

LICENSED

PERIOD 2008-2010 LIC. NO.



LICENSED

PERIOD 2011-2013 LIC. NO.



**OXEN**<sup>TM</sup>  
HERBICIDE

LICENSED

PERIOD 2014-2016 LIC. NO.

8378.96

For use on artichokes (Globe), broccoli, cabbage, cauliflower, cacao, citrus (non-bearing), coffee (Hawaii only), conifers (seedbeds, transplants, container stock) and selected deciduous trees, corn, cotton, cottonwood, eucalyptus, fallow bed (cotton/soybeans), fallow land, Garbanzo beans, garlic, guava (Hawaii only), horseradish, jojoba, mint, onions, papaya (Hawaii only), soybeans, taro and tree fruit, nuts and vines (which includes almond, apple, avocado, beechnut, brazil nut, butternut, cashew, cherry, chesnut, chinquapin, crabapple, date, fejoa, fig, filbert, grapes, hickory nut, kiwi, loquat, macadamia nut, mayhaws, nectarines, olives, peach, pear, pecan, persimmon, pistachio, plum, pomegranates, prune, quince, walnut).

OXEN ACTIVE INGREDIENT	% BY WT.
Oxyfluorfen: 2-chloro-1- (3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl) benzene*	22.2%
INERT INGREDIENTS:	77.8%
TOTAL	100.0%

Contains petroleum distillate.

\*Equivalent to 2 lbs. active ingredient per gallon.

SHAKE WELL BEFORE USING

## KEEP OUT OF REACH OF CHILDREN WARNING—AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail).

### FIRST AID

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL:**  
1-800-301-7976.

**NOTE TO PHYSICIAN:** Contains petroleum distillate; vomiting may cause aspiration pneumonia. Symptoms of exposure through inhalation or ingestion include headache, dizziness, nausea, vomiting, and cramps. Symptoms from eye or skin contact include irritation. Remove victim from area of exposure. Wash off remaining material with plenty of water. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically and give supportive therapy. There is no specific antidote.

EPA REG. NO. 34704-877

EPA EST. NO. 11603-IS-01

NET CONTENTS 2½ GALS. (9.46 L)

IHT

040705 V3 12R07

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through the skin. Do not get in eyes or on clothing. Avoid contact with skin. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash clothes before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:** Protective eyewear, coversalls over short sleeved shirt and short pants, chemical-resistant gloves, such as barrier laminate or Viton >14 mils, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure, chemical-resistant apron when cleaning equipment, mixing, or loading. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENGINEERING CONTROLS STATEMENT:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### USER SAFETY RECOMMENDATIONS

Users should:  
Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. This product is highly toxic to aquatic invertebrates, aquatic plants, wildlife, and fish. Use with care when applying in areas frequented by wildlife or adjacent to any body of water or wetland area. Do not apply when weather conditions favor drift or erosion from target areas.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Protective eyewear, coversalls over short-sleeved shirt and short pants, chemical-resistant gloves, such as barrier laminate or Viton > 14 mils, chemical-resistant footwear plus socks, and chemical-resistant headgear for overhead exposure.

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## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of treated area until sprays have dried.

## CHEMIGATION STATEMENT

Refer to the section entitled APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION for use directions for chemigation. Do not apply this product through any irrigation system unless the instructions for chemigation are followed. If application by chemigation is not specifically listed for a crop, OXEN herbicide may not be applied to that crop through irrigation systems.

## GENERAL USE INFORMATION

Unless otherwise directed by registered supplemental labels, follow the Directions for Use in each crop group section.

**IMPORTANT:** Read the entire DIRECTIONS FOR USE and the WARRANTY STATEMENT before using this product. If terms are not acceptable, return the unopened product container to the place of purchase at once.

## CULTURAL CONSIDERATIONS

In order for OXEN herbicide to provide maximum preemergence activity: Prior to application, the bed or soil surface should be smooth and free of crop and weed trash (decaying leaves, clippings, dead weeds, etc.). Leaves and trash may be removed by blowing the area to be treated or by thoroughly mixing the trash into the soil through cultivation prior to herbicide application. After application, at least one-quarter inch (1/4 inch) of irrigation or rainfall should occur within 3 or 4 weeks after application. The best results from OXEN herbicide are from applications to established beds or soil surfaces that are left undisturbed during the time period for which weed control is desired. Cultural practices that result in redistribution or disturbance of the soil surface after treatment will decrease the herbicidal effectiveness of OXEN herbicide. Cutting water furrows or cultivations that mix untreated soil into treated areas will also reduce the effectiveness of the treatment.

## MIXING DIRECTIONS

Fill the spray tank at least one-third full of clean water. With the pump and agitator running, add the recommended amount of herbicides to the spray tank. The order of addition to the spray tank should be wettable powders first, flowables second, and liquids last. Complete filling of the spray tank with water. For all applications of OXEN herbicide (except onions) where postemergence weed control is desired, add 2 to 4 pints of an 80% active nonionic surfactant cleared for application to growing crops per each 100 gallons of spray. The addition of 4 pints of an 80% active nonionic surfactant per 100 gallons of spray is recommended to enhance postemergence activity when hard water (greater than 600 ppm) is used as a carrier. Maintain agitation until spraying is completed.

Compatibility testing for tank mixing partners: OXEN herbicide may also be used in tank mixtures. Test compatibility of the intended tank mixture before adding OXEN herbicide to the spray or tank mix. Add proportionate amounts of each ingredient to a pint or quart jar, cap, shake, and let set 15 minutes. Formation of precipitates that do not readily redispense indicates an incompatible mixture that should not be used.

Spray equipment should be calibrated carefully before each use. Dosages listed on this label are for broadcast application. For banded application, the amount of OXEN herbicide used per acre should be reduced according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Broadcast Acre} = \text{Amount Needed per Acre for Banded Application}$$

## CROP USE RECOMMENDATIONS

### ARTICHOKES (GLOBE)

#### Post-Directed Spray General Information

OXEN herbicide is an effective herbicide for postemergence and preemergence control of certain broadleaf weeds in artichokes. OXEN herbicide should be directed towards the winter ditch, levees, or flat rows between the artichoke rows. Artichoke fronds receiving accidental spray or drift will be injured. Over-the-top applications may exhibit severe injury to the foliage and flower bud and are not recommended.

#### Dosage

OXEN herbicide is recommended as a post-directed application at 4 to 8 pints (1.0 to 2.0 lbs. active) per acre. Optimum control is achieved when two applications of OXEN herbicide are applied at 4 pints (1.0 lb. active) per acre. The initial application should be made to susceptible weed seedlings (up to 8-leaf stage). It is recommended that a second application be made 8 to 10 weeks later. Good results may be achieved when a single application of 8 pints (2.0 lbs. active) of OXEN herbicide is applied to susceptible weed seedlings (up to 8-leaf stage). Do not apply more than 8 pints (2.0 lbs. active) of OXEN herbicide per treated acre per season as a result of a single application or multiple applications. Do not apply within 5 days of harvest.

#### Weeds Controlled Postemergence

Cheeseweed (Malva) Oxalis (Bermuda Buttercup)  
Groundsel, common Shepherdspurse  
Mustard, Common Yellow Sowthistle, annual  
Nettle, Burning

#### Weeds Controlled Preemergence

Cheeseweed (Malva) \*Oxalis (Bermuda Buttercup)  
Groundsel, common Shepherdspurse  
Lambsquarters, common Sowthistle, annual  
Mustard, Common Yellow  
\*Suppression

#### Timing and Method of Application

Treatments should be made after completion of the ditching operation. OXEN herbicide should be applied in a minimum of 40 gallons of water per acre depending upon density of emerged weeds. Spray volume should be increased as weed height and density increase. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment should be calibrated carefully before each use. Spray should be directed towards the winter ditch, levees, or flat rows between the artichoke rows. **ARTICHOKE FRONDS RECEIVING ACCIDENTAL SPRAY OR DRIFT WILL BE INJURED.**

#### Artichoke (Globe)

##### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply more than 8 pints (2.0 lbs. active) of OXEN herbicide per treated acre per season as a result of a single application or multiple applications.
- Do not apply OXEN herbicide within 5 days of harvest.
- Avoid direct spray or drift contact of OXEN herbicide with artichoke flowers or buds as severe injury may result.
- Do not apply OXEN herbicide to artichoke plantings within 60 days after cutting back or transplanting.

## BROCCOLI, CABBAGE, CAULIFLOWER

### Pre-Transplant (Preplant) Application for Preemergence Broadleaf Weed Control General Information

OXEN herbicide is a selective herbicide for preemergence control of certain annual broadleaf weeds. Applications must be made after completion of soil preparation but prior to transplanting of broccoli, cabbage, or cauliflower plants. Transplanting should be completed with minimal soil disturbance. Treated soil surfaces should be left undisturbed after transplanting to obtain greatest benefit of OXEN herbicide on susceptible annual broadleaf weeds during the time period for which weed control is desired. However, timely cultivations after weed emergence will assist in weed control. Pre-transplant applications of OXEN herbicide in broccoli, cabbage, and cauliflower may result in a temporary initial crop response (leaf cupping or crinkling). Crop response may be enhanced if crop leaves come in direct contact with treated soil. Crops rapidly outgrow this condition and develop normally. Severe crop response may result from the use of transplants that are under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, or storage conditions. The use of young (less than 5 weeks old), extremely succulent transplants grown in containers, less than 1-inch square, may increase the severity of crop injury. Hardening off, increasing the age of transplants, or increasing the size of the rooting container will lessen the possibility and/or severity of crop injury.

#### Dosage

OXEN herbicide is recommended for use at 1 to 2 pints (0.25 to 0.5 lb. active) per broadcast acre. The lower rate (1 pint per acre) is recommended for preemergence weed control on coarse texture soils with less than 1% organic matter. The 2 pint per acre rate is recommended for preemergence weed control on medium to fine texture soils or soils containing greater than 1% organic matter.

OXEN herbicide will assist in early season annual grass control. However, OXEN herbicide must not be a basic portion of the grass herbicide program. A planned herbicide program for preemergence or postemergence grass control is recommended. Research has shown that severe crop injury can occur if OXEN herbicide is applied to a field that has had an acetanilide herbicide (s-metolachlor, alachlor) application during the current growing season; therefore, it is not recommended.

#### Weeds Controlled\*

Carpetweed Purslane, common  
Pigweed, Redroot Smartweed, Pennsylvania

\*Applications of OXEN herbicide to muck soils may result in partial control or suppression of the weeds listed.

OXEN herbicide at the rate of 1 to 2 pints per acre may provide partial control or suppression of galinsoga, common lambsquarters, and wild mustard.

#### Method of Application

OXEN herbicide should be thoroughly mixed with clean water at recommended concentrations and applied in a minimum of 20 gallons of water per acre. Use conventional ground spray equipment with flat fan nozzles at 20 to 40 psi. Do not exceed 40 psi. Accurately calibrate spray equipment prior to each use. Thoroughly flush the spray equipment (tank, hose, pump, boom) with water before and after each use. Residual OXEN herbicide remaining in the spray equipment may damage other crops.

**AVOID DRIFT TO ALL OTHER CROPS AND NONTARGET AREAS. DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT. OXEN HERBICIDE IS PHYTOTOXIC TO PLANT FOLIAGE.**

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### Broccoli, Cabbage, Cauliflower

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply more than 2 pints (0.5 lb. active) OXEN herbicide per treated acre per season.
- Do not apply OXEN herbicide preemergence to direct-seeded broccoli, cabbage, or cauliflower.
- Do not apply OXEN herbicide post-transplant or postemergence (over-the-top) to broccoli, cabbage, or cauliflower.
- FOR FIELD USE ONLY. Do not apply OXEN herbicide in an enclosed green house structure as injury to plant foliage may result.

### CACAO

#### General Information

OXEN herbicide is effective as a preemergence herbicide when used alone for the control of certain annual broadleaf weeds in bearing and non-bearing cacao plantings. Preemergence control is most effective when spray is applied to clean, weed-free soil surfaces. Treated berms or soil surfaces should not be disked or disturbed in any manner as the herbicidal effectiveness of OXEN herbicide may be decreased. Seedling weeds are controlled as they come in contact with soil-applied herbicides during emergence.

#### OXEN Herbicide Used Alone

##### Dosage

OXEN herbicide is recommended for preemergence and postemergence control of susceptible weeds at 2 to 8 pints (0.5 to 2.0 lbs. active) per broadcast acre when directed to the orchard floor beneath cacao plants or at a dosage of up to 4 pints per acre as a pre-transplant application. For directed spray applications, cacao transplants must be healthy and of suitable size for field transplanting. Avoid spray contact with cacao foliage as injury may result. Dosages listed are for broadcast application. For banded application, the amount of OXEN herbicide used per acre should be reduced according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Broadcast Acre} = \text{Amount Needed per Acre for Banded Application}$$

#### Weeds Controlled Postemergence

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per broadcast acre. Applications to weeds beyond the four-leaf stage may result in partial control.

Purslane, Common      Spurge, Garden

#### Weeds Controlled Preemergence

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per broadcast acre.

Ageratum      Purslane, Common  
 Buttonweed      Spurge, Garden  
 Crotonalaria

#### Timing and Method of Application

**DO NOT APPLY PREPLANT OR PREEMERGENCE TO DIRECT-SEEDED CACAO. TREATMENTS CAN BE MADE TO ESTABLISHED CACAO OR AS A PRE-TRANSPLANT OR RECENTLY TRANSPLANTED CACAO.**

Treatments should only be applied to healthy cacao stock (as determined by standard commercial growing practice). Care must be taken to prevent direct spray contact with foliage. Cacao foliage receiving accidental spray or drift may be injured. As a preemergence or postemergence treatment to weeds, apply a minimum of 15 gallons of water per acre. Use higher volumes to assure adequate coverage in high densities of emerged weeds or heavy trash. OXEN herbicide should be directed to the soil and the base of the tree. Use of a low-pressure sprayer equipped with a breakaway boom and flat fan or off-center (OC) nozzles is recommended. Spray shields are suggested for use in young trees. Spray equipment should be calibrated carefully before each use.

#### Cacao

##### Specific Use Restrictions

In addition to the following, also observe the GENERAL USE RESTRICTIONS listed at the end of the label.

- Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre of OXEN herbicide in a single application or 24 pints (6.0 lbs. active) per broadcast acre per year.
- Do not apply OXEN herbicide within one (1) day of harvest.
- Direct spray toward the base of the trees. Avoid spray contact with foliage.
- Do not apply preplant or preemergence to direct-seeded cacao.

### CITRUS (NONBEARING)

Including But Not Limited To Calamondin, Chironja, Citrus Citron, Grapefruit, Kumquat, Lemon, Lime, Mandarin, Pummelo, Satsuma Mandarin, Sour Orange, Sweet Orange, Tangelo, Tangerine, Tangor

**For Use Only In Permanently Established Groves In Arizona, California, Florida, Louisiana, And Texas.**  
 OXEN herbicide

#### General Information

OXEN herbicide is effective as a preemergence and/or postemergence herbicide when used alone or in recommended tank-mix combinations for the control of certain annual broadleaf weeds in nonbearing citrus plantings. OXEN herbicide may be applied to newly planted trees or to young trees that will not bear fruit within one year.

The most effective postemergence weed control is achieved when OXEN herbicide is applied to seedling weeds at the recommended growth stage. For postemergence control of certain grassy and broadleaf weeds, a tank mix of OXEN herbicide with paraquat or glyphosate can be used.

For residual grass control in citrus, a tank mixture of OXEN herbicide with napropamide, simazine, norflurazon, or oryzalin can be used. Contact herbicides such as paraquat or glyphosate may also be added to the tank mixture. Check individual product labels to determine suitability and use rates for various crops.

#### OXEN Herbicide Used Alone

##### Geographic Use Directions

##### Arizona And California

##### Dosage

OXEN herbicide is recommended for postemergence control at 2 to 8 pints (0.5 to 2.0 lbs. active) per broadcast acre. For preemergence control of susceptible weeds, use 8 pints (2.0 lbs. active) per broadcast acre.

#### Weeds Controlled Postemergence (weeds up to 4 inches high)

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per broadcast acre.

Applications to weeds beyond this 4-inch stage may result in partial control.

Cheeseweed (Malva)	Miner's Lettuce
Fiddleneck, Coast	Nettle, Burning
*Filaree, Broadleaf	Pigweed, Redroot
*Filaree, Redstem	Redmaids
*Filaree, Whitestem	Shepherdspurse
Groundsel, Common	Sowthistle, Annual
Henbit	

\*OXEN herbicide at the 8-pint rate (2.0 lbs. active) will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

#### Weeds Controlled Preemergence

Apply 5 to 8 pints (1.25 to 2.0 lbs. active) of OXEN herbicide per broadcast acre.

Burclover	Lettuce, Prickly
Cheeseweed (Malva)	Pigweed, Redroot
Fiddleneck, Coast	Purslane, Common
Filaree, Broadleaf	Redmaids
Filaree, Redstem	Rocket, London
Filaree, Whitestem	Shepherdspurse
Groundsel, Common	Sowthistle, Annual
Henbit	Spurge, Prostrate
Knotweed, Prostrate	Spurge, Spotted
Lambsquarters, Common	

#### Florida, Louisiana, And Texas

##### Dosage

OXEN herbicide is recommended for postemergence control at 2 to 8 pints (0.5 to 2.0 lbs. active) per broadcast acre. For preemergence control of susceptible weeds, OXEN herbicide is recommended at 8 pints (2.0 lbs. active) per broadcast acre.

#### Weeds Controlled Postemergence

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per broadcast acre. The lower rate is recommended for the control of susceptible seedling weeds in the early postemergence stage up to the 4-leaf stage. The higher rate (2.0 lbs. active) should be used for weeds up to the 6-leaf stage. Applications to weeds beyond the 6-leaf stage may result in partial control.

Balsamapple	Pepperweed, Virginia
*Cudweed, Narrowleaf	Pigweed, Redroot
**Eveningprimrose, Cutleaf	Poinsettia, Wild
Groundcherry, Cutleaf	Purslane, Common
Groundcherry Wright	Pusley, Florida
Lambsquarters, Common	Sida, Prickly (Teaweed)
Morningglory, Annual	Smartweed, Pennsylvania
Nightshade, American Black	Sowthistle, Annual
Nightshade, Black	

\*Maximum 0.5 inch diameter.

\*\*Highest rate and/or multiple applications may be required for acceptable control. Do not apply more than 16 pints (4.0 lbs. active) per broadcast acre during any 12-month period as a result of multiple applications.

#### Weeds Controlled Preemergence

Apply 8 pints (2.0 lbs. active) of OXEN herbicide per broadcast acre.

Cudweed, Narrowleaf	Poinsettia, Wild
**Eveningprimrose, Cutleaf	Pusley, Florida
Groundcherry, Cutleaf	Sida, Prickly (Teaweed)
Lambsquarters, Common	Smartweed, Pennsylvania
Nightshade, American Black	Sowthistle, Annual
Nightshade, Black	Spurge, Prostrate
Pepperweed, Virginia	Spurge, Spotted
Pigweed, Redroot	

\*Maximum 0.5 inch diameter.

\*\*Highest rate and/or multiple applications may be required for acceptable control. Do not apply more than 16 pints (4.0 lbs. active) per broadcast acre during any 12-month period as a result of multiple applications.

#### All States- Arizona, California, Florida, Louisiana, And Texas

##### Timing And Method Of Application

OXEN herbicide should be directed to the soil and the base of trees. Avoid direct spray contact on the citrus foliage. Use a low-pressure sprayer equipped with a breakaway boom and flat fan nozzles. An off-center (OC) nozzle positioned at the end of the boom may be desired.

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### SPRAY VOLUME

Weed Stage	Gallons of Water Per Acre
Preemergence	40 or more
Postemergence up to 4-inch or 4-leaf stage	40 or more
Exceeding 4-inch or 4-leaf stage	100 or more

### Tank Mixes with OXEN Herbicide

**IMPORTANT:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mix, the most restrictive situations must apply.

### Dosage

For preemergence control of susceptible grassy and broadleaf weeds in citrus plantings, a tank mixture of OXEN herbicide with napropamide, simazine, norflurazon, or oryzalin can be applied. Apply at the recommended rates and growth stages to susceptible weed species in a manner described on the respective labels. For postemergence control of susceptible grassy and broadleaf weeds, a tank mixture of paraquat or glyphosate with OXEN herbicide or combinations of OXEN herbicide plus napropamide, simazine, norflurazon, or oryzalin can be used. Apply at the recommended rates and growth stages to susceptible weed species in a manner described on the respective labels.

### Weeds Controlled

In addition to the weeds controlled by OXEN herbicide used alone, control of susceptible weeds listed on the respective labels for the following products is also obtained:

Napropamide	Simazine
Paraquat	Norflurazon
Glyphosate	Oryzalin

\*In addition, provides preemergence control of horseweed (marestail).

### Citrus (Nonbearing)

#### Specific Use Restrictions

In addition to the following, also observe the GENERAL USE RESTRICTIONS listed at the end of this label.

- Apply OXEN herbicide only to nonbearing citrus trees.
- Do not apply more than 8 pints of OXEN herbicide (2.0 lbs. active) per broadcast acre in a single application or more than 16 pints (4.0 lbs. active) per broadcast acre during any 12-month period as a result of multiple applications.
- OXEN herbicide or any of the combinations recommended on this label should only be applied to healthy growing trees.
- Do not apply during periods of new foliage growth. Applications should be made after foliage has fully expanded and hardened off.
- Direct spray toward the base of trees. Avoid direct spray contact on the citrus foliage.

### CLARY SAGE

(For Weed Control in Clary Sage Grown and Utilized in the Essence Industry in North Carolina only)

#### General Information

OXEN herbicide is a selective herbicide which can be used for the control of henbit (*Lamium amplexicaule*) in Clary Sage (*Salvia sclarea*).

Applications to control henbit during the winter season should be timed to start shortly after the first flush of henbit is in the 2- to 4-leaf stage. Additional applications may be required to control subsequent weed flushes through the spring season. Clary Sage may respond to the topical application with some marginal leaf burn, recovery is rapid. After spraying, henbit will stop growing and slowly die.

### Dosage

OXEN herbicide should be applied at a rate of 0.5 to 1 pint per acre (0.12 to 0.25 lb. active). OXEN herbicide should be thoroughly mixed with clean water at recommended concentrations and applied in 20 to 50 gallons of water per acre. Apply at 20 to 40 psi.

### COFFEE

#### Bearing and Nonbearing Coffee in Hawaii

#### General Information

OXEN is effective as a preemergence herbicide when used alone for the control of certain annual broadleaf weeds in bearing and nonbearing coffee plantings. For postemergence control of certain grassy and broadleaf weeds, a tank mixture of either paraquat or glyphosate with OXEN herbicide can be applied to seedling weeds. Check individual product labels to determine suitability and use rates for crop.

#### OXEN Herbicide Used Alone

#### Dosage

For preemergence control of susceptible weeds, OXEN herbicide is recommended at 2 to 8 pints (0.5 to 2.0 lbs. active) per broadcast acre as a preemergence application directed to the orchard floor beneath coffee plants or at a dosage of up to 4 pints per broadcast acre as a pre-transplant application. For directed spray applications, coffee transplants must be healthy and of suitable size for field transplanting. Avoid spray contact with coffee foliage as injury may result. OXEN herbicide may be applied postemergence (over-the-top) to dormant coffee transplants. Applications must only be made prior to bud break to avoid possible phytotoxicity to the coffee foliage. Over-the-top applications made after buds start to swell may result in injury to the coffee plant and are not recommended. Dosages listed on this label are for broadcast application. For banded application, the amount of OXEN herbicide used per acre should be reduced according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Broadcast Acre} = \text{Amount Needed per Acre for Banded Application}$$

### Weeds Controlled Postemergence

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per broadcast acre. Applications to weeds beyond the four-leaf stage may result in partial control.

Purslane, Common  
Spurge, Garden

### Weeds Controlled Preemergence

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per broadcast acre.

Ageratum  
Purslane, Common  
Buttonweed  
Spurge, Garden  
Crotalaria

### Timing And Method Of Application

#### Do Not Apply Preplant Or Preemergence To Direct-Seeded Coffee

Treatments should only be applied to healthy coffee stock (as determined by standard commercial growing practices). Care must be taken to prevent direct spray contact with foliage. Coffee foliage receiving accidental spray or drift may be injured. As a preemergence or postemergence treatment to weeds, apply a minimum of 30 gallons of water per acre. Use higher volumes to ensure adequate coverage in high densities of emerged weeds or heavy trash. OXEN herbicide should be directed to the soil and the base of the tree. Use of a low-pressure sprayer equipped with a breakaway boom and flat fan or off-center (OC) nozzles is recommended. Spray equipment should be calibrated carefully before each use.

### Tank Mixes With OXEN Herbicide

**Important:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

For postemergence control of susceptible grassy and broadleaf weeds in coffee plantings, a tank mixture of OXEN herbicide with either glyphosate or paraquat may be applied as a directed spray. Apply at recommended rates and growth stages to susceptible weed species in a manner described on the respective labels.

### Weeds Controlled Postemergence

In addition to the weeds controlled by OXEN herbicide used alone, control of susceptible weeds listed on the respective labels for the following products is also obtained.

Paraquat  
Glyphosate

### Coffee

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply preplant or preemergence to direct-seeded coffee.
- Direct spray toward the base of the trees. Avoid spray contact with foliage.
- OXEN herbicide may be applied as a postemergence (over-the-top) application to dormant transplants. Do not apply over-the-top to coffee transplants after buds start to swell.
- OXEN herbicide or any of the combinations recommended on this label should be applied to only healthy growing trees/transplants under standard commercial growing practices.
- Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre of OXEN herbicide in a single application or 24 pints (6.0 lbs. active) per broadcast acre per year.
- Do not apply OXEN herbicide within one (1) day of harvesting.
- Applications of OXEN herbicide during periods of rapid new foliage growth may cause injury.

### CONIFER SEEDBEDS, TRANSPLANTS, CONTAINER STOCK AND SELECTED FIELD-GROWN DECIDUOUS TREES

#### General Information

OXEN herbicide is effective as a preemergence and/or postemergence herbicide for the control of certain annual grassy and broadleaf weeds in conifer seedbeds, transplants, and container stock, and in selected field-grown deciduous trees. Preemergence control is most effective when spray is applied to clean, weed-free soil surfaces. Treated soil surfaces should not be disturbed as the herbicidal effectiveness of OXEN herbicide may be decreased. Seedling weeds are controlled during emergence as they come in contact with the soil-applied herbicide. The most effective postemergence weed control is achieved when OXEN herbicide is applied to seedling weeds less than 4 inches in height.

Occasionally after the use of OXEN herbicide, a spotting, crinkling, or flecking may appear on leaves of conifer and deciduous species. Leaves that receive direct or indirect (drift) spray contact may be injured. The conifer and deciduous species typically outgrow this condition rapidly and develop normally.

**IMPORTANT:** When applied as directed, the conifer and selected deciduous species listed on this label have shown tolerance to OXEN herbicide. It is impossible, however, to evaluate this product on all varieties, biotypes, and cultivars of listed species on this label or under all possible growing conditions. The user should exercise reasonable judgment and caution with this product. Until familiar with results under user growing conditions, limit application of this product to a few plants in a small treated area to determine plant tolerance and extent of injury if such occurs prior to initiating large-scale applications.

### Weeds Controlled

When OXEN herbicide is applied preemergence or postemergence at recommended dosages and weed stages, the following grasses and broadleaf weeds are controlled.

# OXEN™ HERBICIDE

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\*Barnyardgrass  
 Bedstraw, Catchweed  
 Bittercress, Lesser  
 \*Bluegrass, Annual  
 Buckwheat, Wild  
 Burclover  
 Carpetweed  
 \*Clover, Red  
 \*Clover, White  
 Cocklebur, Common  
 \*Crabgrass, Large  
 \*Fiddleneck, Coast  
 Filaree, Broadleaf  
 Filaree, Redstem  
 Fireweed (From Seed)  
 Fixweed  
 \*Foxtail, Giant  
 \*Goosegrass  
 Groundcherry, Cutleaf  
 Groundcherry, Wright  
 Groundsel, Common  
 Henbit  
 Jimsonweed  
 Knotweed, Prostrate  
 Ladysthrub  
 Lambsquarters, Common  
 Lettuce, Prickly  
 Mallow, Little  
 Mayweed  
 Miner's Lettuce  
 \*Morningglory, Ivyleaf  
 \*Morningglory, Tall  
 \*Highest rate and/or multiple applications may be required for acceptable control.  
 \*\*Preemergence control only.

Mustard, Blue  
 Mustard, Tumble  
 Mustard, Wild  
 Nettle, Burning  
 Nightshade, Black  
 Nightshade, Hairy  
 Oats, Wild  
 Orach, Red  
 Pepperweed, Yellowflower  
 Pigweed, Prostrate  
 Pigweed, Redroot  
 Pimpernel, Scarlet  
 Purslane, Common  
 Redmaids  
 Rocket, London  
 Sandspurry, Red  
 \*Shepherdspurse  
 Sida, Prickly  
 Smartweed, Pennsylvania  
 Sorrel, Red (From Seed)  
 Sowthistle, Annual  
 Speedwell, Birdseye  
 \*\*Spurge, Prostrate  
 \*\*\*Spurge, Spotted  
 Spurry, Corn  
 Tansymustard  
 \*\*Thistle, Bull  
 Thistle, Russian  
 Velveteal  
 Witchgrass  
 \*\*Woodsorrel, Yellow

OXEN herbicide is most effective when applied preemergence to annual grasses. Postemergence applications should be made to seedling grasses not exceeding the 2-leaf stage. The addition of 0.25% (2 pints per 100 gallons of spray solution) of an 80% active nonionic surfactant, cleared for application on growing crops, enhances the OXEN herbicide activity on emerged weeds. When determining an appropriate use rate where a range of rates is provided, use higher rates where heavy weed pressure is anticipated, or where medium and fine soil textures exist and high organic matter soils are present.

### Conifer Seedbeds

To assist in the establishment of conifer seedbeds, OXEN herbicide can be applied as a preemergence application following seeding. Postemergence applications should be delayed until a minimum of 5 weeks after emergence of the conifer seedlings. During periods of cool, cloudy weather, make certain that seedlings have hardened off prior to spraying.

Conifers are tolerant to preemergence and postemergence applications of OXEN herbicide. OXEN herbicide will provide both postemergence and residual preemergence control of many broadleaf weeds and annual grass species.

### Conifer Species

OXEN herbicide may be applied to conifer seedbeds of species including the following:

Common Name	Scientific Name
Douglas Fir	<i>Pseudotsuga menziesii</i>
<b>Fir</b>	
Fraser	<i>Abies fraseri</i>
Grand	<i>Abies grandis</i>
Noble	<i>Abies procera</i>
<b>Hemlock</b>	
Eastern Hemlock	<i>Tsuga canadensis</i>
Western Hemlock	<i>Tsuga heterophylla</i>
<b>Pine</b>	
Austrian	<i>Pinus nigra</i>
Eastern White	<i>Pinus strobus</i>
Himalayan	<i>Pinus wallichiana</i>
Jack	<i>Pinus banksiana</i>
Loblolly	<i>Pinus taeda</i>
Lodgepole	<i>Pinus contorta</i>
Longleaf	<i>Pinus palustris</i>
Monterey	<i>Pinus radiata</i>
Mugho	<i>Pinus mugo</i>
Ponderosa	<i>Pinus ponderosa</i>
Scotch	<i>Pinus sylvestris</i>
Shortleaf	<i>Pinus echinata</i>
Slash	<i>Pinus elliotii</i>
Virginia	<i>Pinus virginiana</i>
<b>Spruce</b>	
Blue	<i>Picea pungens</i>
Dwarf Alberta	<i>Picea glauca conica</i>
Norway	<i>Picea abies</i>
Sitka	<i>Picea sitchensis</i>

### Preemergence Dosage

Apply 1 to 4 pints (0.25 to 1.0 lb. active) of OXEN herbicide per broadcast acre as a preemergence application prior to conifer emergence. Where grassy weeds are present, a rate of 2 to 4 pints (0.5 to 1.0 lb. active) of OXEN herbicide per broadcast acre is recommended. In known areas of high weed competition, 4 pints (1.0 lb. active) of OXEN herbicide per broadcast acre are recommended.

### Timing And Method Of Application

OXEN herbicide should be thoroughly mixed with clean water at recommended concentration and applied at 20 to 40 psi in a minimum of 20 gallons of water per treated acre. Broadcast to beds and irrigate prior to weed emergence with ½ to ¾ inch of sprinkler irrigation.

### Postemergence Dosage

Apply 1 to 2 pints (0.25 to 0.5 lb. active) of OXEN herbicide per broadcast acre with each postemergence application. Depending on subsequent weed flushes, multiple applications may be necessary to achieve season-long weed control.

### Timing And Method Of Application

Postemergence applications should be delayed until a minimum of 5 weeks after emergence of conifer seedlings. During periods of cool, cloudy weather, make certain that seedlings have hardened off prior to spraying. Application should be made to seedling weeds (less than 4 inches in height). OXEN herbicide should be thoroughly mixed with clean water at recommended concentration and applied as a broadcast application at 20 to 40 psi in a minimum of 20 gallons of water per treated acre.

**Sprinkler Chemigation:** If OXEN herbicide is to be applied via sprinkler irrigation (center pivot), follow the method of application directions listed for sprinkler chemigation. Additionally, for application using center pivot irrigation systems, apply specified dosage of OXEN herbicide per acre as described above and meter OXEN herbicide at a continuous uniform rate during the entire irrigation period to allow for uniform distribution to the vegetation and soil surface. Follow all directions given in the supplemental labeling entitled APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION when making applications using sprinkler irrigation systems.

### Conifer Transplants and Container Stock

#### (Includes 2-0 Seedling and Christmas Tree Plantings)

Many container-grown conifers and conifer transplants are tolerant to preemergence and postemergence applications of OXEN herbicide. Applied postemergence, OXEN herbicide will provide both postemergence and preemergence control of many broadleaf weeds and grasses listed in the WEEDS CONTROLLED SECTION above. Postemergence applications should be applied before bud break or after foliage has had an opportunity to harden off. Conifers may be transplanted from seedbeds and sprayed directly providing bud break has not occurred.

The following conifer species in addition to species listed under the CONIFER SEEDBED section have been shown to be tolerant to OXEN herbicide.

Arbovitae	Red Cedar
<i>Thuja occidentalis</i>	<i>Juniperus virginiana</i>
<i>Thuja orientalis</i>	Western Hemlock
Juniper	<i>Tsuga heterophylla</i>
<i>Juniperus chinensis</i>	Yew
<i>Juniperus horizontalis</i>	<i>Taxus</i> species
<i>Juniperus procumbens</i>	
<i>Juniperus sabina</i>	
<i>Juniperus scopulorum</i>	

### Dosage

For preemergence or postemergence weed control, apply 4 to 8 pints (1.0 to 2.0 lbs. active) of OXEN herbicide per broadcast acre.

### Timing And Method Of Application

For optimum weed control, preemergence applications should be made immediately after transplanting seedlings or to weed-free container stock. Postemergence applications should be made to weeds less than 4 inches in height. Two applications may be necessary in fall-transplanted conifer fields for season-long weed control. The addition of 0.25% (2 pints per 100 gallons of spray solution) of an 80% active nonionic surfactant, cleared for application on growing crops, enhances OXEN herbicide activity on emerged weeds. OXEN herbicide must be applied only to conifer transplants prior to bud break or after foliage has had an opportunity to harden off. Thoroughly mix with clean water at recommended concentration and apply at 20 to 40 psi in a minimum of 20 gallons of water per treated acre. Spray over the top of transplants. Heavy rainfall immediately following application to emerged weeds may reduce effectiveness.

### Tank Mixtures For Selected Field-Grown Conifers

In addition to the weeds controlled by OXEN herbicide used alone, tank mixes with other preemergence or postemergence herbicides registered for this use may provide a broader spectrum of weed control.

OXEN herbicide may be tank mixed with products containing the following active ingredients registered for use in conifer plantings:

Glyphosate	Prodiamine
Napropamide	Pronamide
Oryzalin	Sethoxydim
Pendimethalin	

Determine the additional weed species to be controlled, and based on label claims, select the product(s) which would give effective control of the targeted weed(s). When using tank mixes of two or more products, use conditions must be in accordance with the more (most) restrictive of the label limitations and precautions of the mixing partners. IMPORTANT: Read and follow container labels of tank-mix partners and use as directed by labeling. Follow the most restrictive labeling.

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Lbs. active/A	Pts. OXEN herbicide/A	Fl. oz. (milliliters) of OXEN herbicide in 1 gal. of spray mix to treat 400 sq. ft.	Fl. oz. (milliliters) of OXEN herbicide in 1 qt. of spray mix to treat 100 sq. ft.
2	8	1.2 (35)	0.3 (9)

**Conifer**

**Specific Use Restrictions**

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply more than 8 pints (2.0 lbs. active) of this product per broadcast acre per year.
- Not for Conifer release in forest management programs or for forest regeneration applications.
- Do not apply OXEN herbicide in an enclosed greenhouse structure as injury to plant foliage may result.
- Do not store or transport treated container stock in an enclosed structure until completion of 4 irrigations (minimum 21 days) as injury to non-labeled plants may occur.
- Always apply OXEN herbicide only to healthy conifer stock. Do not apply End Zone herbicide to conifers that are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury as severe injury may result.
- Do not graze or feed livestock forage cut from areas treated with OXEN herbicide.

**SELECTED FIELD-GROWN DECIDUOUS TREES**

Many field-grown deciduous trees are tolerant to applications of OXEN herbicide directed to the soil and base of the plant. OXEN herbicide will provide both preemergence and postemergence control of many broadleaf weeds and grasses.

**DECIDUOUS TREE SPECIES**

Common Name	Scientific Name
**Almond	<i>Prunus</i> spp.
**Apple	<i>Malus X domestica</i>
**Apricot	<i>Prunus</i> spp.
Ash, Green	<i>Fraxinus pennsylvanica</i>
Ash, White	<i>Fraxinus americana</i>
Birch, River	<i>Betula nigra</i>
**Cherry	<i>Prunus</i> spp.
**Chestnut	<i>Castanea</i> spp.
**Crabapple	<i>Malus</i> spp.
Dogwood	<i>Cornus florida</i>
Eucalyptus	<i>Eucalyptus viminalis</i> , <i>Eucalyptus pulverulenta</i> , <i>Eucalyptus camaldulensis</i>
**Filbert	<i>Corylus</i> spp.
Lilac	<i>Syringa vulgaris</i>
Locust, Black	<i>Robinia pseudoacacia</i>
*Maple, Black	<i>Acer nigrum</i>
*Maple, Red	<i>Acer rubrum</i>
*Maple, Sugar	<i>Acer saccharum</i>
Myrtle, Crepe	<i>Lagerstroemia indica</i>
**Nectarine	<i>Prunus</i> spp.
**Nut, Hickory	<i>Carya</i> spp.
**Nut, Macadamia	<i>Macadamia ternifolia</i>
Oak, Chestnut	<i>Quercus prinus</i>
Oak, Pin	<i>Quercus palustris</i>
Oak, Red	<i>Quercus rubra</i>
Oak, Water	<i>Quercus nigra</i>
Oak, Willow	<i>Quercus phellos</i>
Olive, Russian	<i>Elaeagnus angustifolia</i>
Poplar	<i>Populus</i> spp.
Poplar, Tulip	<i>Liriodendron tulipifera</i>
**Peach	<i>Prunus persica</i>
**Pear	<i>Pyrus</i> spp.
**Pecan	<i>Carya</i> spp.
**Pistachio	<i>Pistacia vera</i>
**Plum	<i>Prunus</i> spp.
**Prune	<i>Prunus</i> spp.
Redbud	<i>Cercis canadensis</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Platanus occidentalis</i>
**Walnut, Black	<i>Juglans nigra</i>

- \* Do not apply to maple trees used for production of maple sap or maple syrup.
- \*\*Apply as directed to nonbearing trees. For bearing tree fruit, nut, and vine crops, refer to the TREE FRUIT, NUT, VINE SECTION of this label for use directions.

**Dosage**

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per acre as a spray to the soil area surrounding deciduous plants for preemergence or early postemergence weed control. This product may be applied as a single or split application. **DO NOT** apply more than 8 pints of product per season.

For spot treatments, refer to the following table for dosage recommendations. Sprays must be uniform and applied to the soil on a spray-to-wet basis. When spraying to control weeds on a preemergence or postemergence basis, 1 gallon of spray mixture should cover 400 square feet. (This is equivalent to applying OXEN herbicide at a use rate of approximately one gallon per acre in a spray volume of 110 gallons per acre.) It is recommended that an 80% active nonionic surfactant be added to the spray mixture at a rate of 1 tablespoon (0.5 fluid ounces) per gallon of spray when making postemergence applications.

**Timing**

OXEN herbicide can be applied after transplanting or to established deciduous trees. For optimum weed control, applications should be made prior to weed germination.

For maximum safety to deciduous species mentioned on this label, post-directed applications of OXEN herbicide should be made to the soil prior to bud swell in the spring or after trees have initiated dormancy in the fall. Care must be taken to avoid contact of spray drift or mist with foliage or green bark of deciduous trees.

OXEN herbicide may be phytotoxic to the foliage of non-target plants. Avoid making applications of this product under conditions that favor drift to non-target areas.

**Note:** Applications made after bud swell may result in injury to deciduous trees and are not recommended. If a nondormant application is required due to weed competition, do not apply during periods of new foliage growth. Applications should be made after foliage has fully expanded and hardened off. Direct spray toward the soil at the base of the trees and use greater than 50 gallons of water per acre. Splashing soil can carry OXEN herbicide, which may injure the leaves of some deciduous trees.

**Method of Application**

OXEN herbicide should be directed to the soil. Avoid direct spray or drift onto foliage, flowers, or green bark. Apply in 20 or more gallons of water per acre to provide uniform spray distribution and coverage to the soil surface. Use higher volumes to ensure adequate soil coverage in high densities of emerged weeds or heavy trash. Thorough spray coverage is essential to maximize the postemergence activity of OXEN herbicide. Use a low-pressure (20 to 40 psi) sprayer. The use of spray shields that reduce exposure of foliage and bark to OXEN herbicide spray is suggested. Spray equipment should be calibrated carefully before each use.

**Tank Mixtures for Selected Field-Grown Deciduous Trees**

In addition to the weeds controlled by OXEN herbicide used alone, tank mixes with other preemergence or postemergence herbicides registered for this use may provide a broader spectrum of weed control.

OXEN herbicide may be tank mixed with products containing the following active ingredients registered for use in deciduous plantings:

Glyphosate	Pendimethalin	Sethoxydim
Napropamide	Prodiamine	
Oryzalin	Pronamide	

Determine the additional weed species to be controlled and, based on label claims, select the product(s) which would give effective control of the targeted weed(s). When using tank mixes of two or more products, use conditions must be in accordance with the more (most) restrictive of the label limitations and precautions of the mixing partners.

**IMPORTANT:** Read and follow container labels of tank-mix partners and use as directed. Follow the most restrictive labeling.

**Field-Grown Deciduous Trees - Specific Use Restrictions**

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- DO NOT apply more than 8 pints (2.0 lbs. active) of this product per broadcast acre per year.
- The use directions described here for field-grown deciduous trees do not apply to bearing tree fruit, nut, and vine crops. For selected bearing tree fruit, nut, and vine crops, refer to the TREE FRUIT, NUT, VINE section of this label for use directions.
- Apply this product to the soil surface surrounding trees prior to bud swell or after trees have initiated dormancy in the fall. Although not recommended, if a nondormant application is required, apply as a directed spray when foliage has fully expanded and hardened off. Do not apply during periods of new foliage growth.
- Avoid direct or indirect spray contact to foliage flowers and green bark.
- DO NOT apply this product when weather conditions favor drift. Avoid drift to non-target areas. OXEN herbicide is phytotoxic to plant foliage.
- DO NOT apply OXEN herbicide to trees that have been weakened or are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, wind injury, drought, flooding, previously applied pesticides, insects, or winter injury, as severe injury may result.
- DO NOT graze or feed livestock forage cut from areas treated with OXEN herbicide.

**CORN**

**FOR USE ONLY AS DIRECTED SPRAY ON FIELD CORN IN CONJUNCTION WITH THE USDA WITCHWEED ERADICATION PROGRAM IN NORTH CAROLINA AND SOUTH CAROLINA**

**General Information**

OXEN herbicide is a selective herbicide for the control of witchweed (*Striga asiatica*) and works both preemergence and postemergence against witchweed.

**Dosage**

Use 2 to 3 pints of OXEN herbicide (0.5 to 0.75 lb. active) per acre for the first application. The 2 pint rate (0.5 lb. active) per acre should be the standard use rate with the 3 pint rate (0.75 lb.) per acre for isolated infestations. Repeat treatments should be made at rates of 1 to 2 pints (0.25 to 0.5 lb. active) per acre. Use an 80% active nonionic surfactant spreader in the spray mixture at the rate of 0.25% by water volume or 1 quart in 100 gallons of spray mix.

# OXEN™ HERBICIDE

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### Timing And Method Of Application

Fields in the witchweed infested area selected for treatment with OXEN herbicide should be examined during the early part of the growing season to determine uniformity of corn stand and grassy weed pressure. Weedy fields should be cultivated prior to the initial application so as to obtain the best possible soil coverage in the first spray application. Apply during May-August to emerged witchweed before bloom or as soon as possible after bloom appears to avoid seed set. Corn should have a minimum height of 24 inches at the first application. After this application has been made, the fields should be inspected regularly for any breakthrough of the witchweed. If breakthrough occurs, then a second spray should be applied like the first. This application will be made postemergence to the witchweed, preferably before bloom or as soon as possible past the first appearance of witchweed bloom, to avoid seed set.

In all applications, direct the OXEN herbicide spray at the base of the corn plant and uniformly over the entire row surface. Do not spray over the top of the corn, as this may result in severe corn injury. Spray droplets contacting the lower leaves will cause necrotic spotting or streaking of sprayed tissue. Spray should contact only the lower 3 to 8 inches of the corn stalk and any leaves in this zone.

### Corn

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply more than 5 pints of OXEN herbicide (1.25 lbs. active) per acre to a corn crop during the growing season.
- Do not apply any application within 60 days of harvest.
- Do not use corn plants from a treated field for green chop, ensilage, forage, or fodder.

## COTTON

### Post-Directed Spray

#### General Information

OXEN herbicide is a selective herbicide for use as a post-directed application for broadleaf weed control in cotton. Cotton leaves that are accidentally sprayed will exhibit necrotic spotting and may drop from the plant, therefore, care must be exercised to avoid spray contact with the cotton leaves. Crop response may be enhanced if applications are made when excessive soil moisture is present or if rainfall occurs following application. Cotton will outgrow this condition and continue to develop normally.

#### Dosage

OXEN herbicide is recommended as a post-directed application at 1 to 2 pints (0.25 to 0.5 lb. active) per acre.\* Optimum control is achieved when 2 pints of OXEN herbicide (0.5 lb. active) per acre\* are applied to weed seedlings not exceeding 4 true leaves. Effective control of succulent weed seedlings in the 2- to 3-leaf stage can usually be obtained when 1 pint of OXEN herbicide (0.25 lb. active) per acre\* are applied. See MIXING DIRECTIONS for surfactant recommendation. Weeds should be in the seedling stage, young and actively growing. Do not count cotyledon leaves.

\*Dosages listed are for broadcast application. For banded application, the amount of OXEN herbicide used per acre should be reduced according to the following formula:

Band Width (in inches)	X	Rate per Broadcast Acre	=	Amount Needed per Acre for Banded Application
Row Width (in inches)				

#### Weeds Controlled Postemergence

When OXEN herbicide is applied as a post-directed application at the recommended weed stage and dosage in cotton, the following weeds are controlled:

Cocklebur, Common	Nightshade, Hairy
Croton, Tropic	Figweed, Redroot
Groundcherry, Cutleaf	*Poinsettia, Wild
Groundcherry, Wright	Purslane, Common
Jimsonweed	Sesbania, Hemp
Lambsquarters, Common	**Sicklepod
Morningglory, Annual (Up To 6-Leaf)	*Sida, Prickly (Teaweed)
Nightshade, American Black	Smartweed, Pennsylvania
Nightshade, Black	Velvetleaf

\*Multiple applications may be required for acceptable control.

\*\*Post-direct applications of OXEN herbicide will kill or suppress seedlings not exceeding the one true leaf stage.

#### Timing

**Southern Cotton (Alabama, Arkansas, Georgia, Louisiana, Mississippi, Missouri, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, And Virginia)**

Cotton plant height must be a minimum 6 inches or greater. Application to cotton plants less than 6 inches tall may result in severe crop injury and is not recommended. In cotton 6 to 8 inches tall, OXEN herbicide must be applied using rigid precision ground sprayer equipment. The use of spray shields is recommended to avoid spray contact with cotton foliage. Use branch lifters or shields if excessive spray contact on larger cotton plants (8 inches or greater) cannot be avoided by the directed spray.

#### Western Cotton (Arizona And California)

Cotton plant height must be a minimum 6 inches or greater. Applications to cotton plants less than 6 inches tall may result in severe crop injury and is not recommended. In cotton 6 to 8 inches tall, OXEN herbicide must be applied using rigid precision ground sprayer equipment. The use of spray shields is recommended to avoid spray contact with cotton foliage. Use branch lifters or shields if excessive spray contact on larger cotton plants (8 inches or greater) cannot be avoided by the directed spray.

To obtain the maximum benefit of postemergence activity, encourage weed emergence by irrigating prior to spraying. Irrigate immediately following herbicide application to obtain greatest benefit of preemergence activity from OXEN herbicide on nightshade and groundcherry species.

### Method Of Application

#### Southern And Western Cotton

Accurate, uniform placement of OXEN herbicide spray is essential for effective weed control and to minimize cotton injury. As a directed postemergence application, OXEN herbicide should be applied at 20 to 25 psi using 20 to 40 gallons of spray on a broadcast acre basis. Do not exceed 25 psi. Spray should be directed towards the base of the cotton plant. Cotton foliage receiving accidental spray or drift may be injured. Weeds should be in the seedling stage, young and actively growing.

OXEN herbicide can be applied using a post-direct spray rig with only 2 flat fan nozzles per row, 1 nozzle on each side of the row. Additional care should be taken when adjusting sprayer prior to application. For best coverage, it is suggested to use 4 flat fan nozzles per row, 2 nozzles on each side of the row. The 2 forward nozzles should point forward and downward while the rear nozzles should point to the rear and downward. With either sprayer system, nozzles should be adjusted to cover the weed foliage with minimum contact to the cotton plant. Do not use cone nozzles.

#### Tank Mixes With OXEN Herbicide

**Important:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for tank mixtures, the most restrictive situations must apply.

#### Dosage

For postemergence control of susceptible grassy and broadleaf weeds in cotton, a tank mixture of OXEN herbicide with either diuron or MSMA can be applied as a post-directed application. Apply at the recommended rates and growth stages to susceptible weed species in a manner described on the respective labels.

### Cotton

#### Southern And Western

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Southern Cotton: Do not apply more than 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide per season as a result of a single application or multiple applications. Do not apply within 90 days of harvest.
- Western Cotton: Do not apply more than 2 pints (0.5 lb. active) of OXEN herbicide per broadcast acre in a single application or more than a total of 4 pints (1.0 lb. active) of OXEN herbicide per broadcast acre per season as a result of multiple applications. Do not apply within 75 days of harvest.

## COTTONWOOD

#### General Information

OXEN herbicide is an effective herbicide for postemergence and preemergence control of certain broadleaf weeds in cottonwood plantings. OXEN herbicide may be applied postemergence or be post-directed to the base of the cottonwood tree. Applications must only be made prior to bud break to avoid possible phytotoxicity to the cottonwood foliage. Applications made after bud break may result in injury to the cottonwood plant and are not recommended.

#### Dosage

Apply 4 to 8 pints (1.0 to 2.0 lbs. active) of OXEN herbicide per broadcast acre for pre-emergence and postemergence weed control. The addition of 1 quart of an 80% active nonionic surfactant per 100 gallons of spray mix will assist in spray coverage and wetting of weeds for postemergence control.

#### Weeds Controlled

When OXEN herbicide is applied preemergence or postemergence to weed seedlings (not exceeding 6-leaf stage) at recommended dosages, the following broadleaf weeds are controlled:

Groundsel, Common	Mustard, Hedge
Knotweed, Prostrate	Shepherdspurse
Lambsquarters, Common	Smartweed, Pennsylvania

#### Timing And Method Of Application

For optimum weed control, OXEN herbicide should be applied prior to weed emergence. Preemergence applications should be made prior to or immediately after transplanting dormant cottonwood seedlings. Applications must be made prior to bud break of the cottonwood trees.

OXEN herbicide should be applied in a minimum of 20 gallons of water per acre depending upon density of emerged weeds. Spray volume should be increased as weed height and density increase. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment should be calibrated carefully before each use.

### Cottonwood

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- OXEN herbicide should only be applied to dormant healthy cottonwood stock.
- Do not apply more than 8 pints (2.0 lbs. active) per treated acre per growing season as a result of single or multiple applications.

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**EUCALYPTUS**

**General Information**

OXEN herbicide is an effective herbicide for postemergence and preemergence control of certain broadleaf weeds in permanently established eucalyptus (*E. viminalis*, *E. pul- verulenta*, *E. camaldulensis*) plantings.

In new plantings, OXEN herbicide should be applied immediately prior to or immediately following transplanting of dormant eucalyptus seedlings. In established plantings, OXEN herbicide may be applied postemergence (over-the-top) or be post-directed to the base of the eucalyptus tree. Applications must only be made prior to bud break to avoid possible phytotoxicity to the eucalyptus foliage. Applications made after bud break may result in injury to the eucalyptus plant and are not recommended.

**Dosage**

Apply 4 to 8 pints (1.0 to 2.0 lbs. active) of OXEN herbicide per broadcast acre for pre-emergence and postemergence weed control. The addition of 1 quart of an 80% active nonionic surfactant per 100 gallons of spray mix will assist in spray coverage and wet- ting of weeds for postemergence control.

**Weeds Controlled**

When OXEN herbicide is applied preemergence or postemergence to weed seedlings (not exceeding 6-leaf stage) at recommended dosages, the following broadleaf weeds are controlled:

**Weeds Controlled Postemergence**

Cheeseweed (Malva)	Miner's Lettuce
Fiddleneck, Coast	Nettle, Burning
*Filaree, Broadleaf	Pigweed, Redroot
*Filaree, Redstem	Redmaids
*Filaree, Whitestem	Shepherdspurse
Groundsel, Common	Sowthistle, Annual
Henbit	

\*OXEN herbicide at the 8-pint rate (2.0 lbs. active) will provide control of filaree up to the 6-leaf stage.

**Weeds Controlled Preemergence**

Burclover	Lettuce, Prickly
Cheeseweed (Malva)	Pigweed, Redroot
Fiddleneck, Coast	Purslane, Common
Filaree, Broadleaf	Redmaids
Filaree, Redstem	Rocket, London
Filaree, Whitestem	Shepherdspurse
Groundsel, Common	Sowthistle, Annual
Henbit	Spurge, Prostrate
Knotweed, Prostrate	Spurge, Spotted
Lambsquarters, Common	

**Timing And Method Of Application**

For optimum weed control, OXEN herbicide should be applied prior to weed emergence. Postemergence applications should be applied to seedling weeds (up to the 6-leaf stage). Applications must be made prior to bud break of either transplants or established eucalyptus trees.

OXEN herbicide should be applied at 20 to 40 psi in a minimum of 20 gallons of water per acre depending upon density of emerged weeds. Spray volume should be increased as weed height and density increase. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment should be calibrated carefully before each use.

**Eucalyptus**

**Specific Use Restrictions**

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- OXEN herbicide should only be applied to dormant healthy eucalyptus stock.
- Do not apply more than 8 pints (2.0 lbs. active) per treated acre per growing season as a result of single or multiple applications.

**FALLOW BED**

**Ground Or Aerial Application Of OXEN Herbicide On Fallow Beds**

**General Information**

OXEN herbicide is effective as a preemergence and/or postemergence herbicide when used alone or in a tank mix combination with glyphosate for the control of winter annual broadleaf weeds to be planted to the crops listed below.

**MINIMUM TREATMENTS-PLANTING INTERVAL**

	OXEN Herbicide Use Rate	
	up to 1 pint/A	up to 2 pints/A
<b>Direct-Seeded Crops</b>		
Carrot	90 Days	90 Days
Potato	60 Days	60 Days
Sugarbeet	60 Days	90 Days
<b>Other Root/Tuber Crops</b>	90 Days	90 Days
Onions	180 Days	180 Days
<b>Other Bulb Vegetables</b>	180 Days	180 Days
Cabbage, Cauliflower	90 Days	90 Days
<b>Other Brassica Crops</b>	120 Days	120 Days
Lettuce	90 Days	120 Days
<b>Other Leafy Vegetables (Except Brassica Crops)</b>	120 Days	120 Days
Pepper	90 Days	120 Days
Tomato	60 Days	120 Days

	OXEN Herbicide Use Rate	
	up to 1 pint/A	up to 2 pints/A
<b>Direct-Seeded Crops</b>		
<b>Other Fruiting Vegetables</b>	120 Days	120 Days
Cantaloupe	60 Days	90 Days
Squash	90 Days	120 Days
Watermelon	60 Days	60 Days
<b>Other Cucurbits</b>	90 Days	120 Days
Dry Beans	60 Days	60 Days
Peanut	60 Days	60 Days
<b>Other Legume Vegetables</b>	60 Days	60 Days
Safflower	60 Days	60 Days

Cereal Grains (includes barley, buckwheat, corn, proso millet, pearl millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, wild rice)	10 MONTHS	10 MONTHS
Cotton And Soybeans	See specific labeling for Fallow Beds (Cotton, Soybeans) found elsewhere on this label	

**TRANSPLANTED CROPS**

Broccoli	0 Days	30 Days
Cabbage	0 Days	30 Days
Cauliflower	0 Days	30 Days
Celery	30 Days	30 Days
Conifer	0 Days	0 Days
Garlic	0 Days	30 Days
Grape, Kiwi	0 Days	0 Days
Onion	0 Days	30 Days
Pepper	30 Days	30 Days
Strawberries	30 Days	30 Days
Tomato	30 Days	30 Days
Tree Fruit, Nuts, Citrus	0 Days	0 Days

**Important:** The fallow beds should be worked thoroughly to a depth of at least 2½ inches prior to planting; weed control should not be expected following breaking of the soil surface. FAILURE TO ACHIEVE THOROUGH AND COMPLETE INCORPORATION OR TO FOLLOW THE RECOMMENDED TREATMENT-PLANTING INTERVAL MAY RESULT IN STAND REDUCTION AND/OR VIGOR REDUCTION OF THE PLANTED CROP.

Crop injury may be enhanced if newly seeded crops or transplants are under stress due to drought, flooding, excessive fertilizer or soil salts, low soil temperatures, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.

EXERCISE EXTREME CARE TO AVOID HERBICIDE CONTACT WITH ANY DESIRABLE DORMANT OR NON-DORMANT CROP, PLANT, TREE, OR VEGETATION AS SEVERE INJURY MAY RESULT.

**OXEN Herbicide Used Alone**

**Dosage**

OXEN herbicide may be applied at 1 to 2 pints (0.25 to 0.5 lb. active) per broadcast acre. The lower rate (1 pint per acre) should provide up to 4 weeks of preemergence control of susceptible weeds and provide postemergence control of susceptible weeds (up to 4-leaf stage). The higher rate (2 pints per acre) should provide preemergence control of susceptible weeds for up to 8 weeks and postemergence control of susceptible weeds (up to 6-leaf stage). Best preemergence control is achieved when irrigation or rainfall occurs within 3 to 4 weeks following application.

**Weeds Controlled**

OXEN herbicide should provide preemergence and postemergence\* control of the following weeds when used at recommended dosages and weed stage.

Cheeseweed (Malva)	Mustard Species
Fiddleneck, Coast	Nettle, Burning
Filaree, Broadleaf	Redmaids
Filaree, Redstem	Rocket, London
Groundsel, Common	Shepherdspurse
Henbit	Sowthistle, Annual
Miner's Lettuce	

\*Thorough spray coverage is essential to maximize the postemergence activity of OXEN herbicide. For postemergence control when applied by air, a tank mixture of OXEN herbicide with glyphosate is recommended.

OXEN herbicide is a contact herbicide, therefore, coverage is essential for acceptable postemergence control. If dense weed populations, oversized weed seedlings, volunteer grains, annual grasses, or unfavorable environmental conditions exist, a tank mixture of OXEN herbicide with glyphosate for postemergence control is recommended.

**Tank Mixes With OXEN Herbicide**

**Important:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mix, the most restrictive situations must apply.

**Dosage**

OXEN herbicide can be tank mixed with glyphosate to obtain postemergence control of annual grassy weeds, volunteer grains, and broadleaf weeds. Tank mix 1 to 2 pints (0.25 to 0.5 lb. active) of OXEN herbicide with labeled rates of glyphosate. Apply at the recommended rates and growth stages to susceptible weed species in a manner consistent with the respective labels.

**Method Of Application**

**Ground Application**

OXEN herbicide should be applied in a minimum of 5 gallons of water per acre.

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The volume of water used should be increased as the weeds become taller and more dense. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment should be calibrated carefully before each use.

### Aerial Application

OXEN herbicide should be applied using swirl jet or hollow cone nozzles and a spray pressure less than 40 psi to deliver a minimum spray volume of 10 gallons per acre (minimum 5 GPA for OXEN herbicide/glyphosate (tank mix)).

Applications should be made at a height of 6 to 10 feet above the soil surface. It is suggested that the nozzles on the spray booms should not be placed any closer to the wing or rotor tips than ¼ of the span; this will minimize the formation of spray or wing tip vortex roll. Nozzles should be spaced and positioned to produce a uniform spray pattern and to minimize or eliminate the formation of droplets 100 microns or less in diameter.

### Avoid Drift

WHEN APPLYING TO FALLOW BEDS, EXTREME CARE MUST BE EXERCISED TO PREVENT SPRAY DRIFT WHICH COULD RESULT IN DAMAGE TO OTHER CROPS OR DESIRABLE VEGETATION. USE THE FOLLOWING GUIDELINES WHEN AERIAL APPLICATIONS ARE TO BE MADE.

1. Do not apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least ½ mile from all crops and desirable vegetation, except the following: Maintain a minimum downwind buffer zone of:
  - 150 feet from dormant tree fruit, nut, vine crops, and overwintering sugarbeets.
  - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugarbeets, and nontargeted vegetable fallow beds.
3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any nontargeted vegetable fallow bed, crop, or desirable vegetation.

The use of a drift control agent may be required by local regulations. However, the drift control agent may decrease the weed control activity.

### Important

Aerial applicators must be familiar with the EPA-registered label and follow the use precautions. Spraying OXEN herbicide in a manner other than as recommended is done at the user's risk. Users are responsible for all loss or damage that results from such spraying. In addition, aerial applicators should follow all applicable state and local regulations and ordinances. In interpreting the label and local regulations, the most restrictive situations should apply to avoid drift hazards.

### Fallow Bed

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.
- Do not apply more than 2 pints (0.5 lb. active) of OXEN herbicide per acre per fallow season.

## FALLOW BED (COTTON, SOYBEANS)

Ground Or Aerial Application Of OXEN Herbicide On Fallow Beds (To Be Planted To Cotton Or Soybeans)

Not For Use On Fallow Beds To Be Planted To Soybeans In California

#### General Information

OXEN herbicide is effective as a preemergence and/or postemergence herbicide when used alone or in a tank mix combination with glyphosate or paraquat for the control of winter annual broadleaf weeds in fallow beds to be planted to cotton or soybeans. Do not apply OXEN herbicide within 7 days prior to planting. The fallow beds should be worked thoroughly to a depth of at least 2 inches prior to planting. It is important to thoroughly break the soil surface prior to planting. Weed control should not be expected following breaking of the soil surface.

EXERCISE EXTREME CARE TO AVOID HERBICIDE CONTACT WITH ANY DESIRABLE DORMANT OR NON-DORMANT CROP, PLANT, TREE, OR VEGETATION AS SEVERE INJURY MAY RESULT.

### OXEN Herbicide Used Alone

#### Dosage

OXEN herbicide may be applied at 1 to 2 pints (0.25 to 0.5 lb. active) per broadcast acre. The lower rate (1 pint per acre) should provide up to 4 weeks of preemergence control of susceptible weeds and provide postemergence control of susceptible weeds (up to 4-leaf stage). The higher rate (2 pints per acre) should provide preemergence control of susceptible weeds for up to 8 weeks and postemergence control of susceptible weeds (up to 6-leaf stage). Best preemergence control is achieved when irrigation or rainfall occurs within 3 or 4 weeks following application.

### Weeds Controlled

OXEN herbicide should provide preemergence and postemergence\* control of the following weeds when used at recommended dosages and weed stage.

Buttercup, Smallflower	Mustard Species
Cheeseweed (Malva)	Nettle, Burning
**Eveningprimrose, Cutleaf	Oxalis
Fiddleneck, Coast	Pigweed, Redroot

Filaree, Broadleaf	Purslane, Common
Filaree, Redstem	Redmaids
Geranium, Carolina	Rocket, London
Groundcherry, Cutleaf	Shepherd's purse
Groundsel, Common	Sida, Prickly
Henbit	Sowthistle, Annual
Ladysthumb	Velvetleaf (Wild Cotton)
Miner's Lettuce	

\*Thorough spray coverage is essential to maximize the postemergence activity of OXEN herbicide. For postemergence control when applied by air, a tank mixture of OXEN herbicide with either glyphosate or paraquat is recommended.

\*\*Requires maximum rate and/or multiple applications for effective control.

### Tank Mixes With OXEN Herbicide

**Important:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mix, the most restrictive situations must apply.

### Dosage

OXEN herbicide can be tank mixed with either glyphosate or paraquat to obtain post-emergence control of annual grassy weeds, volunteer grains, and broadleaf weeds. Tank mix 1 to 2 pints (0.25 to 0.5 lb. active) of OXEN herbicide with labeled rates of either glyphosate or paraquat. Apply at the recommended rates and growth stages to susceptible weed species in a manner consistent with the respective labels.

**Outside Of California:** For enhanced contact activity (burndown/suppression) to either glyphosate or paraquat, add OXEN herbicide at a rate of 3.5 to 6.5 ounces (0.05 to 0.1 lb. active) per acre to labeled rates of either glyphosate or paraquat. Apply at the recommended rates and growth stages to susceptible weed species in a manner consistent with the respective labels.

If a fallow bed treatment is applied thirty days or more prior to planting and at least three significant rainfalls (0.25 inch or greater) have occurred following application, cotton or soybeans can be planted directly into the stale seedbed. If these conditions cannot be met, soil incorporation is required as directed above.

### Method Of Application

#### Ground Application

OXEN herbicide should be applied in a minimum of 5 gallons of water per acre. The volume of water used should be increased as the weeds become taller and more dense. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment should be calibrated carefully before each use.

### Aerial Application

OXEN herbicide should be applied using swirl jet or hollow cone nozzles and a spray pressure less than 40 psi to deliver a minimum spray volume of 5 gallons per acre (in California, minimum 10 GPA when applied alone or tank mixed with paraquat). Applications should be made at a height of 6 to 10 feet above the soil surface. It is suggested that the nozzles on the spray booms should not be placed any closer to the wing or rotor tips than ¼ of the span; this will minimize the formation of spray or wing tip vortex roll. Nozzles should be spaced and positioned to produce a uniform spray pattern and to minimize or eliminate the formation of droplets 100 microns or less in diameter.

### Avoid Drift

When applying to fallow beds, extreme care must be exercised to prevent spray drift which could result in damage to other crops or desirable vegetation. Use the following guidelines when aerial applications are to be made.

1. Do not apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least ½ mile from all crops and desirable vegetation, except the following: Maintain a minimum downwind buffer zone of:
  - 150 feet from dormant tree fruit, nut, vine crops, and overwintering sugar beets.
  - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets, and nontargeted vegetable fallow beds.
3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any nontargeted vegetable fallow bed, crop, or desirable vegetation.

The use of a drift control agent may be required by local regulations. However, the drift control agent may decrease the weed control activity.

### Important

Aerial applicators must be familiar with the EPA-registered label and follow the use precautions. Spraying OXEN herbicide in a manner other than as recommended is done at the user's risk. Users are responsible for all loss or damage that results from such spraying. In addition, aerial applicators should follow all applicable state and local regulations and ordinances. In interpreting the label and local regulations, the most restrictive situations should apply to avoid drift hazards.

### Fallow Bed (Cotton, Soybeans)

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.
- Do not apply more than 2 pints (0.5 lb. active) of OXEN herbicide per acre per fallow season.

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- Do not apply OXEN herbicide within 7 days prior to planting of cotton or soybeans.

### FALLOW LAND

For Use Only In Idaho, Oregon, And Washington

#### General Information

OXEN herbicide is effective as a preemergence and/or postemergence herbicide when used alone or in a tank mix combination with glyphosate for the control of certain annual broadleaf weeds in a fallow land system. OXEN herbicide can be used as an effective tool to reduce weed growth prior to the establishment of a dry soil mulch. Use of this product is restricted to summer fallow land that will be planted back the following year to winter wheat, barley, or oats.

#### OXEN Herbicide Used Alone

##### Dosage

OXEN herbicide should be used at 0.5 to 2 pints (0.12 to 0.5 lb. active) per broadcast acre.

##### Weeds Controlled

OXEN herbicide will provide postemergence control and preemergence activity of the following broadleaf weeds when used at recommended dosages.

Fiddleneck, Coast	Pigweed, Redroot
Henbit	Purslane, Common
Lettuce, Prickly (China Lettuce)	Shepherdspurse
Mustard, Blue (Purple Mustard)	Sowthistle, Annual
Mustard, Tumble (Jim Hill Mustard)	

##### Timing And Method Of Application

The most effective postemergence weed control is achieved when OXEN herbicide is applied to seedling weeds (less than 4 inches in height). Seedling weeds are controlled as they come in contact with the soil-applied herbicide during emergence.

OXEN herbicide should be applied in 20 to 40 gallons of water per acre depending upon density of emerged weeds. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment should be calibrated before each use.

##### Tank Mixes With OXEN Herbicide

##### Dosage

For postemergence control of annual grassy weeds, OXEN herbicide can be tank-mixed with glyphosate. Tank mix 0.5 to 2 pints (0.12 to 0.5 lb. active) of OXEN herbicide with 0.75 to 1 pint (0.38 to 0.5 lb. active) of glyphosate for each acre treated. Refer to the FALLOW AND REDUCED TILLAGE SYSTEM section on the glyphosate label for specific use directions and restrictions. Fill the spray tank at least one-third full of clean water and add the recommended amounts of OXEN herbicide and glyphosate while the pump and agitator are running. Complete filling of the spray tank with water. Add 1 quart of a comparable 80% active nonionic surfactant, cleared for use on growing crops, per 100 gallons of spray. Maintain agitation until spraying is complete.

##### Fallow Land

##### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

### GARBANZO BEANS

For Use Only In California And Arizona

#### General Information

OXEN herbicide is effective as a preemergence herbicide when used alone for the control of certain annual broadleaf weeds in garbanzo beans. Preemergence control is most effective when spray is applied to clean, weed-free soil surfaces. Seedling weeds are controlled as they come in contact with soil-applied herbicide during emergence. Timely cultivations will usually assist in weed control.

Garbanzo beans are tolerant to preemergence applications of OXEN herbicide, however, under certain conditions, OXEN herbicide can cause severe but temporary crop injury. Heavy splashing rain shortly after crop emergence or wet soil conditions during early growth stages can produce leaf cupping, crinkling, stunting, or defoliation of the garbanzo seedlings. When injury occurs, it is often limited to the first few leaves that develop shortly after crop plants emerge from the soil. Delays in crop development and/or maturity may result. Garbanzo beans do recover from this injury with little to no impact on yield.

#### OXEN Herbicide Used Alone

##### Dosage

OXEN herbicide is recommended for preemergence control of susceptible winter annual broadleaf weeds at 1 pint (0.25 lb. active) per broadcast acre.

##### Weeds Controlled Preemergence

OXEN herbicide used alone at recommended dosages provides preemergence control of the following broadleaf weeds:

Groundsel, Common	Rocket, London
Mallow, Little (Malva)	Shepherdspurse

##### Timing And Method Of Application

As a preemergence application, apply in a minimum of 20 gallons of water per acre. Use conventional ground spray equipment to make a single broadcast application, after planting but prior to weed and crop emergence, with flat fan or hollow cone nozzles.

Spray equipment should be calibrated carefully before each use.

#### Garbanzo Beans

##### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply more than 1 pint (0.25 lb. active) per broadcast acre of OXEN herbicide in a single application.
- Do not feed beans, vines, or hay.

### GARLIC

#### General Information

OXEN herbicide is a selective herbicide for postemergence application to direct-seeded and transplanted garlic for early postemergence control of certain annual broadleaf and grass weeds. Initial spray application should be made only when the garlic have reached the development stage specified in the DOSAGE section and the SPECIFIC USE RESTRICTIONS section of this label. On garlic transplants, spray as soon after transplanting as practical. OXEN herbicide can cause necrotic lesions, twisting, pigtailing, or stunting of the garlic plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the development stage of the garlic plants as specified in the DOSAGE section and the SPECIFIC USE RESTRICTIONS section of this label.

##### Dosage

##### Seeded Garlic

**Northeastern States (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, And Vermont)**

OXEN herbicide is recommended for postemergence control at 2 to 4 fluid ounces (0.03 to 0.06 lb. active) per acre when applied postemergence to seeded garlic that have at least three (3) true leaves. Multiple treatments at the aforementioned rate may be applied. Do not apply more than 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide as a result of multiple applications in one season.

**Western States (Arizona, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah, And Washington)**

OXEN herbicide is recommended for postemergence control at 0.5 pints (0.12 lb. active) per acre when applied postemergence to garlic that have at least two (2) true leaves. Multiple treatments at the aforementioned rates may be applied. Do not apply more than 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide as a result of multiple applications in one season.

##### California Only

##### General Information

OXEN herbicide is a selective herbicide for preemergence use (by air, ground, or sprinkler application), post-direct use when applied by ground equipment, or postemergence (over the top) application when applied via sprinkler irrigation for control of certain broadleaf and grass weeds in garlic in California.

##### Preemergence Garlic Applications in California

Apply OXEN herbicide at a rate of 1 pint (0.25 lb. active) per broadcast acre as a pre-emergence application to garlic. Methods of application may be ground, sprinkler, or aerial.

**Ground Application:** If applied using ground application equipment, OXEN herbicide should be applied in a minimum of 20 gallons per acre. Use conventional ground spray equipment with flat nozzles at 20 to 40 psi.

**Sprinkler Chemigation:** If OXEN herbicide is to be applied via sprinkler irrigation, follow the method of application directions listed for sprinkler chemigation. For application using sprinkler (solid set or portable lateral) irrigation systems, apply specified dosage of OXEN herbicide per acre as described above. Follow all directions given in the supplemental labeling entitled APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION when making applications using sprinkler irrigation systems.

**Aerial Application:** If applied using aerial application, OXEN herbicide should be applied using swirl jet or hollow cone nozzles and a spray pressure less than 40 psi to deliver a minimum spray volume of 10 gallons per acre. Applications should be made at a height of 6 to 10 feet above the soil surface. It is suggested that the nozzles on the spray booms should not be placed any closer to the wing or rotor tips than ¼ of the span; this will minimize the formation of spray or wing tip vortice roll. Nozzles should be spaced and positioned to produce a uniform spray pattern and to minimize or eliminate the formation of droplets 100 microns or less in diameter.

**Garlic Response to Preemergence Applications With OXEN Herbicide:** A chlorotic band around some of the leaves may be observed after the first irrigation (or rainfall) following garlic emergence. Symptoms may be more severe if garlic emerges under cool, wet, overcast, or foggy weather. This condition is temporary and should not affect the vigor or development of the garlic plant.

##### Postemergence (and Directed) Garlic Applications in California

Apply OXEN herbicide at rates up to 1 pint (0.25 lb. active) per broadcast acre as a postemergence (or directed) application in garlic. The garlic must be at least 12 inches in height at application. Weeds should be in the seedling stage, young, and actively growing. Methods of application may be post-directed or by sprinkler chemigation.

**Post Direct Application:** For banded application, the amount of OXEN herbicide used per acre should be reduced according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Broadcast Acre} = \text{Amount Needed per Acre for Banded Application}$$

Accurate, uniform placement of OXEN herbicide spray is essential for effective weed control and to minimize garlic injury. As a directed, postemergence application, OXEN herbicide should be applied using a low-pressure sprayer using a minimum of 20



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- Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre of OXEN herbicide in a single application or more than 16 pints (4.0 lbs. active) per season.
- Do not apply OXEN herbicide within 1 day of harvest.
- Direct spray toward the base of the trees. Avoid direct plant contact.
- OXEN herbicide or any of the combinations recommended on this label should be applied only to healthy growing trees.
- OXEN herbicide applications should be made only after new foliage has hardened off.

### HORSERADISH

#### General Information

OXEN herbicide is a selective herbicide recommended for preemergence control of certain broadleaf weeds. Applications must be made after the horseradish roots have been planted and prior to plant emergence. (Emerging plants that receive direct or indirect (drift) spray contact will be injured.) It may be desirable to cultivate immediately prior to application to remove germinated weeds.

Do not use OXEN herbicide on horseradish plantings that are weak or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought, or excessive moisture.

#### Dosage

Apply OXEN herbicide at a rate of 2 pints (0.5 lb. active) per broadcast acre as a pre-emergence application to horseradish.

#### Weeds Controlled

OXEN herbicide will provide preemergence control of the following weeds when used at the recommended dosage:

Lambsquarters, Common	Shepherdspurse
Pigweed, Redroot	Smartweed, Pennsylvania
Purslane, Common	

#### Timing And Method Of Application

OXEN herbicide should be thoroughly mixed with clean water at recommended concentrations and applied in a minimum of 20 gallons of water per acre. Use conventional ground spray equipment with flat fan nozzles at 20 to 40 psi. Accurately calibrate spray equipment prior to each use.

#### Horseradish

##### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply more than 2 pints (0.5 lb. active) of OXEN herbicide per broadcast acre as a single application.

### JOJOBA

#### General Information

OXEN herbicide is a selective herbicide for postemergence and preemergence control of certain broadleaf weeds in jojoba. OXEN herbicide should be post-directed to the base of the jojoba plant to avoid possible phytotoxicity to the jojoba foliage. Over-the-top applications may exhibit burning, crinkling, or bronzing of jojoba foliage, particularly to the youngest leaves, flowers, or buds present at the time of application.

#### Dosage

OXEN herbicide is recommended for postemergence and preemergence control of susceptible seedling weeds (up to 12 inches in height) at 8 pints (2.0 lbs. active) per broadcast acre. For optimum residual control, apply during the fall or winter. For early post-emergence control of susceptible seedling weeds (less than 8 inches in height), apply OXEN herbicide at a rate of 4 pints (1.0 lb. active) per broadcast acre.

#### Weeds Controlled Postemergence

Fiddleneck, Coast	Miner's Lettuce
**Filaree, Broadleaf	Nettle, Burning
**Filaree, Redstem	*Pigweed, Redroot
**Filaree, Whitestem	Redmaids
*Groundsel, Common	Shepherdspurse
Henbit	Sowthistle, Annual

Mallow, Little (Malva, Cheeseweed)

\*Highest rate may be required for acceptable postemergence control.

\*\*OXEN herbicide at the 8-pint rate (2.0 lbs. active) will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

#### Weeds Controlled Preemergence

Burclover	Lettuce, Prickly
Fiddleneck, Coast	Mallow, Little (Malva, Cheeseweed)
Filaree, Broadleaf	Pigweed, Redroot
Filaree, Redstem	Purslane, Common
Filaree, Whitestem	Redmaids
Groundsel, Common	Rocket, London
Henbit	Shepherdspurse
Knotweed, Prostrate	Sowthistle, Annual
Lambsquarters, Common	

#### Timing And Method Of Application

Apply the first application of OXEN herbicide after jojoba plants have grown to a minimum 6-inch height or greater. Additional applications should be applied as needed for post and preemergence weed control. Weed height should not exceed 12 inches or

unsatisfactory weed control may result.

OXEN herbicide should be applied in a minimum spray volume of 40 gallons of water per acre depending upon density of emerged weeds. Spray volume should be increased as weed height and density increase. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment should be calibrated carefully before each use.

#### Jojoba

##### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Avoid direct spray or drift contact of OXEN herbicide with jojoba flowers or buds as severe injury may result.
- Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre in a single application.

### MINT (SPEARMINT, PEPPERMINT)

For Use In California, Idaho, Montana, Nevada, Oregon, South Dakota, Utah And Washington

#### General Information

OXEN herbicide is a selective herbicide for the control of certain annual grasses and broadleaf weeds in spearmint and peppermint grown in California, Idaho, Montana, Nevada, Oregon, South Dakota, Utah, and Washington. Applications should only be made to spearmint and peppermint that are dormant.

#### Method Of Application

Application must be made prior to new spring growth or severe crop injury may result. OXEN herbicide should be thoroughly mixed with clean water at recommended concentration and applied at 20 to 40 psi in 20 to 40 gallons of water per acre.

#### Weeds Controlled

When OXEN herbicide is applied as a dormant application at recommended dosages in spearmint and peppermint, the following annual weeds are controlled:

Bedstraw, Catchweed	*Oats, Wild
*Bluegrass, Annual	Crack, Red
Flaxweed	Pepperweed, Yellowflower
Groundsel, Common	Pigweed, Redroot
Lambsquarters, Common	*Ryegrass, Italian
Lettuce, Prickly (China Lettuce)	Shepherdspurse
Mustard, Blue (Purple Mustard)	Sowthistle, Annual
Mustard Tumble (Jim Hill Mustard)	Tansymustard
Nightshade, Hairy	Thistle, Russian
*Control of annual grasses is best obtained when OXEN herbicide is applied prior to emergence. Postemergence control of winter annual grasses is generally unsatisfactory if applications are made after the 1- to 2-leaf stage.	

#### Western Oregon

##### Peppermint (Willamette Valley)

Apply 2 to 3 pints (0.5 to 0.75 lb. active) of OXEN herbicide from November to February to dormant peppermint only. Treatments in January or February generally provide better residual preemergence control of annual broadleaf weeds. Full season weed control should not be expected from this treatment.

DO NOT APPLY OXEN HERBICIDE IN THE WILLAMETTE VALLEY TO MINT THAT HAS BEEN PLOWED.

#### Oregon And Washington (East Of Cascades), California, Montana, Idaho, Nevada, South Dakota, And Utah

##### Spearmint And Peppermint

Apply 4 to 8 pints (1 to 2 lbs. active) of OXEN herbicide from December through March to dormant mint only. Later winter applications will provide maximum activity on summer weeds. Summer grass control may be inconsistent. For best results, fall-plowed fields should be harrowed to provide a smooth surface prior to application. Plowed fields should not be harrowed after OXEN herbicide has been applied as soil disturbance will decrease the herbicidal effectiveness. In furrow-irrigated fields, corrugating must be done prior to application. Corrugating after application can cover treated rows with untreated soil resulting in poor weed control.

#### Mint (Spearmint And Peppermint)

(For Use In California, Idaho, Montana, Nevada, Oregon, South Dakota, Utah And Washington)

##### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply more than one application of OXEN herbicide per season.
- Apply OXEN herbicide only to healthy spearmint and peppermint. Do not apply to spearmint or peppermint that has been weakened by disease, drought, flooding, excessive fertilizer, soil salts, previously applied pesticides, nematodes, soil insects, or winter injury as severe injury may result.

### MINT (SPEARMINT, PEPPERMINT)

GROWN ON MUCK SOILS ONLY IN  
INDIANA, MICHIGAN, MONTANA, NORTH DAKOTA,  
SOUTH DAKOTA, WISCONSIN

#### General Information

OXEN herbicide is a selective herbicide that can be used for the control of certain annual broadleaf weeds in dormant spearmint and peppermint. Applications should be made prior to the emergence of spearmint and peppermint that is grown on muck soils. Applications made after the spearmint and peppermint emerge will result in severe injury.

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Applications to first year spearmint and peppermint should be made within four (4) days of planting (sprigging) to prevent excessive injury.

### Weeds Controlled Postemergence and Preemergence

When OXEN herbicide is applied at recommended dosages in spearmint and peppermint, the following weeds are controlled:

Knotweed, Prostrate  
Pigweed, Redroot

Purslane, Common

### Dosage

OXEN herbicide should be applied at a rate of 4 to 6 pints (1.0 to 1.5 lb. active ingredient) per acre. When used postemergence (to the weeds) add an 80% active nonionic surfactant at the rate of one quart per 100 gallons of spray solution. Applications should be made before the weeds exceed four inches. It is important that applications of OXEN herbicide be made prior to the emergence of the spearmint and peppermint. OXEN herbicide should be thoroughly mixed with clean water at recommended concentrations and applied in 20 to 40 gallons of water per acre. Apply at 20 to 40 psi.

### Mint (Spearmint, Peppermint)

(For Use On Mint Grown On Muck Soils Only In Indiana, Michigan, Montana, North Dakota, South Dakota, Wisconsin)

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Apply OXEN herbicide only to spearmint and peppermint grown on muck soils (muck soils should have an organic matter of 20% or greater).
- Always apply OXEN herbicide to healthy spearmint and peppermint. Do not apply OXEN herbicide to spearmint or peppermint that has been weakened by disease, nematodes, soil insects, or winter injury, as severe injury may result.
- Do not apply OXEN herbicide to spearmint or peppermint that has emerged.
- Applications of OXEN herbicide to first-year spearmint or peppermint should be made within four (4) days of planting (sprigging).

### NON-CROP USE ON RIGHT-OF-WAY SITES

(SUCH AS FENCE ROWS, STORAGE AREAS, UTILITY RIGHT-OF-WAYS,  
NONGRAZED MEADOWS, ROADSIDES, FARMSTEADS, ETC.)

#### General Information

OXEN herbicide is recommended for postemergence and preemergence control of certain broadleaf weeds in non-crop areas.

#### Weeds Controlled Postemergence (weeds up to 4 inches high)

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per broadcast acre. Applications to weeds beyond the 4-inch stage may result in partial control.

Mallow, Little (Malva)	Purslane, Common
Mile-A-Minute	Shepherdspurse
Pigweed, Redroot	Witchweed (North And South Carolina)*

#### Weeds Controlled Preemergence

Apply 5 to 8 pints (1.25 to 2.0 lbs. active) per broadcast acre.

Knotweed, Prostrate	Pigweed, Redroot
Lambsquarters, Common	Purslane, Common
Lettuce, Prickly	Shepherdspurse
Mallow, Little (Malva)	Witchweed (North And South Carolina)*
Mile-A-Minute	

\*Applications must be applied to witchweed plants before blooms form to prevent the production of viable seed.

#### Timing and Method of Application

OXEN herbicide should be applied in a minimum of 40 gallons of water per acre (10 gallons of water per acre for witchweed control in North and South Carolina). Best pre-emergence results are achieved when spray is applied to a relatively weed free soil surface. The volume of water used should be increased as the weeds become taller and more dense. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment should be calibrated carefully before each use. The use of an 80% active nonionic surfactant should be added to the spray mixture at a rate of 0.125% v/v (1 pint per 100 gallons of spray mix) when using for the control of witchweed in North and South Carolina.

#### Tank Mixes With OXEN Herbicide

**Important:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

#### Dosage

For preemergence control of susceptible grassy and broadleaf weeds, a tank mixture of OXEN herbicide with diuron or simazine can be applied. Apply at the recommended rates and growth stages to susceptible weed species in a manner described on the respective labels.

For postemergence control of susceptible grass and broadleaf weeds, a tank mixture with paraquat or glyphosate with OXEN herbicide can be used. Apply at the recommended rates and growth stages to susceptible weed species in a manner described on the respective labels.

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not feed or allow animals to graze on any areas treated with OXEN herbicide.

## ONIONS

### General Information

OXEN herbicide is a selective herbicide for postemergence application to direct-seeded and transplanted onions for early postemergence control of certain annual broadleaf and grass weeds. Initial spray application should be made only when the onions have reached the development stage specified in the DOSAGE section and the SPECIFIC USE RESTRICTIONS section of this label. On onion transplants, spray as soon before or after transplanting as practical. OXEN herbicide can cause necrotic lesions, twisting, pigtail, or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the development stage of the onion plants as specified in the DOSAGE section and the SPECIFIC USE RESTRICTIONS section of this label.

### Dosage

#### Seeded Onions

**Northeastern States (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, And Vermont)**

OXEN herbicide is recommended for postemergence control at 2 to 4 fluid ounces (0.03 to 0.06 lb. active) per acre when applied postemergence to seeded onions that have at least three (3) true leaves. Multiple treatments at the aforementioned rate may be applied. Do not apply more than 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide as a result of multiple applications in one season.

**Western States (Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah, And Washington)**

OXEN herbicide is recommended for postemergence control at 0.5 pints to 1 pint (0.12 to 0.25 lb. active) per acre when applied postemergence to onions that have at least two (2) true leaves. Multiple treatments at the aforementioned rates may be applied. Do not apply more than 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide as a result of multiple applications in one season. Sprinkler Chemigation: For application using sprinkler irrigation (solid set, portable lateral, center pivot, continuous lateral move, side (wheel) roll) systems, apply specified dosage of OXEN herbicide per acre as described in this section. Follow all directions given in the supplemental labeling entitled APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION when making applications using sprinkler irrigation systems.

#### All Other States

OXEN herbicide is recommended for postemergence control at 0.5 pints (0.12 lb. active) per acre when applied postemergence to onions that have at least two (2) true leaves. Multiple treatments at the aforementioned rates may be applied. Do not apply more than 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide as a result of multiple applications in one season.

#### Transplanted Onions

Post-Transplant: Transplanted onions are most tolerant of a postemergence application immediately after transplanting.

For all states except the Northeastern states listed under the DOSAGE-SEEDED ONIONS section above, an application of up to 2 pints (0.5 lb. active) per acre within two days after transplanting may be made. If less than 2 pints per acre are applied, a second application can be made two weeks or more after transplanting. Do not exceed the maximum use rate of 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide as a result of multiple applications in one season. Sprinkler Chemigation: For application using sprinkler irrigation (solid set, portable lateral, center pivot, continuous lateral move, side (wheel) roll) systems, apply specified dosage of OXEN herbicide per acre as described in this section. Follow all directions given in the supplemental labeling entitled APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION when making applications using sprinkler irrigation systems.

For transplanted onions in the Northeastern states, apply the same rates listed in the DOSAGE-SEEDED ONIONS section within two days after transplanting.

**Pre-Transplant:** (Not for use in Northeastern or Western states except as specifically directed on other approved supplemental labeling.) OXEN herbicide is recommended for use as a pre-transplant application at 1 to 2 pints (0.25 to 0.5 lb. active) per broadcast acre. Applications must be made after completion of soil preparation but prior to transplanting of onion plants. Transplanting should be completed with minimal soil disturbance. Treated soil surfaces should be left undisturbed after transplanting to obtain greatest benefit of OXEN herbicide on susceptible annual broadleaf weeds during the time period for which weed control is desired. However, timely cultivations after weed emergence will assist in weed control. If less than 2 pints per acre are applied as a pre-plant treatment, postemergence applications can be made as instructed in the DOSAGE-SEEDED ONIONS section of this label. Do not exceed the maximum use rate of 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide as a result of multiple applications in one season.

Dosages listed are for broadcast application. For banded application, the amount of OXEN herbicide used per acre should be reduced according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Broadcast Acre} = \text{Amount Needed per Acre for Banded Application}$$

#### Weeds Controlled

OXEN herbicide will provide postemergence control of the following weeds when applied at the recommended dosage and leaf stage (2 to 4 leaves):

Carnarygrass (Annual)	Puncturevine
<sup>a</sup> Eveningprimrose, Cudweed	<sup>ab</sup> Purslane, Common
Groundsel, Common	Rocket, London
Mallow, Little (Malva)	Sage, Lanceleaf
Nightshade, Black	<sup>b</sup> Shepherdspurse
<sup>b</sup> Pigweed, Prostrate	Sowthistle, Annual
<sup>ab</sup> Pigweed, Redroot	

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- <sup>a</sup> Weeds controlled when applied as a pre-transplant application. In addition, OXEN herbicide at the rate of 1 to 2 pints per acre will provide control/suppression of carpetweed, Pennsylvania smartweed, galinsoga, common lambsquarters, and wild mustard. Applications of OXEN herbicide to muck soils may result in partial control or suppression of the weeds listed.
- <sup>b</sup> Specific weeds controlled at rates recommended for use in Northeastern states (see DOSAGE section).

### Timing and Method of Application

For best postemergence control of susceptible weeds, apply when the weeds are in the 2- to 4-leaf stage. Application of OXEN herbicide after the weeds exceed the maximum leaf stage may result in reduced weed control. More than one postemergence application may be necessary to control subsequent weed flushes.

OXEN herbicide should be thoroughly mixed with clean water at recommended concentration and applied in a minimum of 40 gallons of water per acre. Use conventional ground spray equipment with flat fan spray nozzles at 20 to 40 psi. Accurately calibrate spray equipment prior to each use. Avoid drift to all other crops and nontarget areas. Thoroughly flush the spray equipment (tank, hose, pump, boom) with water before and after each use. Residual OXEN herbicide remaining in the spray equipment may damage other crops.

### Onions

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- In all states except Northeastern states, do not start spraying until the onions (direct-seeded) have two (2) fully developed true leaves. In the Northeastern states (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont), do not start spraying until the onions (direct-seeded) have three (3) fully developed true leaves. Applications made prior to the recommended onion development stage may result in serious injury and are not recommended.
- Do not apply more than a total of 2 pints (0.5 lb. active) per acre of OXEN herbicide during one use season.
- Do not apply within 45 days of harvest.
- Use only on dry bulb onions.
- Do not apply to onions grown for seed except as specified below or on other approved supplemental labeling.
- Tank mixtures of OXEN herbicide with oils, surfactants, liquid fertilizers, or other pesticides may result in enhanced crop response/injury and are the responsibility of the user.
- Do not apply OXEN herbicide preemergence to direct-seeded onions.
- Do not apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes, or diseases.

## ONIONS GROWN FOR SEED

### General Information

OXEN herbicide is a selective herbicide for postemergence application to onions grown for seed for early postemergence control of certain annual broadleaf and grassy weeds. Initial spray application should be made only when the onions have reached the development stage specified in the DOSAGE section and the SPECIFIC USE RESTRICTIONS section of this label. OXEN herbicide can cause necrotic lesions, twisting, pig-tailing, or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the development stage of the onion plants as specified in the DOSAGE section and the SPECIFIC USE RESTRICTIONS section of this label.

**Note:** Some varieties or inbred lines of onions may be more susceptible to OXEN herbicide. Care should be taken to insure that the particular onion variety or line being grown is tolerant to OXEN herbicide. It is suggested that all onion varieties or lines be tested in limited areas to ensure an adequate level of crop tolerance prior to an application for postemergence weed control.

### Weeds Controlled

OXEN herbicide will provide postemergence control of the following weeds when applied at the recommended dosage and leaf stage (2 to 4 leaves):

Canarygrass (Annual)	Puncturevine
Eveningprimrose, Cutleaf	*Purslane, Common
Groundsel, Common	Rocket, London
Mallow, Little (Malva)	Sage, Lanceleaf
Nightshade, Black	Shepherdspurse
*Pigweed, Prostrate	Sowthistle, Annual
*Pigweed, Redroot	

\*Specified weeds controlled at rates recommended for use in Northeastern states (see DOSAGE section).

### Dosage

**Northeastern States (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, And Vermont)**

OXEN herbicide is recommended for postemergence control at a maximum use rate of 2 fluid ounces (0.03 lb. active) per acre when applied postemergence to seeded onions that have at least four (4) true leaves. Multiple treatments at the aforementioned rate may be applied. Do not apply more than 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide as a result of multiple applications in one season.

### All Other States

OXEN herbicide is recommended for postemergence control at a maximum use rate of

0.5 pints (0.125 lb. active) per acre when applied postemergence to onions that have at least three (3) true leaves. Multiple treatments at the aforementioned rate may be applied. Do not apply more than 2 pints (0.5 lb. active) per broadcast acre of OXEN herbicide in one season.

### Timing And Method Of Application

For best postemergence control of susceptible weeds, apply when the weeds are in the 2- to 4-leaf stage. Application of OXEN herbicide after the weeds exceed the maximum leaf stage may result in reduced weed control. More than one postemergence application may be necessary to control subsequent weed flushes.

OXEN herbicide should be thoroughly mixed with clean water at recommended concentrations and applied in a minimum of 40 gallons of water per acre. Use conventional ground spray equipment with flat fan spray nozzles at 20 to 40 psi. Do not exceed 40 psi. Accurately calibrate spray equipment prior to each use. Thoroughly flush the spray equipment (tank, hose, pump, boom) with water before and after each use. Residual OXEN herbicide remaining in the spray equipment may damage other crops.

**Chemigation:** For application using sprinkler irrigation (solid set or portable lateral) systems, apply specified dosage of OXEN herbicide per acre as described above. Follow all directions given in the supplemental labeling entitled APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION when making applications using sprinkler irrigation systems.

**DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT. AVOID DRIFT TO ALL NONTARGET AREAS. OXEN HERBICIDE IS PHYTOTOXIC TO PLANT FOLIAGE.**

### Onions Grown For Seed

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- In all states, do not start spraying until the onions have reached the minimum leaf stage specified in the DOSAGE section of this label. Applications made prior to recommended onion development stage may result in serious injury and are not recommended.
- Do not apply more than a total of 2 pints (0.5 lb. active) per acre of OXEN herbicide during one use season.
- Do not apply within 60 days of harvest.
- Do not mix OXEN herbicide with oils, surfactants, liquid fertilizers, or other pesticides except as specified on the OXEN herbicide label.
- Do not apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.

## PAPAYA

### For Use Only In Hawaii

#### General Information

OXEN herbicide is a selective herbicide for use as a post-directed application for broadleaf weed control in papaya. Occasionally, after the use of OXEN herbicide, a spotting, crinkling, or flecking may appear on the leaves of the papaya. Leaves or green stalks that receive direct or indirect (drift) spray contact will be injured.

Do not use OXEN herbicide on papaya plantings that are weak or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought, or excessive moisture.

### Dosage and Timing

Apply OXEN herbicide at a rate of 4 pints (1.0 lb. active) per broadcast acre as a directed spray to the orchard floor. The initial application should occur no earlier than 4 months after transplanting or 6 months after direct seeding, and after the papaya has reached a minimum height of 4 feet. Applications may be repeated at approximate 4-month intervals.

OXEN herbicide provides effective control of susceptible weed seedlings in the 4-leaf stage. Do not apply more than 4.0 pints (1.0 lb. active) of OXEN herbicide per broadcast acre in a single application or more than 12.0 pints (3.0 lbs. active) per broadcast acre per year as a result of multiple applications.

### Weeds Controlled

OXEN herbicide will provide preemergence and postemergence control of the following weeds when used at the recommended dosage. Application to weeds beyond the 4-leaf stage may result in partial control:

Amaranth, Spiny	Spurge, Garden
Purslane, Common	

### Method Of Application

OXEN herbicide should be thoroughly mixed with clean water at recommended concentrations and applied in a minimum of 15 gallons of water per broadcast acre. Accurately calibrate spray equipment prior to each use.

Accurate, uniform placement of OXEN herbicide is essential for effective weed control and to minimize crop injury. OXEN herbicide must be applied as a directed spray to the orchard floor beneath the papaya plants. Do not allow the herbicide solution, spray, drift, or mist to contact green bark, stems, fruit, or foliage as injury may result. OXEN herbicide must be applied using rigid precision ground sprayer equipment.

### Papaya

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

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- Do not allow herbicide solution, spray, drift, or mist to contact green bark, stems, fruit, or foliage as injury may result.
- Do not apply more than 4.0 pints (1.0 lb. active) of OXEN herbicide per broadcast acre in a single directed spray or more than 12 pints (3.0 lbs. active) per broadcast acre per year as a result of multiple applications.
- Do not apply OXEN herbicide within 1 day of harvest.
- For use only on papaya grown in Hawaii.

### SOYBEANS

#### Not For Use In California

#### General Information

OXEN herbicide is effective as a preemergence and postemergence (post-directed) herbicide for the control of broadleaf weeds in soybeans. Applications can be made early preplant in conservation tillage soybeans, preemergence in no-till (double-crop) and conventional soybeans, or post-directed in conventional till soybeans. Seeding weeds are controlled as they come in contact with the herbicide either during emergence or through a post-directed application. Follow specific use directions and restrictions for recommended use and timing of applications.

Soybeans are tolerant to preemergence and post-directed applications of recommended dosages of OXEN herbicide; however, under certain conditions, OXEN herbicide can cause temporary injury. Heavy splashing rain shortly after crop emergence or cold, wet soil conditions during early growth stages can produce leaf cupping and crinkling. When injury occurs, it is generally limited to the first few leaves that develop shortly after crop plants emerge from the soil. Soybeans recover from this injury and yields are not adversely affected. Soybean leaves that are accidentally sprayed during a post-directed application will exhibit necrotic spotting and injury to the soybean plant. Therefore, care must be exercised to avoid spray contact with the soybean leaves.

#### Dosage And Timing

#### Conservation Tillage

#### Soybeans Early Preplant

OXEN herbicide is effective for preemergence and postemergence control of susceptible broadleaf weeds when surface applied at 1½ to 3 pints (0.38 to 0.75 lb. active) per broadcast acre to the stale seedbed prior to the planting of conservation tillage soybeans. It is suggested that applications be made approximately 14 days prior to planting. The higher rate of 2 to 3 pints (0.5 to 0.75 lb. active) will assist in early season annual grass control. However, OXEN herbicide must not be a basic portion of the grass herbicide program. A planned program utilizing herbicides registered for early preplant, preemergence, or postemergence grass control in soybeans is recommended.

The use of ridge or slot planters or other planting equipment that results in minimal soil disturbance is recommended. Soil surfaces should not be disturbed as the herbicidal effectiveness of OXEN herbicide may be decreased. Seedling weeds are controlled as they come in contact with the soil-applied herbicide during emergence. Timely cultivations will usually assist in weed control.

#### No-Till (Double-Crop) Soybeans

#### Preemergence

OXEN herbicide is effective for preemergence and postemergence control of susceptible broadleaf weeds when applied at 0.5 to 2 pints (0.12 to 0.5 lb. active) per broadcast acre. For postemergence control of certain grassy and broadleaf weeds, a tank mix of

#### Dosage

Refer to the following tables for labeled use rates.

#### No-Till (Double-Crop) Soybeans

#### Preemergence

Soil Texture	RATE OF PRODUCT PER BROADCAST ACRE (PINTS PER ACRE)					
	OXEN Herbicide	S-metolachlor* (7.62 lb. a.i.)	Alachlor* (4 lb. a.i.)	Oryzalin**	Paraquat (2 lb. a.i.)	Glyphosate (4 lb. a.i.)
Course	0.5 to 1.5	1.0	4.0 to 5.0	1.5	1.0 to 2.0	2.0 to 3.0
Medium	0.5 to 2.0	1.33	5.0 to 6.0	2.0	1.0 to 2.0	2.0 to 3.0
Fine	0.5 to 2.0	1.33 to 1.67	5.0 to 6.0	3.0	1.0 to 2.0	2.0 to 3.0
Muck or Peat	***	***	***	***	***	***

\* Use the higher rate of s-metolachlor or alachlor on soils containing more than 3% organic matter.

\*\* When using oryzalin, multiply pints by 0.67 to obtain the amount of oryzalin product required. Do not use oryzalin on soils containing more than 5% organic matter.

\*\*\*Do not use.

#### Conventional Tilled Soybeans

#### Preemergence

OXEN herbicide is effective for preemergence control of susceptible broadleaf weeds when applied at 1 to 1½ pints (0.25 to 0.38 lb. active) per broadcast acre. Application should be made within one day of planting. Later applications may result in severe crop injury and are not recommended. The higher rate (0.38 lb. active) will assist in early season annual grass control. However, OXEN herbicide must not be a basic portion of the grass herbicide program. OXEN herbicide may be applied alone as a preemergence application following a preplant incorporated grass herbicide treatment or as a tank mix in a preemergence application with s-metolachlor, alachlor or oryzalin.

#### Conventional Tilled Soybeans

#### Preemergence

Soil Texture	RATE OF PRODUCT PER BROADCAST ACRE (PINTS PER ACRE)				
	OXEN Herbicide	S-metolachlor* (7.62 lb. a.i.)	Alachlor* (4 lb. a.i.)	Oryzalin**	Metribuzin 75 DF (lbs. per acre)
Course	0.6 to 1.5	1.00 to 1.33	3.0 to 4.0	1.0 to 1.5	0.33
Medium	0.6 to 1.5	1.33 to 1.67	4.0 to 6.0	1.5 to 2.0	0.33
Fine	0.6 to 1.5	1.33 to 1.67	4.0 to 6.0	2.0 to 2.5	0.33
Muck or Peat	***	***	***	***	***

\* Use the higher rate of s-metolachlor or alachlor on soils containing more than 3% organic matter.

\*\* When using oryzalin, multiply pints by 0.67 to obtain the amount of oryzalin product required. Do not use oryzalin on soils containing more than 5% organic matter.

\*\*\* Do not use.

either paraquat or glyphosate with OXEN herbicide can be used. For residual grass control in no-tillage soybeans, a tank mixture of s-metolachlor, alachlor, or oryzalin with OXEN herbicide or combinations of OXEN herbicide plus paraquat or glyphosate can be used. Follow specific use directions and restrictions for these combination tank mixes. Application should be made within one day after planting. Late applications may result in severe crop injury and are not recommended.

#### Weeds Controlled Preemergence

OXEN herbicide used alone at recommended dosages provides preemergence control of the following broadleaf weeds:

*Groundcherry, Cutleaf	Poinsettia, Wild
Jimsonweed	Shepherdspurse
Lambsquarters, Common	Sida, Prickly (Teaweed)
*Nightshade, American Black	Smartweed, Pennsylvania
*Nightshade, Black	*Sowthistle, Common
Pigweed, Redroot	Velvetleaf

\*Suppression of this weed occurs when OXEN herbicide is applied at the reduced rate recommended for the OXEN herbicide/metribuzin tank mix combination.

#### Weeds Controlled Postemergence (Post-Directed Application)

When OXEN herbicide is applied as a post-direct application at the recommended weed stage and dosage in soybeans, the following weeds are controlled:

Cocklebur, Common	Nightshade, Hairy
Croton, Tropic	Pigweed, Redroot
Groundcherry, Cutleaf	*Poinsettia, Wild
Groundcherry, Wright	Purslane, Common
Jimsonweed	Sesbania, Hemp
Lambsquarters, Common	Shepherdspurse
Morningglory, Annual (Up To 6-Leaf)	**Sicklepod
Mustard, Wild	*Sida, Prickly (Teaweed)
Nightshade, American Black	Smartweed, Pennsylvania
Nightshade, Black	Velvetleaf

\*Multiple applications may be required for acceptable control.

\*\*Post-direct applications of OXEN herbicide will kill or suppress seedlings not exceeding the one true leaf stage.

Two pints of an 80% active nonionic surfactant, cleared for application to growing crops, per each 100 gallons of spray solution are suggested in all tank mixtures containing OXEN herbicide when postemergence weed control is desired.

#### Tank Mixes With OXEN Herbicide

OXEN herbicide when applied at 0.6 to 0.8 pint (0.16 to 0.2 lb. active) per acre as a tank mix combination with metribuzin at 0.33 lb. product (0.25 lb. active) per acre is effective for preemergence control of susceptible broadleaf weeds. Do not apply this tank mix to sandy soils or course soils (sandy loam or loamy sand) containing less than 2% organic matter. Do not use on soils with less than ½% organic matter or on alkaline soils with a pH above 7.4 as crop injury may occur. Application should be made within one day following planting. Later applications may result in severe crop injury and are not recommended. The OXEN herbicide/metribuzin herbicide tank mix may be applied as a preemergence application following a preplant incorporated grass herbicide treatment or as a three-way tank mix in a preemergence application with either s-metolachlor, alachlor or oryzalin.

**Important:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

# OXEN™ HERBICIDE

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### Weeds Controlled Preemergence

When OXEN herbicide is tank mixed with s-metolachlor, alachlor or oryzalin and applied preemergence, in addition to the weeds controlled preemergence by OXEN herbicide alone, control of the following weeds is also obtained:

Barnyardgrass	Johnsongrass, Seedling
Crabgrass, Large	Panicum, Fall
Foxtail, Giant	Ragweed, Common
Foxtail, Yellow	Signalgrass, Broadleaf

### Weeds Controlled Postemergence

When OXEN herbicide is tank mixed with paraquat or glyphosate and applied post-emergence, in addition to the weeds controlled postemergence by OXEN herbicide alone, control of the following weeds is also obtained:

Bluegrass, Annual	Foxtail, Yellow
Crabgrass, Large	Lambsquarters, Common
Foxtail, Giant	Ragweed, Common
Foxtail, Green	Sandbur, Field

### Timing And Method Of Application

As a preemergence treatment, apply in 20 to 60 gallons of water per acre. If glyphosate is included in the tank mix, apply in 20 to 40 gallons of water per acre. To insure complete coverage, spray volume should be increased as the density of emerged weeds, crop residue, or stubble increases. Use conventional spray equipment with flat fan or flood jet nozzles. Spray equipment should be calibrated carefully before each use.

### Post-Directed Spray

#### OXEN Herbicide Used Alone

#### Dosage

OXEN herbicide is recommended as a post-directed application at 1 pint (0.25 lb. active) per acre. Optimum control is achieved when OXEN herbicide is applied to seedling weeds not exceeding 4 true leaves. See MIXING DIRECTIONS for surfactant recommendations. Weeds should be in the seedling stage, young and actively growing. Do not count cotyledon leaves.

### Tank Mixes With OXEN Herbicide

For improved broadleaf weed control, a tank mixture of OXEN herbicide plus 2,4-DB is suggested. Use 1 pint OXEN herbicide (0.25 lb. active) with 1 pint of 2,4-DB (0.22 lb. active) or 0.7 to 0.9 pint of 2,4-DB (0.175 to 0.22 lb. active) per broadcast acre. See MIXING DIRECTIONS for surfactant recommendations. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

### Timing

Soybeans plant height must be a minimum of 8 inches or greater. Use branch lifters or shields if excessive spray contact to the soybean plant cannot be avoided.

### Method Of Application

Accurate, uniform placement of OXEN herbicide spray is essential for effective weed control and to minimize soybean injury. As a directed postemergence application, OXEN herbicide should be applied at 20 to 25 psi using 20 to 40 gallons of spray on a broadcast acre basis. Do not exceed 25 psi. Spray should be directed towards the base of the soybean plant. Soybean foliage receiving accidental spray or drift may be injured. Weeds should be in the seedling stage, young and actively growing.

OXEN herbicide can be applied using a post-direct spray rig with only 2 flat fan nozzles per row, 1 nozzle on each side of the row. Additional care should be taken when adjusting the sprayer prior to application. For best coverage, it is suggested to use 4 flat fan nozzles per row, 2 nozzles on each side of the row. The 2 forward nozzles should point forward and downward while the rear nozzles should point to the rear and downward. With either sprayer system, nozzles should be adjusted to cover the weed foliage with minimum contact to the soybean plant. Do not use cone nozzles.

### Tank Mixture of OXEN Herbicide with Clomazone

#### Soybeans (Not For Use In California)

OXEN herbicide when applied preemergence at 0.6 to 0.8 pint (0.16 to 0.2 lb. active) per acre in a tank mix combination with clomazone at 0.75 to 1.25 lb. active is effective for the control of susceptible annual grass and broadleaf weeds in soybeans. Application should be made within one day following planting. Later applications may result in severe crop injury and are not recommended.

### Weeds Controlled Preemergence

A tank mix of OXEN herbicide with clomazone at recommended dosages provides pre-emergence control of the following weeds:

<b>Grass Weeds</b>	<b>Broadleaf Weeds</b>
Barnyardgrass	Beggarweed, Florida
Crabgrass	Croton, Tropic
(Crabgrass, Large)	*Groundcherry, Cutleaf
(Crabgrass, Smooth)	Jimsonweed
Cupgrass, Southwest	Lambsquarters
Cupgrass, Woolly	Mallow, Venice
Foxtail	*Nightshade, Black
(Foxtail, Giant)	Pigweed, Redroot
(Foxtail, Green)	Purslane, Common
(Foxtail, Robust Purple)	Pusley, Common
(Foxtail, Yellow)	Shepherdspurse
Goosegrass	Sida, Prickly

### Grass Weeds

Johnsongrass (Seedling)  
Panicum  
(Panicum, Fall)  
(Panicum, Texas)  
Sandbur, Field  
Signalgrass, Broadleaf  
(Bracharia)  
\*Suppression

### Broadleaf Weeds

Smartweed, Pennsylvania  
\*Sowthistle, Common  
Velvetleaf

### Soybeans

#### Specific Environmental Hazards

This product is highly toxic to freshwater clams, oysters, aquatic invertebrates, and aquatic plants. Do not apply OXEN herbicide when visible erosion to aquatic habitats and/or wetlands occurs. (See elsewhere on this label for further information on Environmental Hazards).

### Soybeans

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.
- Do not make more than two applications of OXEN herbicide per growing season.
- Do not apply more than 2 pints (0.5 lb. active) of OXEN herbicide per acre during one growing season as a result of preemergence application in no-till (double-crop) or conventional till soybeans or post-directed in conventional till soybeans. If early preplant application is made, do not apply more than 3 pints (0.75 lb. active) of End Zone herbicide per acre during one growing season.
- Do not apply a post-directed application of OXEN herbicide to soybeans after the initial appearance of blooms.

## TARO

### For Use In Hawaii Only

#### General Information

OXEN herbicide is a selective herbicide for preemergence and post-directed application to dryland taro for the control of certain broadleaf weeds.

**NOTE:** Dryland taro is defined as a taro grown without irrigation or by using irrigation practices that do not result in runoff, irrigation return flow, or other loss of irrigation water from the production area. If irrigation is used, the water applied shall not exceed the field capacity of the soil.

Occasionally, after the use of OXEN herbicide, a spotting, crinkling, or flecking may appear on the leaves of the taro. Leaves that receive direct or indirect (drift) spray contact will be injured.

Do not use OXEN herbicide on taro plantings that are weak or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought, or excessive moisture.

### Dosage

Apply OXEN herbicide at a rate of 2 pints (0.5 lb. active) per broadcast acre as a single preemergence application within one week after transplanting (and prior to emergence) of the taro. OXEN herbicide is also recommended as a post-direct application of 1 pint (0.25 lb. active) per acre. Effective control of succulent weed seedlings in the 2- to 3-leaf stage can usually be obtained. Do not apply more than 1 pint (0.25 lb. active) of OXEN herbicide per acre in a single post-direct application or more than 2 pints (0.5 lb. active) per broadcast acre per season as a result of multiple post-direct applications.

Dosages listed are for broadcast application. For banded application, the amount of OXEN herbicide used per acre should be reduced according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Broadcast Acre} = \text{Amount Needed per Acre for Banded Application}$$

### Weeds Controlled

OXEN herbicide will provide preemergence and postemergence control of the following weeds when used at the recommended dosages. Applications to weeds beyond the 3-leaf stage may result in partial control:

Amaranth, Spiny	Spurge, Garden
Purslane, Common	

### Timing And Method Of Application

OXEN herbicide should be thoroughly mixed with clean water at recommended concentrations and applied in a minimum of 15 gallons of water per acre.

When applied preemergence, use conventional ground spray equipment with flat fan nozzles at 20 to 40 psi. Accurately calibrate spray equipment prior to each use.

When applied as a post-direct spray, sprays must be directed to the base of the taro plant. Accurate, uniform placement of OXEN herbicide is essential for effective weed control and to minimize crop injury. Taro foliage receiving accidental spray or drift will be injured. OXEN herbicide must be applied using rigid precision ground sprayer equipment. As a directed postemergence application, OXEN herbicide should be applied at 20 to 25 psi using 20 to 40 gallons of spray on a broadcast acre basis. Do not exceed 25 psi.

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### Taro

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply more than 2 pints (0.5 lb. active) of OXEN herbicide per broadcast acre as a single preemergence application.
- Do not apply more than 1 pint (0.25 lb. active) of OXEN herbicide per broadcast acre in a single post-direct spray or more than 2 pints (0.5 lb. active) per broadcast acre per season as a result of multiple post-direct applications.
- Do not apply more than 4 pints (1.0 lb. active) of OXEN herbicide per broadcast acre per season as a result of preemergence and post-direct applications.
- Do not apply OXEN herbicide within 6 months of harvest of taro (corms, leaves).
- For use only to dryland taro grown in Hawaii. (Dryland taro is defined as taro grown without irrigation or by using irrigation practices that do not result in run-off, irrigation return flow, or other loss of irrigation water from the production area. If irrigation is used, the water applied shall not exceed the field capacity of the soil).

## TREE FRUITS, NUTS, VINES

### Dormant Application

**Almond, Apple, Apricot, Avocado, Beech Nut, Brazil Nut, Butternut, Cashew, Cherry, Chestnut, Chiquapin, Crabapple, Date, Feijoa, Fig, Filbert, Grapes, Hickory Nut, Kiwi, Loquat, Macadamia Nut, Mayhaw, Nectarine, Olive, Peach, Pear, Pecan, Persimmon, Pistachio, Plum, Pomegranate, Prune, Quince, Walnut**

### General Information

OXEN herbicide is effective as a preemergence and/or postemergence herbicide when used alone or in recommended combinations for the control of certain annual broadleaf weeds in certain bearing and nonbearing tree fruit, nut, or vine plantings. The most effective postemergence weed control is achieved when OXEN herbicide is applied to seedling weeds. For postemergence control of certain grassy and broadleaf weeds, a tank mixture of OXEN herbicide with either paraquat or glyphosate can be used.

For preemergence control of susceptible grassy and broadleaf weeds in certain tree fruit, nut, or vine plantings, a tank mixture of OXEN herbicide with napropamide, diuron, pronamide, simazine, norflurazon, or oryzalin can be applied. Contact herbicides such as paraquat or glyphosate may also be added to the tank mixture. Check individual product labels to determine suitability and use rates for various crops.

### OXEN Herbicide Used Alone

#### Geographic Use Directions

##### Arizona And California

#### Dosage

OXEN herbicide is recommended for postemergence control at 2 to 8 pints (0.5 to 2.0 lbs. active) per broadcast acre. For preemergence control of susceptible weeds, use 5 to 8 pints (1.25 to 2.0 lbs. active) per broadcast acre.

### Weeds Controlled Postemergence (weeds up to 4 inches high)

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per broadcast acre. Applications to weeds beyond the 4-inch stage may result in partial control.

Cheeseweed, Malva	Miner's Lettuce
Fiddleneck, Coast	Nettle, Burning
*Filaree, Broadleaf	Pigweed, Redroot
*Filaree, Redstem	Redmaids
*Filaree, Whitestem	Shepherdspurse
Groundsel, Common	Sowthistle, Annual
Henbit	

\*OXEN herbicide at the 8-pint rate (2.0 lbs. active) will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

### Weeds Controlled Preemergence

Apply 5 to 8 pints (1.25 to 2.0 lbs. active) of OXEN herbicide per broadcast acre.

Burclover	Lambsquarters, Common
Cheeseweed (Malva)	Lettuce, Prickly
Fiddleneck, Coast	Pigweed, Redroot
Filaree, Broadleaf	Purslane, Common
Filaree, Redstem	Redmaids
Filaree, Whitestem	Rocket, London
Groundsel, Common	Shepherdspurse
Henbit	Sowthistle, Annual
Knottedweed, Prostrate	

**Chemigation:** For application using sprinkler (low-volume (microsprinkler), drip (trickle), and flood (basin) irrigation systems, apply specified dosage of OXEN herbicide per acre as described in ARIZONA AND CALIFORNIA - DOSAGE section above. Follow all directions given in the supplemental labeling entitled APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION when making applications using sprinkler irrigation systems. Do not allow treated irrigation water to contact the fruit or foliage.

### All Other States (Except California And Arizona)

#### Dosage

OXEN herbicide is recommended for postemergence control at 2 to 8 pints (0.5 to 2.0 lbs. active) per broadcast acre. For preemergence control of susceptible weeds, use 5 to 8 pints (1.25 to 2.0 lbs. active) per broadcast acre.

### Weeds Controlled Postemergence

Apply 2 to 8 pints (0.5 to 2.0 lbs. active) of OXEN herbicide per broadcast acre. The lower rate is recommended for the control of susceptible seedling weeds in the early postemergence stage up to the 4-leaf stage. The higher rate (2.0 lbs. active) should be used for weeds up to the 6-leaf stage. Applications to weeds beyond the 6-leaf stage may result in partial control.

Balsamapple	Pepperweed, Virginia
Cocklebur, Common	Pigweed, Redroot
*Cudweed, Narrowleaf	Poinsettia, Wild
**Eveningprimrose, Cutleaf	Purslane, Common
Groundcherry, Cutleaf	Sesbania, Hemp
Groundcherry, Wright	Shepherdspurse
Jimsonweed	Sida, Prickly (Teaweed)
Lambsquarters, Common	Smartweed, Pennsylvania
Morningglory, Annual	Sowthistle, Annual
Nightshade, American Black	Velvetleaf
Nightshade, Black	
*Maximum 0.5-inch diameter	

\*\*Highest rate and/or multiple applications may be required for acceptable control. Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre of OXEN herbicide in one season.

### Weeds Controlled Preemergence

Apply 5 to 8 pints (1.25 to 2.0 lbs. active) of OXEN herbicide per broadcast acre.

Camphorweed	Pigweed, Redroot
Cudweed, Narrowleaf	Poinsettia, Wild
*Eveningprimrose, Cutleaf	Sida, Prickly
Groundcherry, Cutleaf	Smartweed, Pennsylvania
Jimsonweed	Sowthistle, Annual
Lambsquarters, Common	Spurge, Prostrate
Nightshade, American Black	Spurge, Spotted
Nightshade, Black	Velvetleaf
Pepperweed, Virginia	

\*Highest rate and/or multiple applications may be required for acceptable control. Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre of OXEN herbicide in one season.

### All States

#### Timing And Method Of Application

In Arizona and California, OXEN herbicide can be applied during the period following completion of final harvest up to February 15 (February 1st in Coachella Valley, California). Applications made after the calendar dates above but prior to bud swell may result in significant crop injury and are the responsibility of the user. In California, OXEN herbicide may be applied as an over-the-top or directed spray to dormant nonbearing grape plantings. The use of a low-pressure sprayer is suggested.

In all states, do not apply OXEN herbicide after buds start to swell until completion of final harvest. Do not apply when fruits or nuts are present. OXEN herbicide can be applied upon completion of final harvest.

As a preemergence treatment, apply a minimum of 40 gallons of water per acre. Use higher volumes to ensure adequate coverage in high densities of emerged weeds or heavy trash. Best preemergence results are achieved when spray is applied to a relatively weed-free established berm or soil surface. OXEN herbicide should be directed to the soil and the base of dormant trees or vines. Use a low-pressure sprayer equipped with a breakaway boom and flat fan nozzles. An off-center (OC) nozzle positioned at the end of the boom may be desired. Do not apply to grape plantings that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, injury from previously applied pesticides, or injury due to insects, nematodes, or diseases, as severe crop injury may result. See SPECIFIC USE RESTRICTIONS for OXEN herbicide application on dormant tree or vine plantings.

### SPRAY VOLUME

Weed Stage	Gallons of Water per Acre
Preemergence	40 or more
Postemergence (up to 4-inch or 4-leaf stage)	40 or more
Exceeding 4-inch or 4-leaf stage	100 or more

### Tank Mixes With OXEN Herbicide

**Important:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

### Dosage

For preemergence control of susceptible grassy and broadleaf weeds in certain bearing and nonbearing tree fruit, nut, or vine plantings, a tank mixture of OXEN herbicide with napropamide, diuron, pronamide, simazine, norflurazon, or oryzalin can be applied. Apply at the recommended rates and growth stages to susceptible weed species in a manner described on the respective labels.

For postemergence control of susceptible grassy and broadleaf weeds in certain tree fruit, nut, or vine plantings, a tank mixture of paraquat or glyphosate with OXEN herbicide or combinations of OXEN herbicide plus napropamide, diuron, pronamide, simazine, norflurazon, or oryzalin with either paraquat or glyphosate can be used. Apply at the recommended rates and growth stages to susceptible weed species in a manner described on the respective labels.

### Weeds Controlled

In addition to the weeds controlled by OXEN herbicide used alone, control of susceptible weeds listed on the respective labels for the following products is also obtained.

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diuron	norflurazon	pronamide
glyphosate	oryzalin	*simazine
napropamide	paraquat	

\*In addition, simazine provides preemergence control of horseweed (marestail).

### Tree Fruits, Nuts, Vines

#### Dormant Application

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply OXEN herbicide during the period between bud swell and completion of final harvest or when fruit or nuts are present. OXEN herbicide can be applied upon completion of final harvest.
- In Arizona And California, OXEN herbicide can be applied during the period following completion of final harvest up to February 15 (February 1st in the Coachella Valley, California). Applications made after the calendar dates above but prior to bud swell may result in significant crop injury and are the responsibility of the user.
- Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre of OXEN herbicide in one season.
- Do not apply to grapes or kiwi established less than 3 years unless vines are on a trellis wire a minimum of 3 feet above the soil surface.
- Do not apply to grapes or kiwi that are not staked or trellised unless vines are free-standing.
- OXEN herbicide or any of the combinations recommended on this label should be applied only to healthy growing trees or vines.
- Direct spray toward the base of tree or vines unless specific recommendations in TREE FRUITS, NUTS, VINES-ALL STATES TIMING AND METHOD OF APPLICATION portion of the label allow over-the-top applications. Avoid direct plant contact.

## GRAPES (CALIFORNIA ONLY)

### Nondormant Application

#### General Information

OXEN herbicide is a selective herbicide for the control/suppression of susceptible broad leaf weed species in nondormant grapes (raisin and wine grapes only) when applied either as a directed ground spray application or for supplemental preemergence weed control through low-volume sprinkler (microsprinkler) or drip (trickle) irrigation systems. (OXEN herbicide can be applied to all grapes (raisin, table, wine) when applied as a dormant application as specified above.) The total amount of OXEN herbicide applied during one season (from completion of final harvest through dormancy to nondormant use covered by this section) cannot exceed a total of 8 pints (2.0 lbs. a.i.) per acre as a result of multiple applications in any given area (broadcast, banded, or within the wetted area of the low-volume sprinkler or drip irrigation systems).

#### Crop Tolerance Information

The use of OXEN herbicide may in some instances result in varying degrees of injury to nondormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift, soil contact) exposure to OXEN herbicide. This injury may result in leaf necrosis, reddening of the foliage, leaf cupping, or crinkling of the crop. The grape plant continues to grow normally. Immature, expanding leaves at the time of contact with OXEN herbicide are the most susceptible to foliage injury. Grapes may exhibit some small blemishes (spots or flicks) to the fruit.

#### Dosage And Application Timing

OXEN herbicide can be applied as a nondormant application. Applications can be made to nondormant grapes during the period between the completion of bloom up through 14 days prior to harvest.

OXEN herbicide is recommended for use at rates of 1 to 2 pints (0.25 to 0.5 lb. active) per broadcast acre. Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre per season as a result of multiple applications made during the dormant and nondormant season (up to 14 days prior to harvest).

#### Weeds Controlled/Suppressed Postemergence (weeds up to 4 inches high)

For postemergence control/suppression, apply 1 to 2 pints (0.25 to 0.5 lb. active) per broadcast acre to susceptible weed seedlings up to 4 inches in height. Repeat applications may be required. Applications to weeds beyond this 4-inch stage or at reduced use rates will result in reduced herbicidal activity. For enhanced postemergence activity on certain grassy and broadleaf weeds, a tank mixture of OXEN herbicide with either paraquat or glyphosate can be used when applied with ground application equipment.

Cheeseweed (Malva)	Nettle, Burning
Fiddleneck, Coast	Nightshade, Black
Groundsel, Common	Pigweed, Redroot
Herbit	Purslane, Common
Miner's Lettuce	Redmaids
Morningglory Species, Annual	Rocket, London
Mustard, Black	Sowthistle, Annual

Where postemergence weed activity is desired, add 2 pints of an 80% active nonionic surfactant cleared for application to growing crops per each 100 gallons of spray.

#### Tank Mixtures With OXEN Herbicide

**Important:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

For enhanced postemergence activity on a broader spectrum of grassy and broadleaf weeds in the berm or row middles, a tank mixture of OXEN herbicide with either glyphosate or paraquat can be used. Apply at the recommended rates and growth stages to susceptible weed species in a manner described on the respective labels.

### Weeds Controlled/Suppressed Preemergence

Apply 2 pints (0.5 lb. active) of OXEN herbicide per broadcast acre. Applications at reduced rates will result in reduced herbicidal activity.

Burclover	Nettle, Burning
Cheeseweed (Malva)	Nightshade, Black
Fiddleneck, Coast	Pigweed, Redroot
Groundsel, Common	Purslane, Common
Herbit	Redmaids
Knotweed, Prostrate	Rocket, London
Lambsquarters, Common	Sherpherdspurse
Minerslettuce	Sowthistle, Annual
Mustard, Black	

### Method Of Application

**Ground Application:** OXEN herbicide should be thoroughly mixed with clean water at recommended concentrations and applied in a minimum of 20 gallons of water per acre (minimum 10 gallons for OXEN herbicide/glyphosate tank mix). Use higher volumes to ensure adequate coverage in high densities of emerged weeds or heavy trash. Best pre-emergence results are achieved when spray is applied to a relatively weed-free established berm or soil surface.

OXEN herbicide should be directed to the soil and the base of vines. Use a low-pressure sprayer equipped with a breakaway boom and flat fan nozzles. An off-center (OC) nozzle positioned at the end of the boom may be desired. Spray equipment should be calibrated carefully before each use. See SPECIFIC USE RESTRICTIONS for OXEN herbicide application on nondormant vine plantings.

Thoroughly flush the spray equipment (tank, hose, pump, boom) with water before and after each use. Residual OXEN herbicide remaining in spray equipment may damage other crops.

AVOID DRIFT TO ALL OTHER CROPS AND NONTARGET AREAS. DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT. OXEN HERBICIDE IS PHYTOTOXIC TO PLANT FOLIAGE.

**Chemigation Application:** OXEN herbicide may be applied using sprinkler (low-volume (microsprinkler)) and drip (trickle) irrigation systems designed to distribute irrigation water beneath the vine canopy. The application of OXEN herbicide is intended to supplement the preemergence weed control requirements of a broadcast (or directed) weed control program where weed emergence is anticipated within the wetted area of a low-volume sprinkler (microsprinkler) or drip (trickle) irrigation system. Applications should be made prior to weed emergence since postemergence activity will be inconsistent due to partial coverage. Apply specified dosage of OXEN herbicide per acre as described in DOSAGE AND APPLICATION TIMING section above for nondormant grapes. Meter OXEN herbicide at a continuous uniform rate during the middle 1/3 of the irrigation period to allow for uniform distribution to the soil surface. For best results, OXEN herbicide should be uniformly positioned across the wetted area to help reduce the RING EFFECT of weed escapes as other products begin to break down around the emitter. Continue irrigation during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. Follow all directions given in the supplemental labeling entitled APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION when making applications using sprinkler irrigation systems. Do not allow treated irrigation water to contact the fruit or foliage.

### Grapes

#### Nondormant Application-California Only

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- The total amount of OXEN herbicide applied during one season (from completion of final harvest through dormancy to nondormant use covered by this section) cannot exceed 8 pints (2.0 lbs. active) per acre as a result of multiple applications in any given area (broadcast, banded, or within the wetted area of the low-volume sprinkler or drip irrigation systems).
- Do not apply within 14 days of harvest.
- Do not initiate OXEN herbicide applications in nondormant grapes until the completion of bloom.
- Do not apply to grapes established less than 3 years unless vines are either on a trellis wire a minimum of 3 feet above the soil surface, or protected by grow tubes.
- OXEN herbicide should be applied only by ground application equipment or through low-volume sprinkler (microsprinkler) or drip (trickle) irrigation systems as specified above.
- Apply OXEN herbicide as a nondormant application to wine grapes or raisin grapes only.

## GRAPES (WASHINGTON AND OREGON ONLY)

### Wine And Processing Only

#### General Information

OXEN herbicide may be used to assist with sucker control in grapes (wine and processed grapes only) when applied as a directed ground spray application to suckers growing from the base of the plant. The use of OXEN herbicide will typically reduce (but not eliminate) the need for sucker removal by hand.

# OXENTM HERBICIDE

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### Crop Tolerance

The use of OXEN herbicide may in some instances result in varying degrees of injury to nondormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift, soil contact) exposure to OXEN herbicide. This injury may result in leaf necrosis, reddening of the foliage, leaf cupping, or crinkling. Immature, expanding leaves at the time of contact with OXEN herbicide are the most susceptible to foliage injury. Grapes may exhibit some small blemishes (spots or flecks) to the fruit.

### Rate And Application Timing

Apply OXEN herbicide at a rate of 1 to 2 pints (0.25 to 0.5 lb. active ingredient) per acre in a spray volume of 50 gallons (or more) per broadcast acre to new emerging sucker growth, up to 12 inches in length. The highest rate and/or a second application may be required to achieve an acceptable level of control/suppression of grape suckers. Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre, as a result of multiple applications made during a single season (dormant and nondormant). The use of OXEN herbicide will typically reduce (but not eliminate) the need for sucker removal by hand. Applications can be made to nondormant grapes up to three weeks after bloom. Do not use within 60 days of harvest.

Add 2 pints of an 80 percent active nonionic surfactant cleared for application to growing crops) per each 100 gallons of spray.

Rates indicated above are for broadcast application. For banded applications, the amount of OXEN herbicide used per acre should be reduced according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Broadcast Acre} = \text{Amount Needed per Acre for Banded Application}$$

### Method Of Application

OXEN herbicide should be applied in a three-foot band directed towards the base of the grapevine. Applications are to be directed towards the lower portion of the grapevine to minimize leaf injury from spray contact. Avoid spray contact on flowers, grape clusters, or fruit. Mounted nozzles are used to deliver the spray solution. Thorough spray coverage of sucker growth is essential to maximize the activity of OXEN herbicide. Spray equipment should be calibrated carefully before each use.

AVOID DRIFT TO ALL OTHER CROPS AND NONTARGET AREAS. DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT. OXEN HERBICIDE IS PHYTOXIC TO PLANT FOLIAGE.

### Tank Mixtures With OXEN Herbicide

**IMPORTANT:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive requirements must apply. For enhanced postemergence sucker activity, a tank mixture of OXEN herbicide with either glufosinate or paraquat can be used. Apply at the recommended rates and growth stages in a manner described on the respective labels.

## GRAPES (WASHINGTON ONLY)

### Wine And Processing Only

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- The total amount of OXEN herbicide applied during one crop year (dormant and nondormant) cannot exceed eight pints (2.0 lbs. active ingredient) per acre as a result of multiple applications in any given area (broadcast or banded).
- OXEN should be applied only by ground application equipment.
- Apply OXEN herbicide as a nondormant application for sucker control to wine grapes or processed grapes only.
- Do not apply when weather conditions favor drift. Avoid drift to all nontarget areas. OXEN herbicide is phytotoxic to plant foliage.
- Do not apply Galligan herbicide within 60 days of harvest.
- Do not treat ditch banks or waterways with OXEN herbicide.

## PISTACHIOS, WALNUTS, ALMONDS (CALIFORNIA ONLY)

### Nondormant Application

#### General Information

OXEN herbicide provides effective vegetation management when applied to young broadleaf weed seedlings. For enhanced postemergence activity on certain grassy and broadleaf weeds, a tank mixture of OXEN herbicide with either paraquat or glyphosate can be used when applied with ground application equipment.

#### Dosage

OXEN herbicide is recommended for postemergence suppression at 1 to 2 pints (0.25 to 0.5 lb. active) per broadcast acre when applied to susceptible weed seedling less than 4 inches in height. Repeat applications may be required.

For cleanup sprays and preharvest applications for contact (postemergence) control, apply OXEN herbicide at 2 to 8 pints (0.5 to 2.0 lbs. active) per broadcast acre to susceptible weed seedlings not exceeding the 4-inch stage. Applications to weed seedlings beyond the 4-inch stage may result in partial control.

For residual (preemergence) control of susceptible weeds, use 5 to 8 pints (1.25 to 2.0 lbs. active) per broadcast acre.

### Weeds Suppressed and/or Controlled

Cheeseweed (Malva)  
Fiddleneck, Coast  
Filaree, Broadleaf  
Filaree, Redstem  
Filaree, Whitestem  
Groundsel, Common  
Henbit  
Miner's Lettuce

Morningglory Species, Annual  
Mustard, Black  
Nettle, Burning  
Pigweed, Redroot  
Purslane, Common  
Redmaids  
Rocket, London  
Sowthistle, Annual

### Tank Mixtures With OXEN Herbicide

**Important:** Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

### Dosage

For enhanced postemergence activity on a broader spectrum of grass weeds and broadleaf weeds in the tree row middles, a tank mixture of OXEN herbicide with either paraquat or glyphosate can be used. Apply at the recommended rates and growth stages to susceptible weed species in a manner described on the respective label.

### Weeds Suppressed And/Or Controlled

Barnyardgrass  
Bluegrass, Annual  
Chickweed, Common  
Horseweed (Marestail)  
Rocket, London  
Ryegrass, Italian

### Method Of Application

**Ground Application:** Apply a minimum spray volume of 20 gallons of water per acre (minimum 10 gallons for OXEN herbicide/glyphosate tank mix). Use higher volumes to ensure adequate coverage in high densities of emerged weeds or heavy trash. Use conventional low-pressure ground spray equipment with flat fan spray nozzles at 20 to 40 psi. An off-center nozzle positioned at the end of the boom may be desired. Spray equipment should be calibrated carefully before each use.

**Chemigation Application:** Apply this product only through flood (basin) irrigation systems, or low-volume sprinkler (microsprinkler) and drip (trickle) irrigation systems designed to distribute irrigation water beneath the tree canopy. For flood (basin) irrigation systems, OXEN herbicide should be continuously metered into the water during the entire irrigation period. Agitation in the pesticide supply tank is suggested. Best weed control results are obtained when a uniform distribution and flow of irrigation water is maintained over level land. OXEN herbicide may be applied through low-volume sprinkler (microsprinkler) and drip (trickle) irrigation systems designed to distribute irrigation water beneath the tree canopy. The application of OXEN herbicide is intended to supplement the preemergence weed control requirements of a broadcast (or directed) weed control program, where weed emergence is anticipated within the wetted area of a low-volume sprinkler (microsprinkler) or drip (trickle) irrigation system. Applications should be made prior to weed emergence since postemergence activity will be inconsistent due to partial coverage. Meter OXEN herbicide at a continuous uniform rate during the middle one-third of the irrigation period to allow for uniform distribution to the soil surface. For best results, OXEN herbicide should be uniformly positioned across the wetted area to help reduce the "ring effect" of weed escapes, as other products begin to break down around the emitter. Continue irrigation during the final one-third of the irrigation period to insure proper flushing of the irrigation system. Irrigation water treated with OXEN herbicide must be contained on the treated area until the water is absorbed by the soil. Do not apply when wind speed favors drift beyond the area intended for treatment.

**Cultural Considerations For All Applications:** In order to provide maximum effectiveness of preemergence activity of OXEN herbicide, the berm or soil surface should be level, smooth, and free of crop or weed trash (decaying leaves, clippings, dead weeds, etc.). Leaves and trash may be removed by blowing the area to be treated or by thoroughly mixing the trash into the soil through cultivation prior to herbicide applications.

Cultural practices that result in redistribution of disturbance of the soil surface after treatment will decrease the herbicidal effectiveness of OXEN herbicide. Cutting water furrows or cultivations that mix untreated soil into treated areas will also reduce the effectiveness of the treatment. The best results are from applications to established berms or soil surfaces that are left undisturbed during the time period for which weed control is desired.

### Pistachios, Walnuts, Almonds

#### Nondormant Application

#### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- WHEN APPLIED AS A NON-DORMANT TREATMENT, OXEN HERBICIDE CAN ONLY BE APPLIED TO PISTACHIO PLANTINGS BETWEEN MAY 1 AND 7 DAYS PRIOR TO HARVEST.
- WHEN APPLIED AS A NON-DORMANT TREATMENT, OXEN HERBICIDE CAN ONLY BE APPLIED TO ALMOND PLANTINGS BETWEEN APRIL 1 AND SEPTEMBER 30 AND TO WALNUT PLANTINGS BETWEEN MAY 1 AND SEPTEMBER 30.
- Do not apply OXEN herbicide within 7 days of harvest of pistachio trees.
- Do not apply OXEN herbicide within 30 days of harvest of almond trees.
- Do not apply OXEN herbicide within 7 days of harvest of walnut trees.
- Do not apply more than 8 pints (2.0 lbs. active) per broadcast acre of OXEN herbicide during the non-dormant season.
- OXEN herbicide should be applied only to healthy growing trees.
- Direct spray toward the base of tree. Avoid direct herbicide contact with foliage or nuts.

# OXEN™ HERBICIDE

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### WINDBREAKS AND SHELTERBELTS (MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA, WYOMING)

#### General Information

OXEN herbicide is effective as a preemergence and/or postemergence herbicide for the control of certain annual broadleaf weeds in windbreaks and shelterbelts. Preemergence control is most effective when spray is applied to clean, weed-free soil surfaces. Treated soil surfaces should not be disturbed as the herbicidal effectiveness of OXEN herbicide may be decreased. Seedling weeds are controlled during emergence as they come in contact with the soil-applied herbicide. The most effective postemergence weed control is achieved when OXEN herbicide is applied with thorough coverage of weeds in the seedling stage.

Occasionally after the use of OXEN herbicide, a spotting, crinkling, or flecking may appear on leaves of deciduous species. Leaves that receive direct or indirect (drift) spray contact will be injured. Deciduous species typically outgrow this condition rapidly and develop normally.

**Important:** Some varieties or cultivars and deciduous species listed may be susceptible to OXEN herbicide. Care should be taken to ensure that the particular variety to be sprayed with OXEN herbicide is tolerant. It is suggested that unfamiliar species be tested in limited areas prior to application for preemergence and postemergence weed control.

#### Weeds Controlled

When OXEN herbicide is applied preemergence or postemergence (up to 4 leaf stage) at recommended dosages, the following broadleaf weeds are controlled.

Buckwheat, Wild	Mustard, Wild
Burdock	Nettle, Burning
Carpetweed	Nightshade, Black
Dock, Curly	Nightshade, Hairy
Groundcherry, Cutleaf	Oats, Wild
Groundcherry, Wright	Orach, Red
Groundsel, Common	Pepperweed, Yellowflower
Henbit	Pigweed, Prostrate
Jimsonweed	Pigweed, Redroot
Knotweed, Prostrate	Purslane, Common
Kochia	Rocket, London
Ladysthumb	*Shepherdspurse
Lambsquarters, Common	Smartweed, Pennsylvania
Lettuce, Prickly	Sowthistle, Annual
Mallow, Little	Tansymustard
Mayweed Thistle	Russian (Seedling)
Mustard, Blue	Velvetleaf
Mustard, Tumble	

\*Highest rate and/or multiple applications may be required for acceptable control.

#### Grasses Controlled

When OXEN herbicide is applied preemergence or postemergence (up to 2-leaf stage) at recommended dosages, the following annual grasses are controlled/suppressed.

Barnyardgrass	Foxtail, Giant
Bluegrass Annual	Goosegrass
Crabgrass, Large	Witchgrass

OXEN herbicide is most effective when applied preemergence to annual grasses. Postemergence applications should be made to seedling grasses not exceeding the 2-leaf stage. The addition of 0.25% (2 pints per 100 gallons of spray solution) of an 80% active nonionic surfactant, cleared for application on growing crops, enhances the OXEN herbicide activity on emerged weeds. When determining an appropriate use rate where a range of rates is provided, use higher rates where heavy weed pressure is anticipated, or where medium and fine soil textures exist and high organic matter soils are present.

OXEN herbicide may be applied to conifer and deciduous species including the following:

#### CONIFER SPECIES

##### Common Name

Arbovitae

##### Douglas Fir

Fir

Fraser

Grand

Noble

##### Hemlock

Eastern Hemlock

Western Hemlock

##### Juniper

##### Pine

Austrian

Eastern White

Himalayan

Jack

Loblolly

Lodgepole

##### Scientific Name

*Thuja occidentalis*

*Thuja orientalis*

*Pseudotsuga menziesii*

*Abies fraseri*

*Abies grandis*

*Abies procera*

*Tsuga canadensis*

*Tsuga heterophylla*

*Juniperus chinensis*

*Juniperus horizontalis*

*Juniperus procumbens*

*Juniperus sabina*

*Juniperus scopulorum*

*Pinus nigra*

*Pinus strobus*

*Pinus wallichiana*

*Pinus banksiana*

*Pinus taeda*

*Pinus contorta*

##### Common Name

Longleaf

Monterey

Mugho

Ponderosa

Scotch

Shortleaf

Slash

Virginia

Spruce

Blue

Dwarf Alberta

Norway

Sitka

Red Cedar

Yew

##### Scientific Name\*

*Pinus palustris*

*Pinus radiata*

*Pinus mugo*

*Pinus ponderosa*

*Pinus sylvestris*

*Pinus echinata*

*Pinus elliotii*

*Pinus virginiana*

*Picea pungens*

*Picea glauca conica*

*Picea abies*

*Picea sitchensis*

*Juniperus virginiana*

*Taxus*, spp.

#### DECIDUOUS SPECIES

##### Common Name

Ash

Crabapple

Eucalyptus

Lilac

Maple, Black

Oak, Northern Red

Olive, Russian

Poplar (Cottonwood)

Sweetgum

Sycamore

Walnut, Black

##### Scientific Name

*Fraxinus* spp.

*Malus* spp.

*Eucalyptus viminalis*, *E. pulverulenta*,

*E. camaldulensis*

*Syringa vulgaris*

*Acer nigrum*

*Quercus rubra*

*Elaeagnus angustifolia*

*Populus* spp.

*Liquidambar styraciflua*

*Platanus occidentalis*

*Juglans nigra*

#### Dosage

Apply 4 to 8 pints (1.0 to 2.0 lbs. active) of OXEN herbicide per broadcast acre for preemergence and postemergence weed control. The addition of 0.25% v/v (2 pints per 100 gallons of spray solution) of an 80% active nonionic surfactant cleared for application to growing crops enhances the OXEN herbicide activity on emerged weeds.

For banded application, the amount of OXEN herbicide to be used per acre should be reduced according to the following formula.

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Broadcast Acre} = \text{Amount Needed per Acre for Banded Application}$$

#### Method of Application

**Conifers:** OXEN herbicide can be applied pretransplant, post-directed, or postemergence (over-the-top) to conifers. Postemergence or post-directed applications should be applied prior to budbreak or after the foliage has had an opportunity to harden off.

**Deciduous:** OXEN herbicide has exhibited selectivity to many deciduous species when applied pretransplant or as a post-directed spray prior to budbreak. Special care should be taken to direct the spray toward the base of the plant. Applications made after budbreak may result in injury to the deciduous species, and are not recommended. (Note: If a nondormant application is required, do not apply during periods of new foliage growth. Applications should be made after foliage has fully expanded and hardened off. Direct spray toward the base of the trees. Avoid direct or indirect spray contact with the foliage of the deciduous species.)

In general, OXEN herbicide should be thoroughly mixed with clean water at the recommended concentration and applied at 20 to 40 psi in a minimum of 20 gallons of water per acre as a broadcast, banded, or post-directed spray. Thorough spray coverage is essential to maximize the postemergence activity of OXEN herbicide. Spray equipment should be calibrated carefully before each use.

Pretransplant applications must be made after completion of soil preparation but prior to transplanting. Transplanting should be completed with minimal soil disturbance. Treated soil surfaces should be left undisturbed after transplanting to obtain the greatest benefit of OXEN herbicide on susceptible annual broadleaf weeds during the time period for which weed control is desired. However, timely cultivations after weed emergence will assist in weed control.

#### Windbreaks And Shelterbelts

##### Specific Use Restrictions

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the end of this label.

- Do not apply more than 8 pints (2.0 lbs. active) of OXEN herbicide per treated acre per growing season as a result of single or multiple applications.
- Always apply OXEN herbicide to healthy deciduous and/or conifer species.
- Do not apply OXEN herbicide to conifers or deciduous species that have been weakened or under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury, as severe injury may result.

#### SPECIFIC USE RESTRICTIONS FOR INDIVIDUAL CROPS ARE FOUND UNDER DIRECTIONS FOR USE IN EACH CROP GROUP SECTION.

#### General Use Restrictions

##### Use Restrictions That Apply To All Registered Applications Are Listed Below:

- Read and observe all label directions before using. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.
- Do not contaminate irrigation water or water used for domestic purposes.

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- Do not use any plants treated with OXEN herbicide for feed or forage.
  - Do not feed or allow animals to graze on any areas treated with OXEN herbicide.
  - OXEN herbicide should be applied only by ground application equipment except as specifically directed on this label or on other approved supplemental labeling.
  - Do not apply when weather conditions favor drift. Avoid drift to all nontarget areas. OXEN herbicide is phytotoxic to plant foliage.
  - Thoroughly flush spray equipment (tank, pump, hoses, and boom) with clean water before and after each use. Residual OXEN herbicide remaining in spray equipment may damage other crops. To assist in the removal of OXEN herbicide residues in spray equipment, an 80% active non-ionic surfactant may be added at the rate of 1 quart per 100 gallons of water during flushing.
  - Use OXEN herbicide only for recommended purposes and at recommended rates.
  - Do not treat ditch banks or waterways with OXEN herbicide.
  - Rotation Crop Restrictions
    - Do not rotate to small-grain crops (includes barley, buckwheat, corn, pearl millet, proso millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, wild rice) within 10 months following OXEN herbicide treatment.
    - Do not direct seed any crops other than OXEN herbicide-labeled crops within 60 days following a OXEN herbicide treatment.
    - Do not transplant seedling crops other than OXEN herbicide-labeled crops within 30 days following a OXEN herbicide treatment.
- IMPORTANT: TREATED SOIL MUST BE THOROUGHLY INCORPORATED TO A DEPTH OF 4 INCHES AFTER HARVEST (OR ABANDONING) OF THE TREATED CROP BUT PRIOR TO PLANTING OF THE ROTATIONAL CROP. FAILURE TO ACHIEVE THIS THOROUGH AND COMPLETE INCORPORATION OR TO FOLLOW THE REQUIRED MINIMUM PLANT-BACK INTERVAL MAY RESULT IN CROP INJURY, STAND REDUCTION, AND/OR VIGOR REDUCTION OF THE PLANT-BACK CROP.** See specific fallow bed labeling regarding crop planting information for applications of OXEN herbicide made to a fallow bed or fallow field.

**WEEDS LISTED**

**Common Name**  
 Ageratum  
 Amaranth, Spiny  
 Balsamapple  
 Barnyardgrass (Watergrass)  
 Bedstraw, Catchweed  
 Bittercress, Lesser  
 Bluegrass, Annual  
 Buckwheat, Wild  
 Burclover  
 Buttercup, Smallflower  
 Buttonweed  
 Camphorweed  
 Canarygrass (Annual)  
 Carpetweed  
 Cheeseweed (Malva)  
 Clover, Red  
 Clover, White  
 Cocklebur, Common  
 Crabgrass, Large (Hairy)  
 Crotalaria  
 Croton, Tropic  
 Cudweed, Narrowleaf  
 Eveningprimrose, Cutleaf  
 Fiddleneck, Coast  
 Filaree, Broadleaf  
 Filaree, Redstem  
 Filaree, Whitestem  
 Fireweed (From Seed)  
 Flixweed  
 Foxtail, Giant  
 Foxtail, Green  
 Foxtail, Yellow  
 Geranium, Carolina  
 Goosegrass  
 Groundcherry, Cutleaf  
 Groundcherry, Wright  
 Groundsel, Common  
 Henbit  
 Horseweed (Marestail)  
 Jimsonweed  
 Johnsongrass, Seedling  
 Knotweed, Prostrate  
 Ladythumb (Smartweed)  
 Lambsquarters, Common  
 Lettuce, Prickly (China Lettuce)  
 Mallow, Little (Malva)  
 Mayweed (Dog Fennel)  
 Mile-A-Minute  
 Miner's Lettuce  
 Morningglory Species, Annual  
 Morningglory, Ivyleaf  
 Morningglory, Tall  
 Mustard, Black  
 Mustard, Blue (Purple Mustard)  
 Mustard, Common Yellow

**Scientific Name**  
*Ageratum conyzoides*  
*Amaranthus spinosus*  
*Momordica charantia*  
*Echinochloa crus-galli*  
*Galium aparine*  
*Cardamine oligosperma*  
*Poa annua*  
*Polygonum convolvulus*  
*Medicago hispida*  
*Ranunculus abortivus*  
*Borreria laevis*  
*Heterotheca subaxillaris*  
*Phalaris canariensis*  
*Mollugo verticillata*  
*Malva parviflora*  
*Trifolium pratense*  
*Trifolium repens*  
*Xanthium pensylvanicum*  
*Digitaria sanguinalis*  
*Crotalaria species*  
*Croton glandulosus*  
*Gnaphalium falcatum*  
*Oenothera laciniata*  
*Amsinckia intermedia*  
*Erodium botrys*  
*Erodium cicutarium*  
*Erodium moschatum*  
*Epilobium angustifolium*  
*Descurainia sophia*  
*Setaria faberi*  
*Setaria viridis*  
*Setaria lutescens*  
*Geranium carolinianum*  
*Eleusine indica*  
*Physalis angulata*  
*Physalis wrightii*  
*Senecio vulgaris*  
*Lamium amplexicaule*  
*Conyza canadensis*  
*Datura stramonium*  
*Sorghum halepense*  
*Polygonum aviculare*  
*Polygonum persicaria*  
*Chenopodium album*  
*Lactuca serriola*  
*Malva parviflora*  
*Anthemis cotula*  
*Polygonum perforatum*  
*Montia perfoliata*  
*Ipomoea species*  
*Ipomoea hederacea*  
*Ipomoea purpurea*  
*Brassica nigra*  
*Chorispora tenella*  
*Brassica campestris*

**Common Name**  
 Mustard, Hedge  
 Mustard, Tumble (Jim Hill Mustard)  
 Mustard, Wild  
 Nettle, Burning  
 Nightshade, American Black  
 Nightshade, Black  
 Nightshade, Hairy  
 Oats, Wild  
 Orach, Red  
 Oxalis (Bermuda Buttercup)  
 Panicum, Fall  
 Pepperweed, Virginia  
 Pepperweed, Yellowflower  
 Pigweed, Prostrate  
 Pigweed, Redroot  
 Pimpernel, Scarlet  
 Poinsettia, Wild  
 Puncturevine  
 Purslane, Common  
 Pusley, Florida  
 Ragweed, Common  
 Redmaids  
 Rocket, London  
 Ryegrass, Italian  
 Sage, Lanceleaf  
 Sandbur, Field  
 Sandspurry, Red  
 Sesbania, Hemp  
 Shepherdspurse  
 Sicklepod  
 Sida, Prickly (Tea Weed)  
 Signalgrass, Broadleaf  
 Smartweed, Pennsylvania  
 Sorrel, Red (From Seed)  
 Sowthistle, Annual  
 Speedwell, Birdseye  
 Spurge, Garden  
 Spurge, Prostrate  
 Spurge, Spotted  
 Spurry, Corn  
 Tansymustard  
 Thistle, Bull  
 Thistle, Russian  
 Velvetleaf  
 Witchgrass  
 Witchweed  
 Woodsorrel, Common Yellow

**Scientific Name**  
*Sisymbrium officinale*  
*Sisymbrium altissimum*  
*Brassica kaber*  
*Urtica urens*  
*Solanum nodiflorum*  
*Solanum nigrum*  
*Solanum sarachoides*  
*Avena fatua*  
*Atriplex rosea*  
*Oxalis pes-caprae*  
*Panicum dichotomiflorum*  
*Lepidium virginicum*  
*Lepidium perfoliatum*  
*Amaranthus blitoides*  
*Amaranthus retroflexus*  
*Anagallis arvensis*  
*Euphorbia heterophylla*  
*Tribulus terrestris*  
*Portulaca oleracea*  
*Richardia scabra*  
*Ambrosia artemisiifolia*  
*Calandrinia caulescens*  
*Sisymbrium irio*  
*Lolium multiflorum*  
*Salvia lanceolata*  
*Cenchrus incertus*  
*Spergularia rubra*  
*Sesbania exaltata*  
*Capsella bursa-pastoris*  
*Cassia obtusifolia*  
*Sida spinosa*  
*Brachiaria platyphylla*  
*Polygonum pensylvanicum*  
*Rumex acetosella*  
*Sonchus oleraceus*  
*Veronica persica*  
*Euphorbia hirta*  
*Euphorbia supina*  
*Euphorbia maculata*  
*Spergula arvensis*  
*Descurainia pinnata*  
*Cirsium vulgare*  
*Salsola kali*  
*Abutilon theophrasti*  
*Panicum capillare*  
*Striga asiatica*  
*Oxalis stricta*

**APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION**

Apply this product only through sprinkler (center pivot, continuous lateral move, side (wheel) roll, solid set, portable lateral, or low-volume (microsprinkler)), drip (trickle), or flood (basin) irrigation systems. Refer to the specific crop directions to determine which type of irrigation system to use. Do not apply this product through any other type of irrigation system.

Do not apply this product through any irrigation system unless the instructions for chemigation are followed. If application by chemigation is not specifically listed under the specific crop use instructions, OXEN herbicide may not be applied to that crop through an irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

**SPRINKLER CHEMIGATION (FOLIAR SPRAY USES)**

For sprinkler irrigation, sufficient water should be applied at the beginning of the irrigation period to insure uniform wetting of the plant and/or soil surfaces. For solid set or portable lateral sprinkler systems, meter OXEN herbicide at a continuous uniform rate during the middle one-third of the irrigation period to allow for uniform distribution to the vegetation and/or soil surface. Continue irrigation during the final one-third of the irrigation period to insure proper flushing of the irrigation system. For center pivot, continuous lateral move, side (wheel) roll sprinkler systems, meter OXEN herbicide at a continuous uniform rate during the entire irrigation period. During sprinkler irrigation, sufficient water should be applied to insure water penetration to a depth of two inches.

To apply a pesticide using sprinkler chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

### FLOOD (BASIN) CHEMIGATION (SOIL DRENCH USES)

OXEN herbicide should be continuously metered into the water during the entire irrigation period. Agitation in the pesticide supply tank is suggested. Best weed control results, from OXEN herbicide applied through flood (basin) irrigation systems, are obtained when a uniform distribution and flow of irrigation water is maintained over level land.

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain functional automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### DRIP (TRICKLE) CHEMIGATION (SOIL DRENCH USES)

Meter OXEN herbicide at a continuous uniform rate during the middle one-third of the irrigation period to allow for uniform distribution to the soil surface. For best results, OXEN herbicide should be uniformly positioned across the wetted area to help reduce the "ring effect" of weed escapes as other products begin to break down around the emitter. Continue irrigation during the final one-third of the irrigation period to insure proper flushing of the irrigation system.

To apply a pesticide using drip (trickle) chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pipe and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### CHEMIGATION CALIBRATION FOR LOW-VOLUME SPRINKLERS (MICROSPRINKLERS) AND DRIP (TRICKLE) IRRIGATION SYSTEMS

Calculation of use rate is based on wetted area around emitters-NOT on vine acres. To determine correct amount of OXEN herbicide, use the following formula:

1. Treated area per each emitter=A

$$A=3.14 \times (\text{radius} \times \text{radius})$$

Example: If the average distance from emitter to perimeter of wetted area measured at the soil surface is 13 inches, the

$$A=3.14 \times (13'' \times 13'')$$

$$A=3.14 \times (169'')$$

$$A=530.7 \text{ square inches}$$

2. The area in square feet wet in each acre=B

$$B= \frac{A \times \text{emitters/acre}}{144}$$

$$144$$

Example: If there are 300 emitters per acre, then

$$B= \frac{530.7 \times 300}{144} = B=1105.6 \text{ square feet wetted per acre}$$

$$144$$

3. The total area (in square feet) wet by your system=C

$$C=B \times \text{acres covered by system}$$

Example: If the system covers 20 acres, then

$$C=1105.6 \text{ square feet per acre} \times 20 \text{ Acres}$$

$$C=22,112 \text{ square feet wetted by system}$$

4. Amount of OXEN herbicide to inject=S

$$\text{Rate per treated acre of OXEN herbicide} = R$$

$$S= \frac{C}{43,560} \times R = \text{quarts of OXEN v}$$

$$43,560$$

Example: if the desired application rate per treated acre is 1 quart of OXEN herbicide, then

$$S= \frac{22,112}{43,560} \times 1.0 = S = 0.507 \text{ quarts of OXEN herbicide should be injected into system}$$

$$43,560$$

NOTE: Select the proper rate based on weed spectrum and length of control.

### CHEMIGATION CALIBRATION FOR FLOOD (BASIN) IRRIGATION SYSTEMS

1. Determine acreage covered by flood irrigation.
2. Determine time required to irrigate area.
3. Fill metering solution tank with water and adjust flow rate to use contents over the predetermined time interval required.
4. Determine the amount of OXEN herbicide required to treat area.
5. Add the recommended amount of OXEN herbicide and water (if necessary) to bring solution to the amount required to apply the proper rate for the time interval established during calibration.
6. Meter OXEN herbicide as recommended by label.

### CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

If the chemigation system is connected to a public water supply, the following conditions must also be met:

- Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from a point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Upon completion of herbicide application, remove scale, pesticide residues, and other foreign matter from the supply tank and entire injector system. Flush thoroughly with clean water.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**STORAGE:** Keep from freezing. Store above 32°F.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA regional office for guidance.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Ventilate area. Avoid breathing vapors. Use MSHA/NIOSH self-contained breathing apparatus or air-line respirator for large spills in confined areas. Dike the spill with inert material (sand, earth, etc.) and transfer the liquid or solid diking material to separate containers for recovery or disposal. Remove the contaminated clothing promptly and wash exposed skin areas with soap and water. Wash clothing before reuse. Keep spill out of all sewers and bodies of water. For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC — 1-800-424-9300.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**  
BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label,

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or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL, THIS PRODUCT IS SOLD AS IS TO THE EXTENT ALLOWED BY APPLICABLE LAW. LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL, BUYER OR USER MUST SEND, TO THE EXTENT REQUIRED BY APPLICABLE LAW, WRITTEN NOTICE OF SUCH CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, 7251 WEST 4TH STREET, GREELEY, CO 80634.

TO THE EXTENT ALLOWED BY APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT TO THE EXTENT ALLOWED BY APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

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