAC GROUP: 1
Galigan® 2E Galigan® H20	Broadleafs (Certain Annual)	AI: Oxyfluorfen HRAC GROUP: 14
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Beetle (Flea), Leafhopper, Thrips (Foliage-Feeding), Whitefly	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Moth (Diamondback)	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diazinon 50W Diazinon AG500	Cricket (Mole), Cutworm, Maggot (Root), Wireworm	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Armyworm, Beetle (Cucumber), Cabbageworm (Imported), Cutworm	AI: Bifenthrin IRAC GROUP: 3A
Fulfill®	Aphid, Whitefly (Supression)	AI: Pymetrozine IRAC GROUP: 9B
Skyraider™	Armyworm, Beetle (Cucumber), Cutworm, Looper	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
Trigard®	Leafminer	AI: Cyromazine IRAC GROUP: 17
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo Ultrex®	Downy Mildew, Spot (Alternaria Leaf, Ring)	AI: Chlorothalonil FRAC GROUP: M5
Bravo Weather Stik®	Downy Mildew, Spot (Alternaria Leaf)	AI: Chlorothalonil FRAC GROUP: M5
Mastercop®	Downy Mildew, Rot (Black), Spot (Black Leaf)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
Vantana™	Alternaria, Clubroot, Downy Mildew, Spot (Alternaria Leaf)	AI: Fluazinam FRAC GROUP: 29
NEMATOCIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ®	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN

Brassicas grouping includes: Brussels Sprouts, Cauliflower, Broccoli and Cabbage

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.



Canola Portfolio

INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Fanfare® EC	Aphid, Beetle (Flea), Cutworm, Stink Bug	AI: Bifenthrin IRAC GROUP: 3A
Silencer® Silencer® VXN	Aphid, Armyworm, Beetle (Flea), Lygus Bug	AI: Lambda-Cyhalothrin IRAC GROUP: 3A

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.



Citrus Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Direx® 4L	Barnyardgrass, Pigweed	AI: Diuron HRAC GROUP: 17
Galigan® 2E Galigan® H2O	Broadleaves (Certain Annual)	AI: Oxyfluorfen HRAC GROUP: 14
Impose®	Barnyardgrass, Crabgrass, Cranesbill, Dock (Curly), Garlic (Wild)	AI: Imazapic HRAC GROUP: 2
Karmex® DF	Barnyardgrass, Pigweed	AI: Diuron HRAC GROUP: 7
Pravin®	Grasses (Broadleaf Weeds)	AI: Rimsulfuron HRAC GROUP: 2
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Leafhopper, Leafminer, Leafminer (Citrus), Mealybug, Psylla (Asian Citrus), Scale, Thrips (Foliage-Feeding), Weevil (Citrus Root), Whitefly	AI: Imidacloprid IRAC GROUP: 4A
Fanfare® EC	Ant (Fire), Notcher (Little Leaf), Weevil (Diaprepes Root)	AI: Bifenthrin IRAC GROUP: 3A
Skyraider™	Ant (Fire), Cockroach (Asian), Leafhopper, Psylla (Asian Citrus)	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Mastercop®	Canker (Citrus), Scab (Melanose), Spot (Alternaria Brown, Greasy, Septoria)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
NEMATICIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ®	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Corn Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Defy® Amine 4 Defy® LV-6	Burdock (Common), Carpetweed, Dogbane, Flixweed, Jimsonweed, Lambsquarters (Common), Pennycress (Field)	AI: 2,4-D HRAC GROUP: 4
Galigan® 2E Galigan® H2O	Broadleafs (Certain Annual)	AI: Oxyfluorfen HRAC GROUP: 14
Glory®	Broadleafs (All), Carpetweed, Chickweed (Common), Jimsonweed, Knotweed, Lambsquarters (Common), Morningglory, Pigweed	AI: Metribuzin HRAC GROUP: 5
Glory® 4L	Broadleafs (All), Chickweed (Common)	AI: Metribuzin HRAC GROUP: 5
Glory® FDF	Broadleafs (All), Carpetweed, Chickweed (Common), Jimsonweed, Knotweed, Morningglory, Pigweed	AI: Metribuzin HRAC GROUP: 5
Parallel®	Barnyardgrass, Crabgrass, Foxtail (Giant, Green, Yellow), Goosegrass, Nightshade (Eastern Black), Panicum (Fall), Pigweed	AI: Metolachlor + Safener HRAC GROUP: 15
Parallel® Plus	Barnyardgrass, Crabgrass, Foxtail (Giant, Green, Yellow), Goosegrass, Jimsonweed, Kochia, Lambsquarters, Nightshade, Panicum (Fall), Pigweed	AI: Metolachlor + Safener + Atrazine HRAC GROUP: 15 + 5
Pravin®	Grasses (Broadleaf Weeds)	AI: Rimsulfuron HRAC GROUP: 2

INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Cormoran®	Armyworm (Fall), Earworm (Corn), Fly (Silk)	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Fanfare® EC	Armyworm, Beetle (Japanese), Chinch Bug, Corn Earworm, Cutworm, Maggot (Seedcorn), Stink Bug	AI: Bifenthrin IRAC GROUP: 3A
Silencer® Silencer® VXN	Aphid, Armyworm, Beetle (Japanese)	AI: Lambda-Cyhalothrin IRAC GROUP: 3A

FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo Ultrex®	Blight (Helminthosporium Leaf), Rust (Puccinia spp.)	AI: Chlorothalonil FRAC GROUP: M5
Bravo Weather Stik®	Blight (Helminthosporium Leaf), Rust (Puccinia spp.)	AI: Chlorothalonil FRAC GROUP: M5
Mastercop®	Rot (Bacterial Stalk)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Cotton Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Barley Grass, Barnyardgrass, Johnsongrass (Rhizome, Seedling), Ryegrass (Hardy, Italian)	AI: Clethodim HRAC GROUP: 1
Cotoran® 4L	Barnyardgrass, Morningglory, Pigweed, Pigweed (Palmer, Redroot)	AI: Fluometuron HRAC GROUP: 7
Direx® 4L	Barnyardgrass, Grass (Annual, Perennial), Morningglory (Annual), Pigweed	AI: Diuron HRAC GROUP: 7
Diuron 4L	Barnyardgrass, Morningglory (Annual), Pigweed	AI: Diuron HRAC GROUP: 7
Galigan® 2E Galigan® H2O	Broadleafs (Certain Annual)	AI: Oxyfluorfen HRAC GROUP: 14
Karmex® DF	Barnyardgrass, Morningglory (Annual), Pigweed	AI: Diuron HRAC GROUP: 7
Parallel®	Barnyardgrass, Foxtail (Yellow), Goosegrass, Johnsongrass (Seedling), Junglerice, Lambsquarters, Nightshade (Eastern Black), Pigweed, Sida (Prickly)	AI: Metolachlor + Safener HRAC GROUP: 15
Parallel® PCS	Barnyardgrass, Foxtail (Yellow), Goosegrass, Johnsongrass (Seedling), Junglerice (Preemergence), Lambsquarters (Preemergence), Nightshade (Eastern Black), Pigweed, Sida (Prickly, Preemergence)	AI: Metolachlor HRAC GROUP: 15

INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Acephate 90 Prill Acephate 97 WDG	Caterpillar, Lygus, Plant Bug, Stink Bug, Thrips	AI: Acephate IRAC GROUP: 1B
Alias® 4F	Aphid (Cotton), Fleahopper (Cotton), Lygus Bug, Plant Bug, Stinkbug (Brown), Thrips	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Whitefly	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diamond®	Armyworm, Plant Bug (Clouded, Tarnished, Western Tarnished)	AI: Novaluron IRAC GROUP: 15
Fanfare® EC	Aphid (Cotton), Armyworm (Fall), Cutworm, Lygus, Plant Bug, Stink Bug	AI: Bifenthrin IRAC GROUP: 3A
Fulfill®	Aphid, Whitefly (Suppression)	AI: Pymetrozine IRAC GROUP: 9B
Skyraider™	Armyworm, Armyworm (Beet), Budworm (Tobacco), Cutworm, Lygus, Plant Bug, Stink Bug, Whitefly	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A

HARVEST AIDS	ACTION	ACTIVE INGREDIENT
Klean-Pik® 500SC	Boll Opener, Defoliant	AI: Thidiazuron
Redi Pik® 1.5EC	Defoliant	AI: Thidiazuron + Diuron
Setup® 6SL	Boll Opener, Boosts Overall Yield/Harvest Stability	AI: Ethephon

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Cucurbit Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Crabgrass, Johnsongrass (Rhizome, Seedling), Panicum (Texas), Shattercane	AI: Clethodim HRAC GROUP: 1
Galigan® 2E Galigan® H2O	See Label	AI: Oxyfluorfen HRAC GROUP: 14
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Beetle (Cucumber), Whitefly	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Beetle (Cucumber), Melonworm, Whitefly	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diazinon 50W	See Label	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Beetle (Cucumber), Borer (Squash Vine), Cutworm, Looper (Cabbage), Stink Bug	AI: Bifenthrin IRAC GROUP: 3A
Fulfill®	Aphid, Whitefly (Suppression)	AI: Pymetrozine IRAC GROUP: 9B
Trigard®	Leafminer	AI: Cyromazine IRAC GROUP: 17
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo Ultrex® Bravo Weather Stik® Bravo® ZN	Blight (Alternaria Leaf), Downy Mildew, Powdery Mildew (Sphaerotheca Only)	AI: Chlorothalonil FRAC GROUP: M5
Incognito® 4.5 F Incognito® 85 WDG	Anthrachnose, Powdery Mildew	AI: Thiophanate-Methyl FRAC GROUP: 1
Mastercop®	Anthrachnose, Powdery Mildew, Spot (Alternaria Leaf, Angular Leaf)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
Vantana™	Blight (Gummy Stem, Phytophthora), Downy Mildew	AI: Fluazinam FRAC GROUP: 29
NEMATOCIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ® NIMITZ® (CA)	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN

Cucurbit grouping includes: Cucumber, Gourd, Melons (watermelon is found on page 42), Pumpkins, Squash, Zucchini
Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Fruiting Vegetables Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Goosegrass, Johnsongrass (Rhizome, Seedling), Junglerice, Ryegrass (Hardy, Italian), Watergrass	AI: Clethodim HRAC GROUP: 1
Galigan® 2E Galigan® H2O	See Label	AI: Oxyfluorfen HRAC GROUP: 14
Pruvin®	Grasses (Broadleaf Weeds)	AI: Rimsulfuron HRAC GROUP: 2
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Thrips (Foliage-Feeding), Whitefly	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Weevil (Pepper)	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diazinon 50W Diazinon AG500	Cricket (Mole), Cutworm, Wireworm	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Armyworm, Beetle (Colorado Potato, Cucumber), Bug (Squash), Corn Earworm, Cutworm, Leafhopper, Looper	AI: Bifenthrin IRAC GROUP: 3A
Fulfill®	Aphid, Whitefly (Supression)	AI: Pymetrozine IRAC GROUP: 9B
Silencer® Silencer® VXN	Armyworm (Beet, Fall, Southern, Yellowstriped)	AI: Lambda-Cyhalothrin IRAC GROUP: 3A
Skyraider™	Armyworm, Armyworm (Beet), Beetle (Flea, Japanese), Cutworm, Hornworm (Tomato), Looper, Lygus, Pickleworm, Pinworm (Tomato), Stink Bug	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
Trigard®	Leafminer	AI: Cyromazine IRAC GROUP: 17
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo® ZN	Mold (Gray Leaf), Powdery Mildew	AI: Chlorothalonil FRAC GROUP: M5
Harbour	Spot (Bacterial, Transplant)	AI: Ag Streptomycin Sulfate FRAC GROUP: 25
Mastercop®	Blight (Alternaria), Speck (Bacterial), Spot (Bacterial, Cercospora Leaf, Septoria Leaf), Wilt (Bacterial)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
Vantana™	Eggplant and Peppers Only, Blight (Phytophthora)	AI: Fluazinam FRAC GROUP: 29
NEMATICIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ® NIMITZ® (CA)	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN
HARVEST AIDS	ACTION	ACTIVE INGREDIENT
Ethephon 2SL	Growth Regulator in Tomatoes	AI: Ethephon

Fruiting Vegetables grouping includes: Eggplant, Peppers, Tomatoes

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Grape Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Galigan® 2E Galigan® H2O	Broadleaves (Certain Annual)	AI: Oxyfluorfen HRAC GROUP: 14

Pruvin®	Grasses (Broadleaf Weeds)	AI: Rimsulfuron HRAC GROUP: 2
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INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
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Alias® 4F	Leafhopper, Mealybug, Phylloxera, Scale (European Fruit Lecanium)	AI: Imidacloprid IRAC GROUP: 4A
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Apollo® SC	Mite	AI: Clofentezine IRAC GROUP: 10A
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Fanfare® EC	Leafhopper (Variegated), Sharpshooter (Glassy-Winged)	AI: Bifenthrin IRAC GROUP: 3A
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Skyraider™	Beetle (Grape Bud), Leafhopper (Variegated), Leafroller (Grape), Sharpshooter (Glassy-Winged), Thrips	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
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FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
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Mastercop®	Mildew (Downy, Powdery), Phomopsis	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
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NEMATOCIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
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NIMITZ®	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN
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Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Leafy Greens Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
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Arrow® 2EC	Barnyardgrass, Quackgrass, Shattercane, Wheat (Volunteer)	AI: Clethodim HRAC GROUP: 1
Galigan® 2E Galigan® H2O	See Label	AI: Oxyfluorfen HRAC GROUP: 14

INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
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Alias® 4F	Aphid, Whitefly	AI: Imidacloprid IRAC GROUP: 4A
Diazinon 50W Diazinon AG500	Aphid, Cricket (Mole), Cutworm, Leafminer (Dipterous), Wireworm	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Aphid, Armyworm, Beetle (Flea), Budworm (Tobacco), Cabbageworm (Imported), Caterpillar (Saltmarsh), Cutworm, Leafhopper, Stink Bug, Thrips	AI: Bifenthrin IRAC GROUP: 3A
Fulfill®	Aphid, Whitefly (Suppression)	AI: Pymetrozine IRAC GROUP: 9B
Skyraider™	Aphid, Armyworm, Budworm, Cabbageworm (Imported), Caterpillar (Saltmarsh), Corn Earworm, Leafhopper, Lygus, Stink Bug, Weevil (Pepper)	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
Trigard®	Leafminer	AI: Cyromazine IRAC GROUP: 17

FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
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Bravo Ultrex®	Blight (Early, Late)	AI: Chlorothalonil FRAC GROUP: M5
Bravo Weather Stik®	Blight (Early, Late)	AI: Chlorothalonil FRAC GROUP: M5
Mastercop®	Anthrachnose, Downy Mildew, Mold (Botrytis Gray), Rot (Bacterial Soft), Rust (White), Spot (Cercospora Leaf)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
Vantana™	Clubroot, Drop (Sclerotinia)	AI: Fluazinam FRAC GROUP: 29

NEMATOCIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
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NIMITZ® NIMITZ® (CA)	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN
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Leafy Greens grouping includes: Celery, Lettuce, Spinach

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Peanut Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Bermudagrass, Panicum (Texas)	AI: Clethodim HRAC GROUP: 1
Galigan® 2E Galigan® H2O	Broadleaves (Certain Annual)	AI: Oxyfluorfen HRAC GROUP: 14
Impose®	Amaranth (Palmer), Beggarweed (Florida), Crabgrass (Large), Johnsongrass (Seedling), Morningglory (Entireleaf, Pitted), Nutsedge (Purple), Pigweed (Redroot, Smooth, Spiny), Poinsettia (Wild)	AI: Imazapic HRAC GROUP: 2
Parallel®	Barnyardgrass, Crabgrass, Foxtail (Yellow), Goosegrass	AI: Metolachlor + Safener HRAC GROUP: 15
Parallel® PCS	Preemergence: Barnyardgrass, Crabgrass, Foxtail (Yellow), Goosegrass	AI: Metolachlor HRAC GROUP: 15
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Acephate 90 Prill Acephate 97 WDG	Thrips	AI: Acephate IRAC GROUP: 1B
Alias® 4F	Aphid, Thrips, Whitefly	AI: Imidacloprid IRAC GROUP: 4A
Diamond®	Armyworm, Borer (Lesser Cornstalk)	AI: Novaluron IRAC GROUP: 15
Fanfare® EC	Armyworm (Fall), Caterpillar, Cutworm, Leafhopper, Peanutworm (Rednecked), Stink Bug, Thrips	AI: Bifenthrin IRAC GROUP: 3A
Skyraider™	Armyworm (Fall), Borer (Lesser Cornstalk), Cutworm, Peanutworm (Rednecked), Whitefly	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo Ultrex® Bravo Weather Stik®	Spot (Early Leaf, Late Leaf)	AI: Chlorothalonil FRAC GROUP: M5
Vantana™	Blight (Sclerotinia, Southern)	AI: Fluazinam FRAC GROUP: 29

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Pome Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Defy® Amine 4	Aster (Many-Flowered), Buttercup (Smallflower), Copperleaf (Virginia), Dandelion, Horseweed, Jimsonweed, Knotweed, Lambsquarters (Common), Pennycress (Field), Pigweed, Shepherdspurse, Thistle (Canada)	AI: 2,4-D HRAC GROUP: 4
Galigan® 2E Galigan® H2O	Broadleafs (Certain Annual)	AI: Oxyfluorfen HRAC GROUP: 14
Impose®	Bindweed (Field), Chickweed (Common), Dock (Curly), Foxtail (Yellow), Garlic (Wild), Geranium (Carolina), Hound's Tongue, Jimsonweed, Lambsquarters (Common), Pigweed, Starbur (Bristly), Sunflower	AI: Imazapic HRAC GROUP: 2
Pravin®	Grasses (Broadleaf Weeds)	AI: Rimsulfuron HRAC GROUP: 2
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Leafhopper, Maggot (Apple), Psylla (Pear)	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Leafroller, Moth (Codling), Psylla, Psylla (Pear)	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diazinon 50W Diazinon AG500	See Label	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Scale Crawler (San Jose), Stink Bug (Brown Marmorated)	AI: Bifenthrin IRAC GROUP: 3A
Skyraider™	Curculio (Plum), Moth (Codling), Stink Bug	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Captan Gold® 4L Captan Gold® 80WDG	Rot (Bull's Eye, Botrytic), Scab (Apple)	AI: Captan FRAC GROUP: M4
Mastercop®	Anthraco nose, Blight (Fire), Scab (Apple)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
NEMATICIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ®	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN
HARVEST AIDS	ACTION	ACTIVE INGREDIENT
Ethephon 2SL	Growth Regulator in Pome	AI: Ethephon

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Potato Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Barnyardgrass, Foxtail, Panicum (Fall)	AI: Clethodim HRAC GROUP: 1
Galigan® 2E Galigan® H2O	See Label	AI: Oxyfluorfen HRAC GROUP: 14
Glory® Glory® 4L Glory® FDF	Broadleafs (All), Carpetweed (Common), Chickweed, Crabgrass (Large), Jimsonweed, Kochia, Lambsquarters (Common), Mustard (Tansy), Narrowleaf Hawksbread, Nightshade (Hairy), Pigweed (Redroot, Smooth), Purslane (Common), Ragweed (Common), Smartweed (Pennsylvania)	AI: Metribuzin HRAC GROUP: 5
Parallel®	Barnyardgrass, Foxtail (Yellow), Kochia, Lambsquarters, Nightshade (Eastern Black, Hairy), Pigweed, Purslane, Smartweed, Spurge (Annual)	AI: Metolachlor + Safener HRAC GROUP: 15
Parallel® PCS	Preemergence: Barnyardgrass, Foxtail (Yellow), Nightshade (Eastern Black, Hairy), Pigweed, Purslane (Common)	AI: Metolachlor HRAC GROUP: 15
Pruvin®	Grasses (Broadleaf Weeds)	AI: Rimsulfuron HRAC GROUP: 2
Tailwind®	Barnyardgrass, Chickweed (Common), Foxtail, Henbit, Knotweed, Kochia, Ladysthumb, Lambsquarters (Common), Nightshade (Black, Hairy), Pigweed, Purslane (Common)	AI: Metolachlor + Metribuzin HRAC GROUP: 15 + 5
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Beetle (Colorado Potato), Beetle (Flea), Leafhopper, Psylla (Potato)	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Beetle (Colorado Potato), Psyllid (Potato), Tuberworm (Potato)	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diazinon AG500	See Label	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Beetle (Cucumber, Japanese)	AI: Bifenthrin IRAC GROUP: 3A
Fulfill®	Aphid, Psyllid (Potato)	AI: Pymetrozine IRAC GROUP: 9B
Skyraider™	Aphid, Beetle (Colorado Potato, Flea), Borer (European Corn), Grasshopper, Leafhopper, Psyllid (Potato)	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
Trigard®	Beetle (Colorado Potato), Leafminer	AI: Cyromazine IRAC GROUP: 17
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo Ultrex® Bravo Weather Stik® Bravo® ZN	Blight (Early, Late)	AI: Chlorothalonil FRAC GROUP: M5
Harbour	Blackleg, Rot (Soft)	AI: Ag Streptomycin Sulfate FRAC GROUP: 25
Mastercop®	Blight (Early, Late)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
Vantana™	Blight (Late), Mold (White), Powdery Scab	AI: Fluazinam FRAC GROUP: 29
NEMATICIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ® NIMITZ® (CA)	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Rice Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Defy® Amine 4	Burdock (Common), Jimsonweed, Marestail, Morningglory (Annual), Pigweed, Purslane (Common), Ragweed (Common)	AI: 2,4-D HRAC GROUP: 4
Diverge™ EC	Barnyardgrass, Crabgrass, Pigweed (Redroot), Sedge (Annual, Smallflower Umbrella), Sesbania (Hemp)	AI: Propanil HRAC GROUP: 5
Diverge™ Silk	Barnyardgrass, Crabgrass, Pigweed, Umbrella Plant (Smallflower), Watergrass	AI: Propanil HRAC GROUP: 5
FullScript™	Barnyardgrass, Coffeeweed, Rice (Feral, Red, Weedy)	AI: Imazamox + Quinclorac HRAC GROUP: 2 + 4
Galigan® 2E Galigan® H2O	See Label	AI: Oxyfluorfen HRAC GROUP: 14
Highcard™	Barnyardgrass, Rice (Red, Volunteer), Signalgrass (Broadleaf), Sprangletop	AI: Quizalofop + Safener HRAC GROUP: 1
Postscript™	Barnyardgrass, Ducksalad, Flatsedge (Water), Morningglory (Entireleaf, Ivyleaf, Smallflower, Tall), Nutsedge (Purple), Pigweed (Prostrate, Redroot, Smooth, Spiny), Redweed, Rice (Red)	AI: Imazamox HRAC GROUP: 2
Preface™	Barnyardgrass, Ducksalad, Morningglory (Cypressvine, Entireleaf, Ivyleaf, Palmleaf, Pitted, Tall), Rice (Red)	AI: Imazethapyr HRAC GROUP: 2
Zurax™ L	Barnyardgrass, Crabgrass (Large), Jointvetch (Indian), Junglerice, Morningglory, Nutsedge (Yellow), Signalgrass (Broadleaf), Sprangletop	AI: Quinclorac HRAC GROUP: 4
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Silencer® Silencer® VXN	Armyworm (Fall)	AI: Lambda-Cyhalothrin IRAC GROUP: 3A

FullScript, Highcard, Postscript and Preface are only for application to herbicide-tolerant rice.

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Sorghum Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Defy® Amine 4	Dandelion, Dock, Knotweed, Lambsquarters (Common), Lettuce (Prickly), Mallow (Venice), Morningglory (Annual), Pigweed, Radish (Wild), Ragweed (Common, Giant)	AI: 2,4-D HRAC GROUP: 4
Defy® LV-6	Dandelion, Dock, Knotweed, Lambsquarters (Common), Lettuce (Prickly), Mallow (Venice), Morningglory (Annual), Radish (Wild), Ragweed (Common)	AI: 2,4-D HRAC GROUP: 4
FirstAct™	Barnyardgrass, Corn (Volunteer), Crabgrass (Large), Foxtail (Giant, Green, Yellow), Junglerice, Panicum (Texas), Sandbur (Field), Wheat (Volunteer), Witchgrass	AI: Quizalofop HRAC GROUP: 1
Galigan® 2E Galigan® H2O	See Label	AI: Oxyfluorfen HRAC GROUP: 14
Parallel®	Barnyardgrass, Foxtail (Giant, Green, Yellow), Goosegrass, Johnsongrass (Seedling), Nightshade (Eastern Black), Nutsedge (Yellow), Pigweed, Purslane (Common), Ragweed, Witchgrass	AI: Metolachlor + Safener HRAC GROUP: 15
Parallel® PCS	Preemergence: Barnyardgrass, Foxtail (Giant, Green, Yellow), Goosegrass, Johnsongrass (Seedling), Nightshade (Eastern Black), Nutsedge (Yellow), Pigweed, Purslane (Common), Ragweed, Witchgrass	AI: Metolachlor HRAC GROUP: 15
Parallel® Plus	Barnyardgrass, Foxtail (Giant, Green, Yellow), Johnsongrass (Seedling), Lambsquarters, Nightshade, Nutsedge (Yellow), Pigweed, Purslane (Common), Ragweed (Common), Witchgrass	AI: Metolachlor + Safener + Atrazine HRAC GROUP: 15 + 5
Zurax™ L	Barnyardgrass, Crabgrass (Large), Foxtail (Giant, Green, Yellow), Lambsquarters (Common), Morningglory, Ragweed (Common)	AI: Quinclorac HRAC GROUP: 4
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Diamond®	Armyworm (Beet, Fall, True), Webworm	AI: Novaluron IRAC GROUP: 15
Silencer® Silencer® VXN	Armyworm (Beet, Fall, Yellowstriped)	AI: Lambda-Cyhalothrin IRAC GROUP: 3A

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Soybean Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Barnyardgrass, Corn (Volunteer), Foxtail	AI: Clethodim HRAC GROUP: 1
Defy® Amine 4 Defy® LV-6	Artichoke (Jerusalem), Carpetweed, Carrot (Wild), Dandelion, Flixweed, Geranium (Carolina), Goldenrod, Horseweed, Jimsonweed, Lambsquarters (Common), Lettuce (Wild), Marestalk, Morningglory (Annual), Pigweed, Ragweed (Common)	AI: 2,4-D HRAC GROUP: 4
Galigan® 2E Galigan® H2O	See Label, Broadleaves (Certain Annual)	AI: Oxyfluorfen HRAC GROUP: 14
Glory® Glory® 4L Glory® FDF	Chickweed (Common), Dandelion (Common), Grasses (All), Henbit, Kochia, Ladysthumb, Lambsquarters, Lettuce (Prickly), Mallow (Venice), Morningglory, Mustard (Wild), Pigweed, Pigweed (Redroot), Purslane, Ragweed (Common), Smartweed, Waterhemp	AI: Metribuzin HRAC GROUP: 5
Parallel®	Barnyardgrass, Crabgrass, Foxtail (Giant, Green, Yellow), Lambsquarters, Nightshade (Eastern Black), Pigweed, Ragweed, Witchgrass	AI: Metolachlor + Safener HRAC GROUP: 15
Parallel® PCS	Barnyardgrass, Crabgrass, Foxtail (Giant, Green, Yellow), Lambsquarters (Preemergence), Nightshade (Eastern Black), Pigweed, Ragweed (Preemergence), Witchgrass	AI: Metolachlor HRAC GROUP: 15
Tailwind®	Amaranth (Palmer), Barnyardgrass, Chickweed (Common), Crabgrass, Foxtail, Goosegrass, Johnsongrass (Seedling), Junglerice, Ladysthumb, Lambsquarters (Common), Morningglory, Morningglory (Tall), Pigweed, Ragweed (Common), Smartweed (Pennsylvania), Sunflower, Teaweed	AI: Metolachlor + Metribuzin HRAC GROUP: 15 + 5

INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Acephate 90 Prill Acephate 97 WDG	Stink Bug	AI: Acephate IRAC GROUP: 1B
Alias® 4F	Aphid, Beetle (Bean Leaf)	AI: Imidacloprid IRAC GROUP: 4A
Diamond®	Armyworm (Beet, Fall), Caterpillar (Saltmarsh, Velvet Bean), Cloverworm (Green)	AI: Novaluron IRAC GROUP: 15
Fanfare® EC	Aphid, Aphid (Soybean), Beetle (Bean Leaf, Japanese), Caterpillar, Leafhopper	AI: Bifenthrin IRAC GROUP: 3A
Silencer® Silencer® VXN	Aphid (Soybean), Beetle (Japanese), Caterpillar, Grasshopper, Stink Bug	AI: Lambda-Cyhalothrin IRAC GROUP: 3A
Skyraider™	Aphid, Armyworm (Fall), Beetle (Bean Leaf, Japanese), Cutworm, Grasshopper, Leafhopper, Looper, Stink Bug	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A

FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Vantana™	Mold (Gray, White)	AI: Fluazinam FRAC GROUP: 29

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Stone Fruit Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Johnsongrass (Rhizome, Seedling), Junglerice, Ryegrass (Hardy, Italian)	AI: Clethodim HRAC GROUP: 1
Defy® Amine 4	Aster (Many-Flowered), Burdock (Common), Copperleaf (Virginia), Dandelion, Dock, Flixweed, Geranium (Carolina), Goldenrod, Horseweed, Jimsonweed, Lambsquarters (Common), Maretail, Morningglory (Annual), Pennycress (Field), Pigweed, Thistle (Canada)	AI: 2,4-D HRAC GROUP: 4
Galigan® 2E Galigan® H20	See Label	AI: Oxyfluorfen HRAC GROUP: 14
Impose®	Chickweed (Common), Dandelion, Dock (Curly), Garlic (Wild), Geranium (Carolina), Hound's Tongue, Lambsquarters (Common), Pigweed, Plantain (Narrowleaf), Purslane (Common), Ragweed (Common), Smartweed (Ladysthumb), Woodsorrel (Yellow)	AI: Imazapic HRAC GROUP: 2
Pruvin®	Grasses (Broadleaf Weeds)	AI: Rimsulfuron HRAC GROUP: 2

INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Curculio (Plum), Fly (Cherry Fruit), Leafhopper	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Fly (Fruit), Scale	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diazinon 50W Diazinon AG500	See Label	AI: Diazinon IRAC GROUP: 1B

FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo Ultrex® Bravo Weather Stik® Bravo® ZN	Scab	AI: Chlorothalonil FRAC GROUP: M5
Captan Gold® 4L Captan Gold® 80WDG	Rot (Brown, White), Scab (Peach)	AI: Captan FRAC GROUP: M4

NEMATICIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ®	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN

Stone Fruit grouping includes: Apricots, Cherries, Nectarines, Peaches

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Strawberry Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Pigweed (Redroot)	AI: Clethodim HRAC GROUP: 1
Galigan® 2E Galigan® H2O	See Label	AI: Oxyfluorfen HRAC GROUP: 14
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Beetle (Sap)	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diazinon 50W Diazinon AG500	Aphid, Cricket (Mole), Leafroller (Strawberry), Mite (Cyclamen), Spider Mite (Two-Spotted)	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Aphid, Beetle (Strawberry Sap), Lygus, Stink Bug, Weevil (Strawberry Root)	AI: Bifenthrin IRAC GROUP: 3A
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Captan Gold® 4L	Alternaria, Blight (Botrytis), Phytophthora	AI: Captan FRAC GROUP: M4
Captan Gold® 80WDG	Blight (Botrytis)	AI: Captan FRAC GROUP: M4
Mastercop®	Blight (Leaf), Scorch (Leaf), Spot (Angular Leaf, Leaf)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
NEMATICIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ® NIMITZ® (CA)	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.



Sunflower Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
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Arrow® 2EC	Corn (Volunteer), Foxtail (Green, Yellow)	AI: Clethodim HRAC GROUP: 1
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INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
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Diamond®	Lygus Bug	AI: Novaluron IRAC GROUP: 15
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Silencer® Silencer® VXN	Armyworm (Beet, Fall), Beetle, Caterpillar, Weevil	AI: Lambda-Cyhalothrin IRAC GROUP: 3A
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Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Tree Nut Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Barnyardgrass, Johnsongrass (Rhizome, Seedling), Junglerice, Ryegrass (Hardy, Italian)	AI: Clethodim HRAC GROUP: 1
Galigan® 2E Galigan® H2O	Broadleaves (Certain Annual)	AI: Oxyfluorfen HRAC GROUP: 14
Defy® Amine 4	Carrot (Wild), Dandelion, Dock, Dogbane, Evening Primrose (Common), Geranium (Carolina), Lambsquarters (Common), Morningglory (Annual), Mustard, Pepperweed, Pigweed, Plantain, Purslane (Common), Rocket (Yellow)	AI: 2,4-D HRAC GROUP: 4
Impose®	Chickweed (Common), Dandelion, Foxtail (Yellow), Johnsongrass (Seedling), Lambsquarters (Common), Pigweed, Ragweed (Common)	AI: Imazapic HRAC GROUP: 2
Pravin®	Grasses (Broadleaf Weeds)	AI: Rimsulfuron HRAC GROUP: 2
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Scale (San Jose)	AI: Imidacloprid IRAC GROUP: 4A
Apollo® SC	Mite	AI: Clofentezine IRAC GROUP: 10A
Diazinon 50W Diazinon AG500	See Label	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Aphid (Black Pecan, Walnut, Yellow Pecan), Bug (Leaffooted), Fly (Walnut Husk), Leafroller (Oblique-Banded)	AI: Bifenthrin IRAC GROUP: 3A
Silencer® Silencer® VXN	Navel Orangeworm	AI: Lambda-Cyhalothrin IRAC GROUP: 3A
Skyraider™	Aphid, Aphid (Black Pecan), Borer (Peach Twig), Bug (Leaffooted), Filbertworm, Fly (Walnut Husk), Leafhopper, Leafroller (Oblique-Banded), Navel Orangeworm, Scale (San Jose), Stink Bug	AI: Bifenthrin + Imidacloprid IRAC GROUP: 3 + 4A
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo Ultrex® Bravo Weather Stik®	Blight (Eastern Filbert), Shot Hole	AI: Chlorothalonil FRAC GROUP: M5
Incognito® 4.5 F Incognito® 85 WDG	Rot (Brown), Scab	AI: Thiophanate-Methyl FRAC GROUP: 1
Mastercop®	Bacterial Blast, Blight (Walnut) and others (see label)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
NEMATOCIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ®	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN

Target pests/sites listed above are not intended to be all-inclusive. Refer to EPA-approved labels for specific product DIRECTIONS FOR USE.

Watermelon Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Arrow® 2EC	Bermudagrass, Crabgrass, Johnsongrass (Rhizome, Seedling), Signalgrass (Broadleaf)	AI: Clethodim HRAC GROUP: 1
Galigan® 2E Galigan® H2O	See Label	AI: Oxyfluorfen HRAC GROUP: 14
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Alias® 4F	Aphid, Leafhopper, Whitefly	AI: Imidacloprid IRAC GROUP: 4A
Cormoran®	Armyworm, Melonworm, Pickleworm, Whitefly	AI: Novaluron + Acetamiprid IRAC GROUP: 15 + 4A
Diazinon 50W Diazinon AG500	Cutworm, Wireworm	AI: Diazinon IRAC GROUP: 1B
Fanfare® EC	Armyworm, Beetle (Cucumber), Borer (Squash Vine), Cutworm, Plant Bug, Rindworm	AI: Bifenthrin IRAC GROUP: 3A
Fulfill®	Aphid, Whitefly (Suppression)	AI: Pymetrozine IRAC GROUP: 9B
Silencer® Silencer® VXN	Aphid, Armyworm	AI: Lambda-Cyhalothrin IRAC GROUP: 3A
Trigard®	Leafminer	AI: Cyromazine IRAC GROUP: 17
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Bravo Ultrex® Bravo Weather Stik® Bravo® ZN	Anthracnose, Blight (Gummy Stem), Downy Mildew, Powdery Mildew (Sphaerotheca only)	AI: Chlorothalonil FRAC GROUP: M5
Mastercop®	Anthracnose, Powdery Mildew (Sphaerotheca only), Watermelon Bacterial Fruit Blotch	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1
NEMATICIDE	TARGET NEMATODE	ACTIVE INGREDIENT IRAC GROUP
NIMITZ® NIMITZ® (CA)	Plant-parasitic Nematodes	AI: Fluensulfone IRAC GROUP: UN

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Wheat & Barley Portfolio

HERBICIDE	TARGET WEED	ACTIVE INGREDIENT HRAC GROUP
Defy® Amine 4 Defy® LV-6	Bindweed (Hedge), Lambsquarters (Common), Mustard, Pigweed, Purslane (Common), Sunflower, Thistle (Canada)	AI: 2,4-D HRAC GROUP: 4
Galigan® 2E Galigan® H2O	See Label	AI: Oxyfluorfen HRAC GROUP: 14
Glory®	Brome (Japanese), Buckwheat (Wild), Chickweed (Common), Dogfennel, Geranium (Carolina), Kochia, Lambsquarters (Common), Mustard (Tansy), Radish (Wild), Thistle (Russian)	AI: Metribuzin HRAC GROUP: 5
Glory® 4L	Brome (Japanese), Buckwheat (Wild), Chickweed (Common), Dogfennel, Geranium (Carolina), Kochia, Lambsquarters, Mustard (Tansy), Radish (Wild), Thistle (Russian)	AI: Metribuzin HRAC GROUP: 5
Glory® FDF	Brome (Japanese), Chickweed (Common), Dogfennel, Geranium (Carolina), Kochia, Lambsquarters, Mustard (Tansy), Radish (Wild), Thistle (Russian)	AI: Metribuzin HRAC GROUP: 5
Zurax™ L	Foxtail (Giant, Green, Yellow), Ragweed (Common), Sunflower (Wild)	AI: Quinclorac HRAC GROUP: 4
INSECTICIDE	TARGET INSECT	ACTIVE INGREDIENT IRAC GROUP
Silencer® Silencer® VXN	Aphid (Bird Cherry-Oat, Corn Leaf, English Grain, Russian Wheat)	AI: Lambda-Cyhalothrin IRAC GROUP: 3A
FUNGICIDE	TARGET DISEASE	ACTIVE INGREDIENT FRAC GROUP
Mastercop®	Blotch, Blotch (Septoria Leaf), Spot (Helminthosporium)	AI: Copper Sulfate Pentahydrate FRAC GROUP: M1

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