

CROP PROTECTION

VINEYARD

PRODUCT GUIDE

As a leader in specialty crop protection we balance innovation and efficiency to bring you a focused product portfolio that saves time and delivers results.

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Grow a better tomorrow

SELECTIVE HERBICIDES TO STOP WEEDS AND KEEP VINEYARDS CLEAN

Goal® 2XL

EPA REG. NO.	92894-2-71368
A.I.	oxyfluorfen (22.3%) (2 lbs/gal)
RATE / ACRE	Pre-emerge: 5-6 pt/A (broadcast), 5-8 pt/A (banded) *non dormant app for CA only 2 pt/A Post-emerge: 2-6 pt/A (broadcast), 2-8 pt/A (banded) *non dormant app for CA only 1-2 pt/A
GROUP NO.	14 REI 24 hrs PHI 14 days

Goal® 2XL delivers “extra long” control of many broadleaf and grassy weeds, including malva species. It works on contact and forms a lasting soil barrier to block emerging weeds for extended post- and pre-emerge control.

KEY BENEFITS:

- Proven pre- and post-emerge control
- Broad crop label and flexible application timings
- Long-lasting residual activity
- Excellent tankmix partner

TARGET PEST:

Burclover, cheeseweed (malva), fiddleneck, groundsel, henbit, knotweed, lambsquarters, minerslettuce, morningglory spp., mustard, nettle, nightshade, pigweed, purslane, redmaids, sowthistle (see label for complete list)

GoalTender®

EPA REG. NO.	92894-3-71368
A.I.	oxyfluorfen (41%) (4 lbs/gal)
RATE / ACRE	Pre-emerge: 2.5-3 pt/A (broadcast), 2.5-4 pt/A (banded) *non dormant app for CA only 1 pt/A Post-emerge: 1-3 pt/A (broadcast), 1-4 pt/A (banded) *non dormant app for CA only 0.5-1 pt/A
GROUP NO.	14 REI 24 hrs PHI 14 days

GoalTender® is a water-based formulation that holds well to soil and performs at lower rates with less environmental load. It delivers broadleaf weed burndown and lasting pre-emerge activity on broadleaves and grasses, making it ideal for residual herbicide programs.

KEY BENEFITS:

- Proven pre- and post-emerge control
- Long-lasting residual activity
- Holds well to soil with low volatility
- Low VOC meets California requirements
- Water-based formulation for greater crop safety and application flexibility

TARGET PEST:

Burclover, cheeseweed (malva), fiddleneck, groundsel, henbit, knotweed, lambsquarters, minerslettuce, morningglory spp., mustard, nettle, nightshade, pigweed, purslane, redmaids, sowthistle (see label for complete list)

Grapple™

EPA REG. NO.	71368-121
A.I.	rimsulfuron (25%)
RATE / ACRE	4 oz
GROUP NO.	2 REI 4 hrs PHI 14 days
COMPARE TO	Matrix®

Grapple™ Herbicide delivers outstanding weed control on many crops, but it's designed with the unique challenges of vineyards and orchards in mind. Knock down existing weeds and keep floors clean with lasting residual.

KEY BENEFITS:

- Outstanding broad-spectrum pre- and post-emergent control of many weeds
- Labeled for use on a wide range of crops, but formulated to deliver excellent results in vineyards and orchards
- Long-lasting residual control

TARGET PEST:

Barley, barnyardgrass, bluegrass, chamomile, chickweed, cocklebur, crabgrass, dandelion, filaree, fleabane, foxtail, groundsel, henbit, johnsongrass, kochia, lambsquarters, marestalk (horseweed), mustard, nightshade, oats, nutsedge, pigweed, puncturevine, purslane, quackgrass, ragweed, shepherd's-purse, smartweed, spurge, thistle, velvetleaf (see label for complete list)

Orchard Clean®

EPA REG. NO.	71368-1
A.I.	2,4-D amine (46.8%) (3.8 lb a.e./gal)
RATE / ACRE	1.8-2.7 pt/A
GROUP NO.	4 REI 48 hrs PHI 100 days
COMPARE TO	Dri-Clean®

Orchard Clean® is a low-volatile, premium 2,4-D amine formulation that is sequestered to 1,500-ppm water hardness. This “workhorse” of 2,4-D amines is registered for control of a variety of difficult weeds - including marestalk, mustard, and fleabane.

KEY BENEFITS:

- Readily soluble in water and forms a true solution
- Broad-spectrum broadleaf phenoxy herbicide in a low-volatile formulation
- Specialty label allows for applications in a variety of orchard settings

TARGET PEST:

For control of tough to control broadleaf weeds such as field bindweed, Canada thistle, fleabane, lambsquarters, morningglory, ragweed (see label for complete list)

Precaution: Grapes are extremely sensitive to 2,4-D. Use a direct application so no 2,4-D contacts grape leaves and young shoots or stems.

Tuscany® SC

EPA REG. NO.	71368-113
A.I.	flumioxazin (4 lb/gal)
RATE / ACRE	6-12 oz
GROUP NO.	14 REI 12 hrs PHI 60 days
COMPARE TO	Chateau®

Now in a convenient liquid formula, Tuscany® SC Herbicide controls more than 60 weeds with lasting residual control. Liquid Tuscany SC stays where you put it, with low leaching or volatilization potential.

KEY BENEFITS:

- Delivers dependable control in various weather conditions
- Offers residual control to keep weeds clear for months
- At least 1/4 inch rainfall or irrigation required to release activity

TARGET PEST:

Chickweed, dandelion, filaree, groundsel, henbit, johnsongrass (seedling), lambsquarters, little mallow, London rocket, marestalk (horseweed), mustard, nightshade, pigweed, prickly lettuce, puncturevine, purslane, radish, redmaids, shepherd's-purse, waterhemp (see label for complete list)

NON-SELECTIVE HERBICIDES FOR COMPLETE WEED CONTROL

Cheetah®

EPA REG. NO.	71368-112
A.I.	glufosinate (2.34 lb)
RATE / ACRE	48-82 oz
GROUP NO.	10 REI 12 hrs PHI 14 days
COMPARE TO	Rely®

Cheetah® utilizes a novel mode of action to better protect your vineyards from weed competition including triazine, ALS, and glyphosate resistant weeds. This fast, effective, non-selective herbicide will let you focus more on profitability and less on weeds.

KEY BENEFITS:

- Best glyphosate alternative, offering broad-spectrum weed control
- Directed sprays provide excellent control and crop safety in vineyards
- Excellent tank-mix partner with Tuscany® for extended residual control

TARGET PEST:

Controls more than 130 annual, biennial, perennial grass and broadleaf weeds including: giant ragweed, kochia, lambsquarters, marestalk (horseweed), morningglory spp., Palmer amaranth, waterhemp (see label for complete list)

Credit® 41 Extra

EPA REG. NO.	71368-20
A.I.	isopropylamine glyphosate (4 lb/gal) (3 lb a.e./gal)
RATE / ACRE	8-48 oz
GROUP NO.	9 REI 4 hrs PHI 14 days
COMPARE TO	Honcho®, Abundit™ Extra

Setting the industry standard, Credit® 41 Extra non-selective herbicide offers powerful weed control in a fully-loaded surfactant formulation. Credit 41 Extra requires no additional surfactant.

KEY BENEFITS:

- Superior broad-spectrum control of tough annual and perennial broadleaf weeds and grasses
- Works fast – brown down of annuals in 2 to 3 days and perennials in 7 to 10 days
- Fully loaded – requires no additional surfactant

TARGET PEST:

Wide range of annual and perennial grass and broadleaf weeds. (see label for complete list)

Credit® Xtreme

EPA REG. NO.	71368-81
A.I.	glyphosate: isopropylamine salt (3.33 lb), potassium salt (2.5 lb) (4.5 a.e./gal)
RATE / ACRE	11 fl oz-3.3 qt
GROUP NO.	9 REI 4 hrs PHI 14 days
COMPARE TO	Roundup PowerMAX® II

Credit® Xtreme gives you the proven performance of Credit in an exclusive formulation with Dual-Salt Technology™. With fast activity and rainfastness, tough weeds are no match.

KEY BENEFITS:

- Contains proprietary Dual-Salt Technology™
- Takes on the toughest weeds with quick burndown and complete control
- Excellent tank-mix compatibility, even in hard water environments

TARGET PEST:

Broadleaf weeds including common mallow and certain grass weeds such as barnyardgrass (see label for complete list)

PROTECT VALUABLE VINEYARDS FROM DEVASTATING INSECT PESTS

Abamex™

EPA REG. NO.	228-734
A.I.	abamectin low VOC (0.15 lb)
RATE / ACRE	8-16 fl oz
GROUP NO.	6 REI 12 hrs* PHI 28 days
COMPARE TO	Agri-Mek®

Abamex™ packages the power of abamectin in a low-volatility, water-based formulation. It affects pests within hours and translaminar activity protects the entire leaf, inside and out. With selective chemistry, Abamex is a useful resistance management rotation partner.

KEY BENEFITS:

- Control mites, leafhoppers and other insects
- Flexible application timing in an easy-to-use, low-volatility liquid formula
- Rainfast within hours of application

TARGET PEST:

Pacific spider mites, two-spotted spider mites, variegated leafhoppers*, Western grapeleaf skeletonizers, Western grape leafhoppers*, Willamette spider mites (see label for complete list)
*suppression

Abamex™ is an EPA Restricted-Use Pesticide. Always read and follow label directions.

Nuprid® 4F MAX

EPA REG. NO.	228-528
A.I.	imidacloprid (4 lb)
RATE / ACRE	1.2-1.6 fl oz (foliar), 8-16 fl oz (soil applied)
GROUP NO.	4A REI 12 hrs* PHI 30 days
COMPARE TO	Admire® Pro

Nuprid® 4F MAX systemic insecticide provides lasting broad-spectrum control. Labeled for both soil and foliar application, it offers outstanding control of damaging insect pests.

KEY BENEFITS:

- Selective control of key piercing and sucking insects
- Helps stop transmission of many insect vectored diseases
- Readily mixes with other tank-mix partners

TARGET PEST:

Leafhoppers / sharpshooters, mealybugs, Western grapeleaf skeletonizers (see label for complete list)

*REI exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

BlightBan® A506

EPA REG. NO.	228-710
A.I.	pseudomonas fluorescens
RATE / ACRE	5.3 oz or 150 grams
GROUP NO.	N/A REI 4 hrs PHI N/A



BlightBan® A506 protects grapes from bunch rot caused by species of Acetobacter bacteria (sour rot). OMRI Listed for use in organic agriculture, BlightBan A506 offers an unparalleled degree of safety and can be used in tank mixes and rotations as part of an integrated resistance management program.

KEY BENEFITS:

- The beneficial bacterium, Pseudomonas fluorescens reduces bunch rot in grapes
- Essential part of resistance management programs
- Gentle on crops
- Listed for use in organic crop production

TARGET PEST:

Bunch rot reduction
(see label for complete directions for use)

Champ® Formula 2 Flowable

EPA REG. NO.	55146-64
A.I.	copper hydroxide (4.5 lb/gal) metallic copper equivalent (2.91 lb/gal)
RATE / ACRE	1.33-2.66 pt/A
GROUP NO.	MI REI 48 hrs PHI N/A

Champ® Formula 2 Flowable is an advanced copper formulation that delivers excellent disease control. Developed with a small particle size, Champ stays in suspension longer, mixes easier in water and covers plants better to deliver superior protection.

KEY BENEFITS:

- Excellent control of key diseases
- Consistently ideal crystal size combined with state-of-the-art surfactants
- Long shelf life
- Pours and mixes easily – even after extended storage

TARGET PEST:

Black rot, downy mildew, Phomopsis, powdery mildew
(see label for complete directions for use)

ChampION⁺⁺

FUNGICIDE/BACTERICIDE

EPA REG. NO.	55146-115
A.I.	copper hydroxide (46.1%) metallic copper equivalent (30%)
RATE / ACRE	0.75-1.75 lb
GROUP NO.	MI REI 48 hrs PHI N/A
COMPARE TO	KOCIDE® 3000



ChampION⁺⁺ has the smallest, most consistent copper ions (particles) of any WG copper formulation. The result: better coverage and better disease control. And, ChampION⁺⁺ delivers all that with less environmental load than high dose copper products.

KEY BENEFITS:

- Stable WG formula pours easily and disperses quickly
- High density copper product means lower use rates and smaller pack sizes
- Controls plant pathogenetic fungi and bacteria (non-public health bacteria)
- Listed for use in organic crop production

TARGET PEST:

Black rot, downy mildew, Phomopsis, powdery mildew
(see label for complete directions for use)

Phostrol®

AGRICULTURAL FUNGICIDE

EPA REG. NO.	55146-83
A.I.	mono- and dibasic sodium, potassium and ammonium phosphites (6.27 lb/gal equivalent to 4.17 lb a.e./gal)
RATE / ACRE	2.5-5 pt/A
GROUP NO.	33 REI 4 hrs PHI N/A

Phostrol® is one of the few phosphorous acids labeled as a fungicide. A neutral pH requires no buffering and allows integration with many other fungicides. Its tank mix compatibility makes Phostrol an excellent fit for any disease management program.

KEY BENEFITS:

- Provides prevention and control of a broad spectrum of diseases
- Clear, virtually odorless formulation
- No buffer necessary

TARGET PEST:

Downy mildew
(see label for complete directions for use)

Ultra Flourish®

AGRICULTURAL FUNGICIDE

EPA REG. NO.	55146-73
A.I.	mefenoxam (2 lb)
RATE / ACRE	7.2 pt/A or 0.5 pt/1000 row ft (as soil spray)
GROUP NO.	4 REI 48 hrs PHI 60 days
COMPARE TO	Ridomil Gold® SL

Ultra Flourish® forms a protective barrier from harmful soil diseases caused by Pythium and Phytophthora species. Ultra Flourish's systemic mode of action prevents spore production and inhibits mycelial growth of fungus and improves crop health and vigor.

KEY BENEFITS:

- Highly active fungicide formulation
- Can be applied in combination with liquid fertilizers or saturated into dry fertilizers
- Excellent crop safety

TARGET PEST:

Crown rot, root rot
(see label for complete directions for use)



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Abamex™ is an EPA Restricted-Use Pesticides. Always read and follow label directions.

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