

California & Arizona Vegetable Crop Portfolio

UPL
OpenAg™





We invite you to review our expanded portfolio of fungicides, insecticides and herbicides designed to deliver optimum value alone or within a resistance management program. We are UPL, and while you may be hearing our name for the first time, we know you'll recognize many of our trusted products.

Our company is out to create an open agricultural network that feeds sustainable growth for all — growers, retailers, food producers and consumers. We call this new global purpose OpenAg™ and its mission is to deliver broader choice, greater value and increased sustainability to help secure the world's food supply. And that starts here, with our comprehensive portfolio of innovative solutions for the California and Arizona vegetable crop market.

For more information, talk to your local UPL representative or retailer. Or call 1-800-438-6071. We're here to help.

	Product	Active Ingredient	Mode of Action	Features and Benefits
FUNGICIDES	Cuprofix® Ultra 40 Disperss®	Copper Sulfate	M1	» High quality fixed copper » Superior formulation » Disperses quickly and stays in suspension » More particles/surface area for greater coverage
	Dexter® Max	Mancozeb + Azoxystrobin	M3 11	» Contact and systemic disease control » Broad spectrum, dual mode of action » Excellent resistance management option » Yield-maximizing product
	Manzate® Max	Mancozeb	M3	» The power of Manzate ProStick in a liquid » Easy pouring, mixing formulation » Superior performance at controlling key crop diseases
	Manzate Pro-Stick™	Mancozeb	M3	» Market leading brand » Multi-site, protectant fungicide » World class formulation » Excellent, broad spectrum disease control » No documented resistance » Maximum rainfastness
	Microthiol® Disperss	Micronized Sulfur	M2	» Multi-site, contact activity » Highly efficacious » Superior formulation » Disperses quickly and stays in suspension » More particles/surface area for greater coverage
	Ph-D®	Polyoxin D zinc salt	19	» Broad-spectrum disease control » Unique mode of action » Derived from biological fermentation and exempt from tolerance » Superior knockdown of powdery mildew » Excellent resistance management tool
	Procure® 480SC Trionic™ 4SC	Triflumizole	3	» Locally systemic fungicide » Rapid absorption and long residual control » Preventative and curative powdery mildew activity
	Tebuzol® 3.6F	Tebuzonazole	3	» Systemic activity » Wide application window » Controls tough leaf diseases
	Topsin® M WSB	Thiophanate methyl	1	» Tried and proven performance » Broad spectrum control » Systemic activity
	Vacciplant® (California registration pending)	Laminarin	P4	» Fully systemic with whole-plant response » Compatible with standard spray programs » Improves conventional spray performance using both SAR (systemic acquired resistance) and ISR (induced systemic resistance) MOA's » Effective as a preventative treatment » No toxicity or stunting issues
HERBICIDES	Devrinol® 2-XT	Napropamide	15	» XT formulations for a longer incorporation window » Reliable PRE and PPI grass and broadleaf control » Tank mix friendly with other herbicides » Excellent crop safety
	Devrinol DF-XT	Napropamide	15	» XT formulations for a longer incorporation window » Reliable PRE and PPI grass and broadleaf control » Tank mix friendly with other herbicides » Excellent crop safety
	Metricor® DF	Metribuzin	5	» Broad-spectrum PRE herbicide » Excellent tank mix partner » Ideal resistance management option » Great soil stability
	Metricor 4F	Metribuzin	5	» Broad-spectrum PRE herbicide » Excellent tank mix partner » Ideal resistance management option » Great soil stability
	Moccasin® II Plus	S-Metolachlor	15	» Flexible application timings » Superior residual control properties » Important resistance management tool
	Satellite® HydroCap	Pendimethalin	3	» Pre-emergent control of targeted grass and small-seeded broadleaves » Micro-encapsulated, water based formulation » Excellent surface stability for incorporation flexibility
	Shadow® 3EC	Clethodim	1	» Quality formulation for POST grass control » Excellent tank-mix compatibility for broad spectrum control » Labeled on numerous broadleaf crops » Wide application window for flexible timing
	Shutdown® (Not registered in California)	Sulfentrazone	14	» Residual PRE broadleaf and grass control » Higher active ingredient loading than the industry standard » Tank-mix flexibility for use in resistance management programs

Labeled Pests	Average Use Rate*	Re-Entry Interval
Alternaria, Anthracnose, Bacterial Spot, Bacterial Speck, Early Blight, Late Blight	0.75 - 3 lbs/A	48 Hours
Alternaria Leaf Spot, Anthracnose, Belly Rot, Cercospora Leaf Spot, Downy Mildew, Gummy Stem Blight, Scab, Early Blight, Late Blight, Bacterial Speck, Bacterial Spot	0.8 - 3.2 lbs/A	24 Hours
Alternaria Leaf Spot, Anthracnose, Cercospora Leaf Spot, Downy Mildew, Gummy Stem Blight, Early Blight, Late Blight, Bacterial Speck, Bacterial Spot	1.2 - 2.4 qts/A	24 Hours
Alternaria Leaf Spot, Anthracnose, Cercospora Leaf Spot, Downy Mildew, Gummy Stem Blight, Early Blight, Late Blight, Bacterial Speck, Bacterial Spot	0.75 - 3.0 lbs/A	24 Hours
Powdery Mildew, Red Spider Mite, Septoria Leaf Spot, Rust	3.0 - 10.0 lbs/A	24 Hours
Powdery Mildew, Sclerotinia, Gray Mold, Late Blight, Gummy Stem Blight, Scab, Alternaria Leaf Spot, Early Blight, Belly Rot, Rhizoctonia damping-off and fruit rot, Target Leaf spot, Corynespora Leaf Spot, Alternaria Leaf Spot	6.2 oz/A	4 Hours
Powdery Mildew, Black Spot, Alternaria Leaf Spot	6-8 fl oz/A	12 Hours
Powdery Mildew, Cercospora Leaf Spot, Alternaria Leaf Spot	4.0 - 8.0 fl oz/A	12 Hours
Anthracnose*, Gummy Stem Blight*, Powdery Mildew, Target Spot*, Belly Rots*	0.5 lbs/A	24 Hours
Powdery Mildew, Downy Mildew, Alternaria Leaf Spot, Pin Rot, Xanthomonas Leaf Spot, Cercospora Leaf Spot, Gummy Stem Blight, Bacterial Blight, Bacterial Spot, Bacterial Speck, Black Mold, Grey Mold, Early Blight, Late Blight, Target Spot, Phytophthora Blight, Sclerotinia	14 - 22 fl oz/A	4 Hours
PREPLANT or PREEMERGENCE control of select grasses and broadleaves	2.0 - 4.0 qts/A	24 Hours
PREPLANT or PREEMERGENCE for select grasses and broadleaves	2.0 - 4.0 lbs/A	24 Hours
PREPLANT INCORPORATED or POSTEMERGENCE broadleaf control for tomatoes	0.33 - 1.33 lbs/A	12 Hours
PREPLANT INCORPORATED or POSTEMERGENCE broadleaf control for tomatoes	0.5 - 2.0 pts/A	12 Hours
PREPLANT, PREPLANT INCORPORATED, PREEMERGENCE or POSTEMERGENCE grass and small-seeded broadleaf control for tomatoes and pumpkins	1.0 - 2.0 pts/A	24 Hours
PREPLANT, PREPLANT INCORPORATED, or POSTEMERGENCE grass and small-seeded broadleaf control	1.0 - 3.0 pts/A	24 Hours
POSTEMERGENT perennial and annual grass control	4.0 - 10.67 fl oz/A	24 Hours
PREPLANT or PREEMERGENCE primarily broadleaf and some grass control	2.25 - 11.8 fl oz/A	12 Hours

Product	Active Ingredient	Mode of Action	Features and Benefits
Acephate 97UP®	Acephate	1B	» Reliable, broad spectrum, contact and systemic sucking and chewing insect control » Suitable for a wide variety of crops » Highly compatible with a wide range of tank mix partners
Acramite® 50WS	Bifenazate	20D	» Controls a wide variety of mites » Attacks spider mites at all life stages » Provides rapid knockdown » Highly active with long residual control » Easy on predator mites and other beneficials » Excellent resistance management tool
Assail® 30SG	Acetamiprid	4A	» Translaminar sucking and chewing insect control » Controls all insect life stages » Rapid knockdown and excellent residual » Works through pest contact and ingestion » Low to moderate toxicity to bees when applied according to the label
Assail 70 WP	Acetamiprid	4A	» Translaminar sucking and chewing insect control » Controls all insect life stages » Rapid knockdown and excellent residual » Works through pest contact and ingestion » Low to moderate toxicity to bees when applied according to the label
Bifenture® 10DF	Bifenthrin	3A	» Second-generation pyrethroid with broad spectrum insect and mite control » Consistent, cost effective insect control » Provides excellent residual control
Bifenture EC	Bifenthrin	3A	» Second-generation pyrethroid with broad spectrum insect and mite control » Consistent, cost effective insect control » Provides excellent residual control
Bifenture LFC	Bifenthrin	3A	» Contact insecticide that effectively stops insects before they can damage seeds and early root development » Can be mixed with pop-up or starter fertilizers
Dimilin® 2L	Diflubenzuron	15	» Insect growth regulator with long-lasting residual activity » Easy on beneficials
Enkounter™ (State Registrations Pending)	Methoxyfenozide + Acetamiprid	18 + 4A	» Broad spectrum insect and worm control » Dual mode of action » Systemic control through contact and ingestion » Quick knockdown and extended residual control » Easy on beneficials and IPM compatible
Lambda-CY®	Lambda-Cyhalothrin	3A	» Third-generation pyrethroid with broad spectrum insect control » Trusted formulation » Quick knockdown and excellent residual control » Low application rates
Perm-UP® 25DF	Permethrin	3A	» Proven broad spectrum pyrethroid » Quality formulation
Perm-UP 3.2 EC	Permethrin	3A	» Proven broad spectrum pyrethroid » Quality formulation
Rimon® 0.83EC	Novaluron	15	» Insect growth regulator with broad spectrum control » Easy on beneficials » Excellent choice for an IPM program » Rainfast and provides up to 10 days of residual control
UP-Cyde® 2.5 EC	Cypermethrin	3A	» Economical broad spectrum control of key insect pests » Suitable for a wide variety of crops
Vigilant® 4SC	Bifenazate	20D	» Controls a wide variety of mites » Attacks spider mites at all life stages » Provides rapid knockdown » Highly active with long residual control » Easy on predator mites and other beneficials » Excellent resistance management tool
Zylo®	Methoxyfenozide	18	» Consistent lepidopteran control » Unique mode of action » 7-14 day extended residual control » Pollinator and beneficial friendly » Tank mix compatible

Labeled Pests	Average Use Rate*	Re-Entry Interval
Aphids, Green Peach Aphid, Cabbage Looper, Aster Leafhopper, Armyworm, Grasshoppers	0.25 - 1.0 lbs/A	24 Hours
Avocado Red Spider Mite, Banks Grass Mite, Citrus Red Mite, Clover Mite, European Red Mite, McDaniel Mite, Pacific Spider Mite, Pecan Leaf Scorch Mite, Persea Mite, Six-Spotted Mite, Southern Red Mite, Spruce Spider Mite, Strawberry Spider Mite, Two-Spotted Spider Mite, Wilamette Mite	0.75 - 1.0 lbs/A	12 Hours
Cucumber Beetles, Squash Bug, Aphids, Leafhoppers, Whiteflies, Colorado Potato Beetle, Pepper Weevil, Thrips	2.5 - 5.3 oz/A	12 Hours
Cucumber Beetles, Squash Bug, Aphids, Leafhoppers, Whiteflies, Colorado Potato Beetle, Pepper Weevil, Thrips	1.1 - 2.3 oz/A	12 Hours
Grubs, Maggots, Wireworms, Aphids, Armyworms, Crickets, Cucumber Beetles, Cutworms, Diamondback Moth, Flea Beetles, Ground Beetles, Imported Cabbageworm, Leafhoppers, Loopers, Stink Bugs, Thrips, Banks Grass Mite, Carmine Mite, Lygus spp., Pacific Spider Mite, Two-Spotted Spider Mite, Whitefly, Plant Bug, Pepper Weevil	5.3 - 16 oz/A	12 Hours
Aphids, Armyworms, Corn Earworm, Crickets, Cucumber Beetles, Cutworms, Diamondback Moth, Flea Beetles, Ground Beetles, Imported Cabbageworm, Leafhoppers, Loopers, Stink Bugs, Thrips, Whitefly, Wireworm, Banks Grass Mite, Carmine Mite, Lygus spp., Pacific Spider Mite, Two-spotted Spider Mite, Brown Marmorated Stink Bug, Squash Bug, Plant Bug, Rindworm, Pepper Weevil	2.1 - 6.4 fl oz/A	12 Hours
Rootworm larvae, Grubs, Maggots, Cutworms, Wireworm, Flea Beetle Larvae, Cucumber Beetle Larvae, Armyworms, Lettuce Root Aphid, Bulb mites, Leafhoppers, Cucumber Beetles, Aphids, Whitefly, Loopers, Stink Bugs, Crickets, Thrips, Diamondback moth, Banks Grass Mite, Two-spotted Spider Mite, Carmine Mite, Pacific Spider Mite, Lygus spp.	3.4 - 8.5 fl oz/A	12 Hours
Grasshopper, Pepper Weevil, Armyworms, Plume Moth	2.0 - 8.0 fl oz/A	12 Hours
Cucumber Beetles, Squash Bug, Aphids, Leafhoppers, Whiteflies, Colorado Potato Beetle, Pepper Weevil, Thrips, Armyworms, Loopers, Garden Webworm, Imported Cabbageworm, Rindworms, Tomato Hornworm, Diamondback Moth (suppression)	1 lb/A	12 Hours
Alfalfa Looper, Cabbage Looper, Cutworms, Imported Cabbageworm, Aphids, Armyworms, Diamondback Moth, Flea Beetles, Grasshopper, Leafhoppers, Plant Bug, Spider Mites, Stink Bugs, Thrips, Vegetable Weevil, Whitefly, Blister Beetles, Crickets, Cucumber Beetles, June Beetle, Leaf-footed Bug, Rindworms, Saltmarsh caterpillar, Squash Beetle, Squash Bugs, Webworms, Leafminers, Colorado Potato Beetle, Pepper Weevil, Tomato Fruitworm, Tomato Pinworm	1.92 - 3.84 fl oz/A	24 Hours
Armyworms, Loopers, Diamondback Moth, Imported Cabbageworm, Plant Bugs, Thrips, Cutworms, Flea Beetles, Aphids, Leafminers, Squash Bug, Leafhoppers, Rindworms, Squash Vine Borer, Pepper Weevil, Hornworms, Tomato Fruitworm, Tomato Pinworm	3.2 - 12.8 oz/A	12 Hours
Loopers, Armyworms, Imported Cabbageworm, Plant Bugs, Thrips, Diamondback Moth, Flea Beetles, Aphids, Leafminers, Squash Bugs, Cutworms, Leafhoppers, Rindworms, Pepper Weevil, Colorado Potato Beetle, Hornworms, Tomato Fruitworm, Tomato Pinworm	2.0 - 8.0 fl oz/A	12 Hours
Armyworms, Cucumber Beetles, Leafminers, Loopers, Sap Beetles, Squash Bugs, Thrips, Whitefly, Colorado Potato Beetle, caterpillars, Tomato fruitworm, Tomato hornworm, Tomato pinworm, Pepper Weevil, Stink Bugs, Diamondback Moth, Imported Cabbageworm, Bagrada Bugs, Lygus, Stink Bugs, Thrips, Vegetable Weevil	9 - 12 fl oz/A	12 Hours
Cutworms, Lygus, Leafhoppers, Flea Beetles, Imported Cabbageworm, Cucumber Beetles, Armyworms, Loopers, Stink Bugs, Crickets, Ground Beetles, Onion Thrips, Wireworm, Diamondback Moth	2.5 - 5.0 fl oz/A	12 Hours
Avocado Red Spider Mite, Banks Grass Mite, Citrus Red Mite, Clover Mite, European Red Mite, McDaniel Mite, Pacific Spider Mite, Pecan Leaf Scorch Mite, Persea Mite, Six-Spotted Mite, Southern Red Mite, Spruce Spider Mite, Strawberry Spider Mite, Two-Spotted Spider Mite, Wilamette Mite	12.0 - 16.0 fl oz/A	12 Hours
Armyworms, Loopers, Garden Webworm, Imported Cabbageworm, Rindworms, Tomato Hornworm, Diamondback Moth (suppression)	4.0 - 16.0 fl oz/A	4 Hours



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