12/9/2003

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number: 72167-32 DEC 9 2003

Term of Issuance:

Conditional

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X Registration Reregistration

NOTICE OF PESTICIDE:

Name of Pesticide
Oxyfluorfen 2
Herbicide

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Nations Ag II, LLC 4680 Monticello Ave. #18i-174 Williamsburg, VA 23188

Note: Changes in labeling differing in substance from that accepted in commection with this registration must be submitted to and eccepted by the Peqistration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EUR registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Add the phrase "EPA Registration No. 72167-32" to the label before you release the product for shipment.

COMMENTS CONTINUED ON PAGE 2 OF THIS NOTICE OF REGISTRATION

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product under the enclosed stamped copy of the label constitutes acceptance of these conditions.

Enclosure

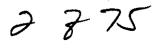
Joanne I. Miller Product Manager (23) Herbicide Branch Registration Division (7505C)

Signature of Approving Official:

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Date:

DEC 8 5003



- 2. Submit and/or cite all data required for the registration of this product when the Agency requires all registrants of similar products to submit data; and submit acceptable responses required for reregistration of this product under FIFRA, section 4.
- 3. Submit one (1) copy of the final printed labeling before you release this product for shipment.

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# NATIONS AG II, LLC OXYFLUORFEN 2 Herbicide

EPA Reg. No. 72167-

Active Ingredient	
oxyfluorfen: 2-chloro-1-(3-ethoxy-4-ni	trophenoxy)
4-(trifluoromethyl)	23%
Inert Ingredients	
Total	

Contains 2 pounds active ingredient per galion. Contains petroleum distillates

ACCEPTED with COMMENTS In EFA Letter Dated DEC 9 2003

Under the Federal Insecticide, Fundicide, and Referticide Act as attended, and Pesticide registered mater 22 Reg. No.

# 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.)

# Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to inside of label booklet for Precautionary Statements and Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read** CONDITIONS OF SALE AND WARRANTY at end of label booklet. If terms are unacceptable, return at once unopened.

# Shake Well Before Using

In case of emergency endangering health or the environment involving this product, call 1-800-308-5391. If you wish to obtain additional product information, call 1-800-979-8994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 72167-

EPA Est. 707-PA-01

Nations Ag II, LLC 2901-12 Rivendell Knoxville, TN 37922

Shake Well Before Using

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# **Precautionary Statements**

#### Hazards to Humans and Domestic Animals

# WARNING

Causes Substantial But Temporary Eye Injury • Causes Skin Irritation • Harmful If Swallowed Or Absorbed Through The Skin • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some Individuals

Do not get in eyes, on skin or on clothing. Wear goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing 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

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- · Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves (such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate)
- · 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.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standards (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 contaminated clothing and wash clothing before reuse.

#### **First Aid**

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**If swallowed:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.

Hot Line Number: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Call 1-800-308-5391 day or night, for emergency treatment information.

#### **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. Runoff may be hazardous to aquatic organisms in neighboring areas.

#### **Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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 evewear
- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves (such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate
- Chemical-resistant headgear for overhead exposure

#### 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 areas until sprays have dried.

#### Storage and Disposal:

Do not contaminated 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**

Plastic Containers: Triple rinse (or equivalent). 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.

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Metal Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Steps to be Taken In Case Material Is Released or Spilled: Ventilate area. Avoid breathing vapors. Use MSHA/NIOSH self-contained breathing apparatus or airline 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 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.

### **GENERAL USE INFORMATION**

Oxyfluorfen 2 herbicide may be applied for preemergence and postemergence weed control in labeled crops as indicted in this label. All use directions as provided in the General Use Information section and crop-specific sections of this label, must be followed.

# GENERAL USE RESTRICTIONS: THE FOLLOWING USE RESTRICTIONS APPLY TO ALL REGISTERED USES OF THIS PRODUCT:

(NOTE: SEE DIRECTIONS FOR USE FOR INDIVIDUAL CROPS FOR CROP-SPECIFIC USE RESTRICTIONS.)

- Read and observe all label directions before using. When tank mixing, read and carefully follow all
  applicable use directions, precautions, and limitations on the respective product 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.
- Do not use any plants treated with Oxyfluorfen 2 for feed or forage.
- Do not feed or allow animals to graze on any areas treated with Oxyfluorfen 2.
- Oxyfluorfen 2 should be applied only by ground application equipment except as otherwise allowed or directed in specific use directions.
- Do not apply when weather conditions favor drift. Avoid drift to all non-target areas. Oxyfluorfen 2 is phytotoxic to plant foliage.
- Thoroughly flush spray equipment (tank, pump, hoses and boom) with clean water before and after
  each use. Residual Oxyfluorfen 2 remaining in spray equipment may damage other crops. To assist
  removal of Oxyfluorfen 2 residues in spray equipment, Latron AG-98 or Latron CS-7 may be added
  at the rate of 1 quart per 100 gallons of water during flushing.
- Use Oxyfluorfen 2 only for recommended purposes and at recommended rates.
- Do not treat ditch banks or waterways with Oxyfluorfen 2.

#### **ROTATION CROP RESTRICTIONS**

Do not rotate to small-grain crops (includes barley, buckwheat, com, pearl millet, proso millet, oats, popcom, rice, rye, sorghum, triticale, wheat, wild rice) within 10 months following an Oxyfluorfen treatment.

- Do not direct seed any crops, other than Oxyfluorfen 2-labeled crops, within 60 days following a treatment with Oxyfluorfen 2.
- Do not transplant seedling crops, other than Oxyfluorfen 2-labeled crops, within 30 days following treatment with Oxyfluorfen 2. 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 Oxyfluorfen 2 that are made to a fallow bed or fallow field.

**WEEDS LISTED 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 LADYSTHUMB (SMARTWEED) LAMBSQUARTERS, COMMON LETTUCE, PRICKLY (CHINA LETTUCE) MALLOW, LITTLE (MALVA) MAYWEED (DOG FENNEL) MINERSLETTUCE MORNINGGLORY SPECIES. ANNUAL MORNINGGLORY, IVYLEAF

MORNINGGLORY, TALL

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Ageratum conyzoides Amaranthus spinosus Momordica charantia Echinochloa crus-galli

Galium aparine Cardamine oligosperma Poa annua Polygonum convolvulus Medicago hispida Ranunculus aborvitus 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 faber Setaria, viridisi Setaria, lutescens Geranium carolinianum Eleusine indica Physalis angulata Physalis wrightii Senecio vulgaris Lamium amplexicaule Conyza canadensis Datura stramonium Sorghum halepense Polygonum aviculare Polygonum persicarla Chenopodium album Lactuca serriola

Malva parviflora Anthemis cotula Montia perfoliata Ipomoea species

Ipomoea hederacea Ipomoea purpurea MUSTARD, BLACK MUSTARD, BLUE (PURPLE MUSTARD) MUSTARD, COMMON YELLOW 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 SANDPUR, FIELD SANDSPURRY, RED SESBANIA, HEMP SHEPHERDSPURSE

SICKLEPOD

SIDA, PRICKLY (TEAWEED) 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

Brassica nigra Chorispora tenella

Brassica campestris Sisymbrium officinale Sisymbrium altissimum

Brassica kaber Urtica urens

Solanum americanum Solanum nigrum Solanum sarrachoides

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 irlo Lolium multiflorum Salvia reflexa 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

#### 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 under the specific crop use instructions, Oxyfluorfen 2 herbicide may not be applied to that crop through an irrigation system.

Apply this product only through sprinkler (solid set, portable lateral, or low-volume (microsprinkler)), drip (trickle), or flood (basin) irrigation systems. Refer to use directions for specific crops for instructions as to which type of irrigation system may be used. Do not apply this product through any other type of 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)

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.
- 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 imigation 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.

For sprinkler irrigation, sufficient water should be applied at the beginning of the irrigation period to ensure uniform wetting of the plant and/or soil surfaces. Meter Oxyfluorfen 2 at a continuous uniform rate during the middle 1/3 of the irrigation period to allow for uniform distribution to the vegetation and/or soil surface. Continue irrigation during the final 1/3 of the irrigation period to ensure proper flushing of the irrigation system. During sprinkler irrigation, sufficient water should be applied to ensure water penetration to a depth of two inches.

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

Oxyfluorfen 2 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 Oxyfluorfen 2 applied through flood (basin) irrigation systems are obtained when a uniform distribution and flow of irrigation water is

maintained over level land.

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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 calve, vacuum relief valve, and low-pressure drain appropriately located on the imigation 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 inigation 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 Oxyfluorfen 2 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, Oxyfluorfen 2 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 ensure 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 imagation 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 grove acres. To determine correct amount of Oxyfluorfen 2, use the following formula:

 Treated area per each emitter = A A = 3.14 x (radius x radius)

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

A = 3.14 X (13" x 13")

 $A = 3.14 \times (169")$ 

A = 530.7 square inches

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

B = AX emitters/acre

Example: If there are 300 emitters per acre, then

B = <u>530.7 X 300</u> = B = 1105.6 square feet wetted per acre

The total area (in square feet) wet by your system = C
 C = B X acres covered by system

Example: If the system covers 20 acres, then

C = 1105.6 square feet per acre x 20 acres

C = 22,112 square feet wetted by system

4. Amount of Oxyfluorfen 2 to inject = S

Rate per treated acre of Oxyfluorfen 2 = R

S = CXR = quarts of Oxyfluorfen 243,560

Example: If the desired application rate per treated acre is 1 quart of Oxyfluorfen 2, then

 $S = 22.112 \times 1.0 = S = 0.507$  quarts of Oxyfluorfen 2 should be injected into system. 43.560

**NOTE:** Select the proper rate based on weed spectrum and desired length of control (See RATE RANGES section below).

#### 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 inigation 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.

#### **CULTURAL CONSIDERATIONS**

In order for Oxyfluorfen 2 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 Oxyfluorfen 2 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 Oxyfluorfen 2. Cutting water furrows or cultivations that mix untreated soil into treated areas will also reduce the effectiveness of the treatment.

#### **RATE RANGES**

Select proper application rates based on soil conditions, weed spectrum and desired period of residual weed control.

Preemergence Application: Where rate ranges are given, use the lower rate in the rate range on coarse texture soils with less than 1% organic matter. Use higher rates in the rate range on medium to fine texture soils, soils containing greater than 1% organic matter, or where a longer period of residual weed control is desired.

Postemergence Application: Where a rate range is given, use higher rate in rate range for heavy weed infestations, weeds in advanced stages of growth or where a longer period of residual weed control is desired.

#### **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 Oxyfluorfen 2 (except onions) where postemergence weed control is desired, add 2 to 4 pints of Latron AG-98\* nonionic surfactant (or comparable 80% active nonionic surfactant cleared for application to growing crops) per each 100 gallons of spray. The addition of 4 pints of Latron AG-98 per 100 gallons of spray is recommended to enhance postemergence activity when hard water (greater than 600 ppm) is used as carrier. Maintain agitation until spraying is completed.

Spray equipment should be calibrated carefully before each use. Dosages listed on this label are for broadcast application. For banded application, the amount of Oxyfluorfen 2 used per acre should be reduced according to the following formula:

<u>Band Width (in inches)</u> X Rate per = Amount Needed per Acre Row Width (in inches) = Broadcast Acre = For Banded Application

#### **Tank Mixing Precautions:**

- Read and carefully follow all applicable use directions, precautions, and limitations on the respective
  product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations
  must apply.
- Do not exceed recommended application rates. Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.

Tank Mix Compatibility Testing: A jar test is recommended prior to tank mixing to ensure compatibility of this product and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture

for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

### **CROP-SPECIFIC USE INFORMATION**

# **ARTICHOKES (GLOBE)**

#### POST-DIRECTED SPRAY

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is an effective herbicide for posternergence and preemergence control of listed broadleaf weeds in artichokes. Oxyfluorfen 2 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. Overthe-top applications may exhibit severe injury to the foliage and flower bud and are not recommended.

#### **DOSAGE**

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Oxyfluorfen 2 is recommended as a post-directed application at 4 to 8 pints (1.0 to 2.0 ib active) per acre. Optimum control is achieved when two applications of Oxyfluorfen 2 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 lb active) of Oxyfluorfen 2 is applied to susceptible weed seedlings (up to 8-leaf stage). Do not apply more than 8 pints (2.0 lb active) of Oxyfluorfen 2 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 SOWTHISTLE, ANNUAL

MUSTARD, COMMON YELLOW

**NETTLE, BURNING** 

#### WEEDS CONTROLLED PREEMERGENCE

CHEESEWEED (MALVA)
GROUNDSEL, COMMON

<sup>†</sup>OXALIS (BERMUDA BUTTERCUP)

GROUNDSEL, COMMON LAMBSQUARTERS, COMMON

SHEPHERDSPURSE SOWTHISTLE. ANNUAL

MUSTARD, COMMON YELLOW

### TIMING AND METHOD OF APPLICATION

#### Treatments should be made after completion of the ditching operation.

Oxyfluorfen 2 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.

#### **ARTICHOKES (GLOBE)**

#### SPECIFIC USE RESTRICTIONS

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

 Do not apply more than 8 pints (2.0 lb active) of Oxyfluorfen 2 per treated acre per season as a result of a single application or multiple applications.

<sup>†</sup> Suppression

14 75

Do not apply Oxyfluorfen 2 within 5 days of harvest.

Avoid direct spray or drift contact of Oxyfluorfen 2 with artichoke flowers or buds as severe injury
may result.

Do not apply Oxyfluorfen 2 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**

Oxyfluorfen 2 is a herbicide for preemergence control of listed 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 Oxyfluorfen 2 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 Oxyfluorfen 2 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

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Oxyfluorfen 2 is recommended for use at 1 to 2 pints (0.25 to 0.5 lb active) per broadcast acre. Use the lower rate in the rate range for preemergence weed control on coarse texture soils with less than 1% organic matter. Use the highest rate in the rate range for preemergence weed control on medium to fine texture soils or soils containing greater than 1% organic matter.

Oxyfluorfen 2 will assist in early season annual grass control. However, Oxyfluorfen 2 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 Oxyfluorfen 2 is applied to a field that has had an acetanilide herbicide (Dual Magnum \* Herbicide, Lasso\* Herbicide, or Ramrod\* Herbicide) application during the current growing season, therefore, it is not recommended.

WEEDS CONTROLLED <sup>†</sup>

CARPETWEED
PIGWEED, REDROOT

PURSLANE, COMMON SMARTWEED, PENNSYLVANIA

Oxyfluorfen 2 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**

Oxyfluorfen 2 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 Oxyfluorfen 2 remaining in spray equipment may damage other crops.

<sup>&</sup>lt;sup>†</sup>Applications of Oxyfluorfen 2 to muck soils may result in partial control or suppression of the weeds listed.

AVOID DRIFT TO ALL OTHER CROPS AND NON-TARGET AREAS. DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT. OXYFLUORFEN 2 IS PHYTOTOXIC TO PLANT FOLIAGE.

# BROCCOLI/CABBAGE/CAULIFLOWER SPECIFIC USE RESTRICTIONS

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

- Do not apply more than 2 pints (0.5 lb active) of Oxyfluorfen 2 per treated acre per season.
- Do not apply Oxyfluorfen 2 preemergence to direct-seeded broccoli, cabbage or cauliflower.
- Do not apply Oxyfluorfen 2 post-transplant or postemergence (over the top) to broccoli, cabbage or cauliflower.
- For field use only. Do not apply Oxyfluorfen 2 in an enclosed greenhouse structure as injury to plant foliage may result.

# **CACAO**

### **GENERAL INFORMATION**

Oxyfluorfen 2 is effective as a preemergence herbicide when used alone for the control of listed annual broadleaf weeds in bearing and nonbearing 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 Oxyfluorfen 2 may be decreased. Seedling weeds are controlled as they come in contact with soil-applied herbicide during emergence.

#### Oxyfluorfen 2 USED ALONE DOSAGE

Oxyfluorfen 2 is recommended for preemergence and postemergence control of susceptible weeds at 2 to 8 pints (0.5 to 2.0 lb 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 Oxyfluorfen 2 used per acre should be reduced according to the following formula:

Band Width (in inches) X Row Width (in inches)

Rate per Broadcast Acre Amount Needed per Acre for Banded Application

#### WEEDS CONTROLLED POSTEMERGENCE

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

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PURSLANE, COMMON

SPURGE, GARDEN

#### WEEDS CONTROLLED PREEMERGENCE

Apply 2 to 8 pints (0.5 to 2.0 lb active) of Oxyfluorfen 2 per broadcast acre.

AGERATUM BUTTONWEED CROTALARIA PURSLANE, COMMON SPURGE, GARDEN

#### 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 practices). 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 in 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. Oxyfluorfen 2 should be directed to the soil and the base of the tree. Use of a low pressure sprayer equipped with a breakaway boom and a 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 beginning of this label.

- Do not apply more than 8 pints (2.0 lb active) per broadcast acre of Oxyfluorfen 2 in a single application or 24 pints (6.0 lb active) per broadcast acre per year.
- Do not apply Oxyfluorfen 2 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)

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

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is effective as a preemergence and/or postemergence herbicide when used alone or in recommended tank mix combinations, for the control of listed annual broadleaf weeds in nonbearing citrus plantings. Oxyfluorfen 2 may be applied to newly planted trees or to young trees that will not bear fruit within one year.

The most effective posternergence weed control is achieved when Oxyfluorfen 2 is applied to seedling weeds at the recommended growth stage. For broader spectrum posternergence control of grass and broadleaf weeds, a tank mix of Oxyfluorfen 2 with paraquat (Gramoxone & Herbicide) or glyphosate (Glyphomax\* Herbicide) can be used.

For residual grass control in citrus, a tank mixture of Oxyfluorfen 2 with Devrinol® Herbicide, simazine, Solicam® Herbicide or Surflan\*. Herbicide can be used. Contact herbicides such as paraquat (Gramoxone) or glyphosate (Glyphomax) may also be added to the tank mixture. Check individual product labels to determine suitability and use rates for various crops.

#### **OXYFLUORFEN 2 USED ALONE**

# GEOGRAPHIC USE DIRECTIONS ARIZONA AND CALIFORNIA

#### **DOSAGE**

Oxyfluorfen 2 is recommended for posternergence control at 2 to 8 pints (0.5 to 2.0 lb active) per broadcast acre. For preemergence control of susceptible weeds, use 8 pints (2.0 lb active) per broadcast acre.

WEEDS CONTROLLED POSTEMERGENCE (weeds up to 4 inches high) - Apply 2 to 8 pints (0.5 to 2.0 lb active) of Oxyfluorfen 2 per broadcast acre. Applications to weeds beyond this 4-inch stage may result in partial control.

CHEESEWEED (MALVA) FIDDLENECK, COAST †FILAREE, BROADLEAF † FILAREE, REDSTEM † FILAREE, WHITESTEM

GROUNDSEL. COMMON

**MINERSLETTUCE** NETTLE, BURNING PIGWEED, REDROOT

**REDMAIDS** 

**SHEPHERDSPURSE** SOWTHISTLE, ANNUAL

**HENBIT** 

WEEDS CONTROLLED PREEMERGENCE - Apply 5 to 8 pints (1.25 to 2.0 lb active) of Oxyfluorfen 2 per broadcast acre.

BURCLOVER CHEESEWEED (MALVA) FIDDLENECK, COAST FILAREE, BROADLEAF FILAREE, REDSTEM FILAREE. WHITESTEM

LETTUCE, PRICKLY PIGWEED, REDROOT PURSLANE, COMMON REDMAIDS

GROUNDSEL, COMMON

ROCKET, LONDON **SHEPHERDSPURSE** SOWTHISTLE, ANNUAL

**HENBIT** 

SPURGE, PROSTRATE SPURGE, SPOTTED

KNOTWEED, PROSTRATE LAMBSQUARTERS, COMMON

#### FLORIDA, LOUISIANA AND TEXAS

#### DOSAGE

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

WEEDS CONTROLLED POSTEMERGENCE - Apply 2 to 8 pints (0.5 to 2.0 lb active) of Oxyfluorfen 2 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 lb 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 TCUDWEED, NARROWLEAF THEVENINGPRIMROSE, CUTLEAF **GROUNDCHERRY. CUTLEAF** GROUNDCHERRY, WRIGHT LAMBSQUARTERS, COMMON

PEPPERWEED, VIRGINIA PIGWEED, REDROOT POINSETTIA, WILD **PURSLANE, COMMON PUSLEY, FLORIDA** 

MORNINGGLORY, ANNUAL

SIDA, PRICKLY (TEAWEED) SMARTWEED, PENNSYLVANIA

NIGHTSHADE, AMERICAN BLACK

SOWTHISTLE, ANNUAL

NIGHTSHADE, BLACK

<sup>1</sup> Maximum 0,5-inch diameter.

<sup>&</sup>lt;sup>†</sup> Oxyfluorfen 2 at the 8-pint rate (2.0 lb 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.

<sup>&</sup>lt;sup>11</sup> Highest rate and/or multiple applications may be required for acceptable control. Do not apply more than 16 pints (4.0 lb active) per broadcast acre during any 12-month period as a result of multiple applications.

18 775

WEEDS CONTROLLED PREEMERGENCE - Apply 8 pints (2.0 lb active) of Oxyfluorfen 2 per broadcast acre.

CUDWEED, NARROWLEAF

TEVENINGPRIMROSE, CUTLEAF
GROUNDCHERRY, CUTLEAF
LAMBSQUARTERS, COMMON
NIGHTSHADE, AMERICAN BLACK
NIGHTSHADE, BLACK
PEPPERWEED, VIRGINIA
PIGWEED, REDROOT

POINSETTIA, WILD
PUSLEY, FLORIDA
SIDA, PRICKLY (TEAWEED)
SMARTWEED, PENNSYLVANIA
SOWTHISTLE, ANNUAL
SPURGE, PROSTRATE
SPURGE, SPOTTED

#### ALL STATES - ARIZONA, CALIFORNIA, FLORIDA, LOUISIANA AND TEXAS

#### TIMING AND METHOD OF APPLICATION

Oxyfluorfen 2 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.

#### SPRAY VOLUME

#### Weed Stage

(Gallons of Water Per Acre)

Preemergence
Postemergence up to 4-inch or 4-leaf stage

40 or more 40 or more

Exceeding 4-inch or 4-leaf stage

100 or more

#### **TANK MIXES WITH OXYFLUORFEN 2**

**IMPORTANT:** Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mix, the most restrictive situations must apply.

#### DOSAGE

For preemergence control of susceptible grass and broadleaf weeds in citrus plantings, a tank mixture of Oxyfluorfen 2 with Devrinol, simazine, Solicam or Surflan 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 of paraquat (Gramoxone) or glyphosate (Glyphomax) with Oxyfluorfen 2 or combinations of Oxyfluorfen 2 plus Devrinol, simazine, Solicam or Surflan 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 Oxyfluorfen 2 used alone, control of susceptible weeds listed on the respective labels for the following products is also obtained:

Devrinol paraquat (Gramoxone) glyphosate (Glyphomax)

simazine <sup>†</sup> Solicam Surfian

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

<sup>&</sup>lt;sup>†</sup> In addition, provides preemergence control of horseweed (marestail).

19 275

# CITRUS (NONBEARING) SPECIFIC USE RESTRICTIONS

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

Apply Oxyfluorfen 2 only to nonbearing citrus trees.

- Do not apply more than 8 pints of Oxyfluorfen 2 (2.0 lb active) per broadcast acre in a single application or more than 16 pints (4.0 lb active) per broadcast acre during any 12-month period as a result of multiple applications.
- Oxyfluorfen 2 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 sprays contact on the citrus foliage.

# **CLARY SAGE**

#### FOR USE ONLY IN NORTH CAROLINA

#### **GENERAL INFORMATION**

For control of henbit (Lamium amplexicaule) and other annual broadleaf weeds (see Weeds Listed table in the General Use Information section) in clary sage (Salvia sclarea) grown and utilized in the essence industry. 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 of growth. Additional applications may be required to control subsequent weed flushes through the spring season. Clary sage may respond to the topical application of this product with some marginal leaf burn, but recovery is rapid. After treatment, henbit will stop growing and slowly die.

#### DOSAGE

Oxyfluorfen 2 should be applied at the rate of 0.5 to 1 pint per acre (0.12 to 0.25 lb active) in 20 to 50 gallons of water per acre. Apply at 20 to 40 psi.

# **COFFEE**

# BEARING AND NONBEARING COFFEE IN HAWAII GENERAL INFORMATION

Oxyfluorfen 2 is effective as a preemergence herbicide when used alone for the control of listed annual broadleaf weeds in bearing and nonbearing coffee plantings. For broader spectrum postemergence control of grass and broadleaf weeds, a tank mixture of either paraquat (Gramoxone) or glyphosate (Glyphomax) with Oxyfluorfen 2 can be applied to seedling weeds. Check individual product labels to determine suitability and use rates for crop.

# OXYFLUORFEN 2 USED ALONE DOSAGE

For preemergence control of susceptible weeds, Oxyfluorfen 2 is recommended at 2 to 8 pints (0.5 to 2.0 lb 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. Oxyfluorfen 2 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 Oxyfluorfen 2 used per acre should be reduced according to the following formula:

Band Width (in inches) X

Rate per

Amount Needed per Acre for Banded Application

Row Width (in inches)

Broadcast Acre

#### WEEDS CONTROLLED POSTEMERGENCE

Apply 2 to 8 pints (0.5 to 2.0 lb active) of Oxyfluorfen 2 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 lb active) of Oxyfluorfen 2 per broadcast acre.

AGERATUM BUTTONWEED CROTALARIA PURSLANE, COMMON SPURGE, GARDEN

#### 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 in 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. Oxyfluorfen 2 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 OXYFLUORFEN 2**

**IMPORTANT:** Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

For postemergence control of susceptible grass and broadleaf weeds in coffee plantings, a tank mixture of Oxyfluorfen 2 with either glyphosate (Glyphomax) or paraquat (Gramoxone) 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 Oxyfluorfen 2 used alone, control of susceptible weeds listed on the respective labels for the following products is also obtained.

paraquat (Gramoxone)

glyphosate (Glyphomax)

#### COFFEE

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#### **SPECIFIC USE RESTRICTIONS**

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the beginning 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.
- Oxyfluorfen 2 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.

- Oxyfluorfen 2 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 lb active) per broadcast acre of Oxyfluorfen 2 in a single application or 24 pints (6.0 lb active) per broadcast acre per year.
- Do not apply Oxyfluorfen 2 within one (1) day of harvesting.
- Applications of Oxyfluorfen 2 during periods of rapid new foliage growth may cause injury.

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

Oxyfluorfen 2 is effective as a preemergence and/or postemergence herbicide for the control of listed annual grass and broadleaf weeds in conifer seedbeds, transplant and container stock, and in selected field-grown deciduous trees. Preemergence weed 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 Oxyfluorfen 2 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 Oxyfluorfen 2 is applied to seedling weeds less than 4 inches in height.

Occasionally after the use of Oxyfluorfen 2, 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 Oxyfluorfen 2. 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 Oxyfluorfen 2 is applied preemergence or postemergence at recommended dosages and weed stages, the following grasses and broadleaf weeds are controlled.

MUSTARD, BLUE

<sup>T</sup>BARNYARDGRASS BEDSTRAW, CATCHWEED BITTERCRESS, LESSER <sup>1</sup> BLUEGRASS, ANNUAL BUCKWHEAT, WILD BURCLOVER CARPETWEED CLOVER, RED CLOVER, WHITE COCKLEBUR, COMMON CRABGRASS, LARGE TFIDDLENECK, COAST FILAREE, BROADLEAF FILAREE, REDSTEM FIREWEED (FROM SEED) **FLIXWEED** TFOXTAIL, GIANT <sup>†</sup> GOOSEGRASS GROUNDCHERRY, CUTLEAF GROUNDCHERRY, WRIGHT

GROUNDSEL, COMMON

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 <sup>T</sup>SHEPHERDSPURSE SIDA, PRICKLY SMARTWEED, PENNSYLVANIA SORREL, RED (FROM SEED) SOWTHISTLE, ANNUAL

HENBIT
JIMSONWEED

KNOTWEED, PROSTRATE

LADYSTHUMB LAMBSQUARTERS, COMMON

LETTUCE, PRICKLY MALLOW, LITTLE

MAYWEED MINERSLETTUCE

TMORNINGGLORY, IVYLEAF
TMORNINGGLORY, TALL

\*\*SPURGE, SPOTTED
SPURRY, CORN
TANSYMUSTARD
\*\*THISTLE, BULL
THISTLE, RUSSIAN
VELVETLEAF

SPEEDWELL, BIRDSEYE TO SPURGE, PROSTRATE

VELVETLEAF WITCHGRASS

\*\* WOODSORREL, YELLOW

<sup>1</sup> Highest rate and/or multiple applications may be required for acceptable control.

The Preememence control only.

Oxyfluorfen 2 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/100 gallons of spray solution) of Latron AG-98 or comparable 80% active nonionic surfactant, cleared for application on growing crops, enhances the Oxyfluorfen 2 activity on emerged weeds. When determining an appropriate use rate where a range of rates are 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, Oxyfluorfen 2 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 Oxyfluorfen 2. Oxyfluorfen 2 will provide both postemergence and residual preemergence control of many broadleaf weeds and annual grass species.

#### **CONIFER SPECIES**

Oxyfluorfen 2 may be applied to conifer seedbeds of species:

**DOUGLAS FIR** 

Pseudotsuga menziesii

FIR

FRASER GRAND

Abies fraseri Abies grandis Abies procera

NOBLE HEMLOCK

EASTERN HEMLOCK Tsuga canadensis

#### PINE

AUSTRIAN Pinus nigra **EASTERN WHITE** Pinus strobus HIMALAYAN Pinus wallichiana JACK Pinus banksiana LOBLOLLY Pinus taeda LODGEPOLE Pinus contorta LONGLEAF Pinus palustris MONTEREY Pinus radiata **MUGHO** Pinus mugo PONDEROSA Pinus ponderosa SCOTCH Pinus sylvestris SHORTLEAF Pinus echinata SLASH Pinus elliottii VIRGINIA Pinus virginiana

#### SPRUCE

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BLUE Picea pungens

DWARF ALBERTA Picea glauca Conica

NORWAY Picea abies

SITKA Picea sitchensis

#### PREEMERGENCE DOSAGE

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

#### TIMING AND METHOD OF APPLICATION

Oxyfluorfen 2 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 1/2 to 3/4 inch of sprinkler irrigation.

#### POSTEMERGENCE DOSAGE

Apply 1 to 2 pints (0.25 lb. to 0.5 lb. active) of Oxyfluorfen 2 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). Oxyfluorfen 2 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 Oxyfluorfen 2 is to be applied via sprinkler irrigation (center pivot), follow the method of application directions listed for sprinkler irrigation. Additionally, for application using center pivot irrigation systems, apply the specified dosage of Oxyfluorfen 2 per acre as described above and meter Oxyfluorfen 2 at a continuous uniform rate during the entire irrigation period to allow for uniform distribution to the vegetation and soil surface. When applying this product using a sprinkler irrigation system, follow all directions given in the CHEMIGATION section of this label.

# 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 Oxyfluorfen 2. Applied postemergence, Oxyfluorfen 2 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 Oxyfluorfen 2.

**ARBORVITAE** 

Thuja occidentalis

Thuja orientalis

**JUNIPER** 

Juniperus chinensis Juniperus horizontalis

Juniperus procumbens

Juniperus sabina Juniperus scopulorum **RED CEDAR** 

Juniperus virginiana

**WESTERN HEMLOCK** 

Tsuga heterophylla

YEW

Taxus species

#### DOSAGE

For preemergence or postemergence weed control apply 4 to 8 pints (1.0 lb. to 2.0 lb active) of Oxyfluorfen 2 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/100 gals. of spray solution) of Latron AG-98 or comparable 80% active nonionic surfactant, cleared for application to growing crops, enhances Oxyfluorfen 2 activity on emerged weeds. Oxyfluorfen 2 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 Oxyfluorfen 2 used alone, tank mixes with other preemergence or postemergence herbicides registered for this use, may provide a broader spectrum of weed control. Oxyfluorfen 2 may be tank mixed with products containing the following active ingredients registered for use in conifer plantings:

glyphosate napropamide oryzalin pendimethalin prodiamine pronamide sethoxydim

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.

#### **CONIFER - SPECIFIC USE RESTRICTIONS**

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

- Do not apply more than 8 pints (2.0 lb 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 Oxyfluorfen 2 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 Oxyfluorfen 2 only to healthy conifer stock. Do not apply Oxyfluorfen 2 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 Oxyfluorfen 2.

# **SELECTED FIELD-GROWN DECIDUOUS TREES**

Many field-grown deciduous trees are tolerant to applications of Oxyfluorfen 2 directed to the soil and base of the plant. Oxyfluorfen 2 will provide both preemergence and postemergence control of many broadleaf weeds and grasses.

DECIDUOUS TREE SPECIES	
T Almond	Prunus spp.
T Apple	Malus X domestica
T Apricot	Prunus spp.
Ash, Green	Fraxinus pennsylvanica
Ash, White	Fraxinus americana
Birch, River	Betula nigra
T Cherry	Prunus spp.
TT Chestnut	Castanea spp.
<sup>™</sup> Crabapple	Malus spp.
Dogwood	Cornus florida
Eucalyptus	Eucalyptus viminalis
	Eucalyptus pulverulenta
	Eucalyptus camaldulensis
TT Filbert	Corylus spp.
Lilac	Syringa vulgaris
Locust, Black	Robinia pseudoacacia
∐Maple, Black	Acer nigrum
∐ Maple, Red	Acer rubrum
<sup>™</sup> Maple, Sugar	Acer saccharum
Myrtle, Crepe	Lagerstroemia indica
** Nectarine	Prunus spp.
TT Nut, Hickory	Carya sp.
™ Nut, Macadamia	Macadamia temifola
Oak, Chestnut	Quercus prinus.

Oak, Pin	Quercus palustris
Oak, Red	Quercus. rubra
Oak , Water	Quercus nigra
Oak, Willow	Quercus phelios
Olive, Russian	Elaeagnus angustifolia
Poplar	Populus spp.
Poplar, Tulip	Liriodendron tulipifera
IT Peach	Prunus persica
T Pear	Pyrus spp.
T Pecan	Carya spp.
T Pistachio	Pistacia vera
<sup>TT</sup> Plum	Prunus spp.
T Prune	Prunus spp.
Redbud	Cercis canadensis
Sweetgum	Liquidamber styraciflua
Sycamore	Platanus occidentalis
<sup>17</sup> Walnut, Black	Jugians nigra

<sup>&</sup>lt;sup>†</sup> Do not apply to maple trees used for production of maple sap or maple syrup.

#### DOSAGE

Apply 2 to 8 pints (0.5 lb. to 2.0 lb active) of Oxyfluorfen 2 per acre as a spray onto to the soil area surrounding deciduous plants for preemergence or early postermergence 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 Oxyfluorfen 2 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.

Pounds Active/Acre	Pints Oxyfluorfen 2/Acre	Fluid Ounces (milliliters) of Oxyfluorfen 2 in one gallon of spray mix to treat 400 Sq. Ft	Fluid Ounces (milliliters) of Oxyfluorfen 2 in one quart of spray mix to treat 100 Sq. Ft
2	8	1.2	0.3
		(35)	(9)

#### **TIMING**

Oxyfluorfen 2 may 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 Oxyfluorfen 2 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 of or green bark of deciduous trees.

Treefruit/Nut/Vine section of this label for use directions.

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Oxyfluorfen 2 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 non-domant 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 Oxyfluorfen 2, which may injure the leaves of some deciduous trees.

#### **METHOD OF APPLICATION**

Oxyfluorfen 2 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 posternergence activity of Oxyfluorfen 2. Use a low-pressure (20 to 40 psi.) sprayer. The use of spray shields that reduce exposure of foliage and bark to Oxyfluorfen 2 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 Oxyfluorfen 2 used alone, tank mixes with other preemergence or postemergence herbicides registered for this use, may provide a broader spectrum of weed control. Oxyfluorfen 2 may be tank mixed with products containing the following active ingredients registered for use in conifer plantings:

glyphosate napropamide oryzalin pendimethalin prodiamine pronamide sethoxydim

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.

#### FIELD-GROWN DECIDUOUS TREES-SPECIFIC USE RESTRICTIONS

- DO NOT apply more than 8 pints (2.0 lb active) of this product per broadcast acre per year.
- The use directions described here for field-grown deciduous trees do not apply for bearing treefruit, nut and vine crops. For selected bearing treefruit, nut and vine crops, refer to Treefruit/Nut/Vine section of this label's 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 non-dormant 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.
   Oxyfluorfen 2 is phytotoxic to plant foliage.

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- DO NOT apply Oxyfluorfen 2 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 Oxyfluorfen 2.

### **CORN**

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

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is a herbicide for the control of witchweed (Striga asiatica), and works both preemergence and postemergence against witchweed.

#### DOSAGE

Use 2 to 3 pints of Oxyfluorfen 2 (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 active) 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. Applications should be made in 10 to 30 gallons of water per acre. Use Latron AG-98 spreader in the spray mixture at the rate of 0.25% by water volume or 1 quart in 100 gallons of spray mix.

#### TIMING AND METHOD OF APPLICATION

Fields in the witchweed infested area selected for treatment with Oxyfluorfen 2 should be examined during the early part of the growing season to determine uniformity of com stand and grass 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. Com 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 Oxyfluorfen 2 spray at the base of the com plant and uniformly over the entire row surface. Do not spray over the top of the com, as this may result in severe com 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 com stalk and any leaves in this zone.

#### **CORN - SPECIFIC USE RESTRICTIONS**

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

- Do not apply more than 5 pints of Oxyfluorfen 2 (1.25 lb active) per acre to a com 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**

Oxyfluorfen 2 is a 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

Oxyfluorfen 2 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 Oxyfluorfen 2 (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 Oxyfluorfen 2 (0.25 lb active) per acre<sup>1</sup> are applied. See MIXING DIRECTIONS for surfactant recommendation. Weeds should be in the seedling stage, young and actively growing. Do not count cotyledon leaves.

Band Width (in inches) Row Width (in inches)

Rate per **Broadcast Acre** 

Amount Needed per Acre for Banded Application

#### WEEDS CONTROLLED POSTEMERGENCE

X

When Oxvfluorfen 2 is applied as a post-directed application at the recommended weed stage and dosage in cotton, the following weeds are controlled:

COCKLEBUR, COMMON CROTON, TROPIC GROUNDCHERRY, CUTLEAF GROUNDCHERRY, WRIGHT **JIMSONWEED** LAMBSQUARTERS, COMMON MORNINGGLORY, ANNUAL (UP TO 6 LEAF) SIDA, PRICKLY (TEAWEED) NIGHTSHADE, AMERICAN BLACK

NIGHTSHADE, BLACK

NIGHTSHADE, HAIRY PIGWEED. REDROOT TPOINSETTIA, WILD PURSLANE, COMMON SESBANIA. HEMP <sup>††</sup> SICKLEPOD

SMARTWEED, PENNSYLVANIA

<sup>†</sup> Multiple applications may be required for acceptable control.

#### **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. Oxyfluorfen 2 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. 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, Oxyfluorien 2 must be applied using rigid precision ground sprayer equipment. The use of spray shields

<sup>&</sup>lt;sup>†</sup> Dosages listed are for broadcast application. For banded application, the amount of Oxyfluorfen 2 used per acre should be reduced according to the following formula:

The Post-direct applications of Oxyfluorfen 2 will kill or suppress seedlings not exceeding the one true leaf stage.

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 Oxyfluorfen 2 on nightshade and groundcherry species.

#### METHOD OF APPLICATION

#### SOUTHERN AND WESTERN COTTON

Accurate, uniform placement of Oxyfluorfen 2 spray is essential for effective weed control and to minimize cotton injury. As a directed posternergence application, Oxyfluorfen 2 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.

Oxyfluorfen 2 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 OXYFLUORFEN 2**

**IMPORTANT:** Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for tank mixtures, the most restrictive situations must apply.

#### **DOSAGE**

For postemergence control of susceptible grass and broadleaf weeds in cotton, a tank mixture of Oxyfluorfen 2 with either Karmex<sup>®</sup> Herbicide (dluron) 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 beginning of this label.

- SOUTHERN COTTON: Do not apply more than 2 pints (0.5 lb active) per broadcast acre of
  Oxyfluorfen 2 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 Oxyfluorfen 2 per broadcast
  acre in a single application, or more than a total of 4 pints (1.0 lb. active) of Oxyfluorfen 2 per
  broadcast acre per season as a result of multiple applications. Do not apply within 75 days of
  harvest.

# COTTONWOOD

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is an effective herbicide for postemergence and preemergence control of listed broadleaf weeds in cottonwood plantings. Oxyfluorfen 2 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 lb active) of Oxyfluorfen 2 per broadcast acre for preemergence and postemergence weed control. The addition of 1 quart of Latron AG-98 or a comparable 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 Oxyfluorfen 2 is applied preemergence or postemergence to weed seedlings (not exceeding 6-leaf stage) at recommended dosages, the following broadleaf weeds are controlled:

GROUNDSEL, COMMON KNOTWEED, PROSTRATE LAMBSQUARTERS, COMMON MUSTARD, HEDGE SHEPHERDSPURSE

SMARTWEED, PENNSYLVANIA

#### TIMING AND METHOD OF APPLICATION

For optimum weed control, Oxyfluorfen 2 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.

Oxyfluorfen 2 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 beginning of this label.

- Oxyfluorfen 2 should only be applied to dormant healthy cottonwood stock.
- Do not apply more than 8 pints (2.0 lb active) per treated acre per growing season as a result of single or multiple applications.

#### **EUCALYPTUS**

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is an effective herbicide for postemergence and preemergence control of listed broadleaf weeds in permanently established eucalyptus (E. viminalis, E. pulverulenta, and E. camaidulensis) plantings. In new plantings, Oxyfluorfen 2 should be applied immediately prior to or immediately following transplanting of dormant eucalyptus seedlings. In established plantings, Oxyfluorfen 2 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 lb active) of Oxyfluorfen 2 per broadcast acre for preemergence and postemergence weed control. The addition of 1 quart of Latron AG-98 or a comparable 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 Oxyfluorfen 2 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

CHESEWEED (MALVA)
FIDDLENECK, COAST

† FILAREE, BROADLEAF

† FILAREE, REDSTEM

† FILAREE, WHITESTEM

GROUNDSEL, COMMON

MINERSLETTUCE NETTLE, BURNING PIGWEED, REDROOT

REDMAIDS

SHEPHERDSPURSE SOWTHISTLE, ANNUAL

**HENBIT** 

#### WEEDS CONTROLLED PREEMERGENCE

BURCLOVER
CHEESEWEED (MALVA)
FIDDLENECK, COAST
FILAREE, BROADLEAF
FILAREE, REDSTEM

LETTUCE, PRICKLY PIGWEED, REDROOT PURSLANE, COMMON REDMAIDS

FILAREE, REDSTEM
FILAREE, WHITESTEM
GROUNDSEL, COMMON

ROCKET, LONDON SHEPHERDSPURSE SOWTHISTLE, ANNUAL

HENBIT KNOTWEED, PROSTRATE SPURGE, PROSTRATE SPURGE, SPOTTED

LAMBSQUARTERS, COMMON

#### TIMING AND METHOD OF APPLICATION

For optimum weed control, Oxyfluorfen 2 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.

Oxyfluorfen 2 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 beginning of this label.

- Oxyfluorfen 2 should only be applied to domant healthy eucalyptus stock.
- Do not apply more than 8 pints (2.0 lb active) per treated acre per growing season as a result of single or multiple applications.

#### FALLOW BED

GROUND OR AERIAL APPLICATION OF OXYFLUORFEN 2 ON FALLOW BEDS

<sup>&</sup>lt;sup>†</sup>Oxyfluorfen 2 at the 8-pint rate (2.0 lb active) will provide control of filaree up to the 6-leaf stage.

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is effective as a preemergence and/or postemergence herbicide when used alone or in a tank mix combination with glyphosate (Glyphomax) for the control of winter annual broadleaf weeds to be planted to the crops listed below.

#### MINIMUM TREATMENT-PLANTING INTERVAL

	Oxyfluorfen 2 Use Rate	
DIRECT SEEDED CROPS	up to 1 pint/A	
CARROT	90 DAYS	90 DAYS
POTATO	60 DAYS	60 DAYS
SUGAR BEET	60 DAYS	90 DAYS
OTHER ROOT/TUBER CROPS	90 DAYS	90 DAYS
ONIONS	180 DAYS	180 DAYS
OTHER BULB VEGETABLES	180 DAYS	180 DAYS
CABBAGE	90 DAYS	90 DAYS
CAULIFLOWER	90 DAYS	90 DAYS
OTHER BRASSICA CROPS	120 DAY	120 DAYS
LETTUCE	90 DAYS	120 DAYS
OTHER LEAFY VEGETABLES	30 DA ( O	120 07 10
(EXCEPT BRASSICA CROPS)	120 DAYS	120 DAYS
PEPPER	90 DAYS	120 DAYS
TOMATO	60 DAYS	120 DAYS
OTHER FRUITING	120 DAYS	120 DAYS
VEGETABLES	ILO DA IO	120 57110
CANTALOUPE	60 DAYS	90 DAYS
SQUASH	90 DAYS	120 DAYS
WATERMELON	60 DAYS	60 DAYS
OTHER CUCURBITS	90 DAYS	120 DAYS
DRY BEANS	60 DAYS	60 DAYS
PEANUT	60 DAYS	60 DAYS
OTHER LEGUME VEGETABLES	60 DAYS	60 DAYS
SAFFLOWER	60 DAYS	60 DAYS
CEREAL GRAINS	10 MONTHS	10 MONTHS
(includes barley, buckwheat, com,		
proso millet, pearl millet, oats,		
popcom, rice, rye, sorghum,		
triticale, wheat, wild rice)		
COTTON AND SOYBEAN	(See specific labeling for fallow beds to be	

(See specific labeling for fallow beds to be planted to cotton or soybeans)

	Oxyfluorfen 2 Use Rate	
TRANSPLANTED CROPS	up to 1 pint/A	up to 2 pints/A
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** TREEFRUIT/NUT/CITRUS 30 DAYS 0 DAYS

30 DAYS 0 DAYS

#### IMPORTANT:

The fallow beds should be worked thoroughly to a depth of at least 2.5 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.

# **OXYFLUORFEN 2 USED ALONE**

#### DOSAGE

Oxyfluorfen 2 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**

Oxyfluorfen 2 should provide preemergence and postemergence<sup>†</sup> control of the following weeds when used at recommended dosages and weed stage.

CHEESEWEED (MALVA) FIDDLENECK, COAST FILAREE, BROADLEAF FILAREE, REDSTEM GROUNDSEL, COMMON HENBIT

MUSTARD, SPECIES **NETTLE. BURNING REDMAIDS** 

ROCKET, LONDON SHEPHERDSPURSE SOWTHISTLE, ANNUAL

**MINERSLETTUCE** 

Oxyfluorfen 2 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 Oxyfluorfen 2 with glyphosate (Glyphomax) for postemergence control is recommended.

#### **TANK MIXES WITH OXYFLUORFEN 2**

IMPORTANT: Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mix, the most restrictive situations must apply.

#### DOSAGE

Oxyfluorfen 2 can be tank mixed with glyphosate (Glyphomax) product to obtain postemergence control of annual grass weeds, volunteer grains and broadleaf weeds. Tank mix 1 to 2 pints (0.25 to 0.5 lb

<sup>&</sup>lt;sup>1</sup> Thorough spray coverage is essential to maximize the postemergence activity of Oxyfluorfen 2. For postemergence control when applied by air, a tank mixture of Oxyfluorfen 2 with glyphosate (Glyphomax) is recommended.

active) of Oxyfluorfen 2 with labeled rates of glyphosate (Glyphomax). 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

Oxyfluorfen 2 should be applied in a minimum of 20 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**

Oxyfluorfen 2 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 Oxyfluorfen 2/glyphosate (Glyphomax) 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 3/4 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.

#### **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 1/2 mile from all crops and desirable vegetation, except the following:

  Maintain a minimum downwind buffer zone of:
  - 150 feet from dormant treefruit/nut/vine crops and overwintering sugar beets.
  - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets, and non-targeted 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 non-targeted 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 Oxyfluorfen 2 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 beginning of this label.

- Read and observe all label directions before using. When tank mixing, read and carefully follow all
  applicable use directions, precautions, and limitations on the respective product 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 Oxyfluorfen 2 per acre per fallow season.

# FALLOW BED (COTTON/SOYBEANS)

GROUND OR AERIAL APPLICATION OF OXYFLUORFEN 2 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**

Oxyfluorfen 2 is effective as a preemergence and/or postemergence herbicide when used alone or in a tank mix combination with glyphosate (Glyphomax) or paraquat (Gramoxone) for the control of winter annual broadleaf weeds in fallow beds to be planted to either cotton or soybeans. Do not apply Oxyfluorfen 2 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.

#### **OXYFLUORFEN 2 USED ALONE** DOSAGE

Oxyfluorfen 2 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**

Oxyfluorfen 2 should provide preemergence and postemergence<sup>†</sup> control of the following weeds when used at recommended dosages and weed stage.

BUTTERCUP, SMALLFLOWER

CHEESEWEED (MALVA)

TEVENINGPRIMROSE, CUTLEAF

FIDDLENECK, COAST FILAREE, BROADLEAF

FILAREE, REDSTEM

GERANIUM, CAROLINA GROUNDCHERRY, CUTLEAF

GROUNDSEL, COMMON

**HENBIT** 

LADYSTHUMB

**MINERSLETTUCE** 

**MUSTARD SPECIES NETTLE, BURNING** 

**OXALIS** 

PIGWEED. REDROOT PURSLANE, COMMON

**REDMAIDS** 

ROCKET, LONDON SHEPHERDSPURSE

SIDA, PRICKLY

SOWTHISTLE, ANNUAL

VELVETLEAF (WILD COTTON)

#### **TANK MIXES WITH OXYFLUORFEN 2**

IMPORTANT: Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mix, the most restrictive situations must apply.

<sup>&</sup>lt;sup>1</sup> Thorough spray coverage is essential to maximize the postemergence activity of Oxyfluorfen 2. For postemergence control when applied by air, a tank mixture of Oxyfluorfen 2 with either glyphosate (Glyphomax) or paraguat (Gramoxone) is recommended.

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

#### **DOSAGE**

Oxyfluorfen 2 can be tank mixed with either glyphosate (Glyphomax) or paraquat (Gramoxone) to obtain postemergence control of annual grass weeds, volunteer grains and broadleaf weeds. Tank mix 1 to 2 pints (0.25 to 0.5 lb active) of Oxyfluorfen 2 with labeled rates of either glyphosate (Glyphomax) or paraquat (Gramoxone). 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 (Glyphomax) or paraquat (Gramoxone), add Oxyfluorfen 2 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 (Glyphomax) or paraquat (Gramoxone). 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

Oxyfluorfen 2 should be applied in a minimum of 20 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**

Oxyfluorfen 2 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 [Gramoxone]). 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 3/4 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.

#### **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 1/2 mile from all crops and desirable vegetation, except the following: Maintain a minimum downwind buffer zone of:
  - 150 feet from dormant treefruit/nut/vine crops and overwintering sugar beets.
  - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets, and non-targeted 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 non-targeted 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 Oxyfluorfen 2 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 beginning of this label.

- Read and observe all label directions before using. When tank mixing, read and carefully follow all
  applicable use directions, precautions, and limitations on the respective product 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 Oxyfluorfen 2 per acre per fallow season.
- Do not apply Oxyfluorfen 2 within 7 days prior to planting of cotton or soybeans.

# **FALLOW LAND**

#### FOR USE ONLY IN IDAHO, OREGON AND WASHINGTON

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is effective as a preemergence and/or postemergence herbicide when used alone of in a tank mix combination with glyphosate (Glyphomax) for the control of listed annual broadleaf weeds in a fallow land system. Oxyfluorfen 2 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.

# **OXYFLUORFEN 2 USED ALONE**

# **DOSAGE**

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

#### **WEEDS CONTROLLED**

Oxyfluorfen 2 will provide postemergence control and preemergence activity of the following broadleaf weeds when used at recommended dosages.

FIDDLENECK, COAST

**HENBIT** 

LETTUCE, PRICKLY (CHINA LETTUCE)

MUSTARD, BLUE (PURPLE MUSTARD)

MUSTARD, TUMBLE (JIM HILL MUSTARD)

PIGWEED, REDROOT PURSLANE, COMMON SHEPHERDSPURSE SOWTHISTLE. ANNUAL

### TIMING AND METHOD OF APPLICATION

The most effective postemergence weed control is achieved when Oxyfluorfen 2 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.

Oxyfluorfen 2 should be applied in 20 to 40 gailons 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 carefully before each use.

# TANK MIXES WITH OXYFLUORFEN 2

For postemergence control of annual grass weeds, Oxyfluorfen 2 can be tank mixed with glyphosate (Glyphomax). Tank mix 0.5 to 2 pints (0.12 to 0.5 active) of Oxyfluorfen 2 with 0.75 to 1 pint (0.38 to 0.5 lb active) of glyphosate (Glyphomax) for each acre treated. Refer to the FALLOW AND REDUCED TILLAGE SYSTEM section on the glyphosate (Glyphomax) 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 Oxyfluorfen and glyphosate (Glyphomax) while the pump and agitator are running. Complete filling of the spray tank with water. Add 1 quart of Latron AG-98 or 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 beginning of this label.

 When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

# **GARBANZO BEANS**

### FOR USE ONLY IN ARIZONA AND CALIFORNIA

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is effective as a preemergence herbicide when used alone for the control of listed 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 Oxyfluorfen 2; however, under certain conditions, Oxyfluorfen 2 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 defollation 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.

#### **OXYFLUORFEN 2 USED ALONE**

#### **DOSAGE**

Oxyfluorfen 2 is recommended for preemergence control of susceptible winter annual broadleaf weeds at 1 pint (0.25 lb active) per broadcast acre.

#### WEEDS CONTROLLED PREEMERGENCE

Oxyfluorfen 2 used alone at recommended dosages provides preemergence control of the following broadleaf weeds:

GROUNDSEL, COMMON MALLOW, LITTLE

ROCKET, LONDON SHEPHERDSPURSE

#### TIMING AND METHOD OF APPLICATION

As a preemergence application, apply in a minimum of 25 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 beginning of this label.

- Do not apply more than 1 pint (0.25 lb active) per broadcast acre of Oxyfluorfen 2 in a single application.
- · For application only in Arizona and California.
- Do not feed bean, vines or hav.

# **GARLIC**

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is a herbicide for postemergence application to direct-seeded and transplanted gartic for early postemergence control of listed annual broadleaf and grass weeds. Initial spray application should be made only when the gartic have reached the development stage specified in the DOSAGE section and the SPECIFIC USE RESTRICTIONS section of this label. On gartic transplants, spray as soon after transplanting as practical. Oxyfluorfen 2 can cause necrotic lesions, twisting, pigtailing or stunting of the gartic 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 gartic 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)

Oxyfluorfen 2 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 has 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 Oxyfluorfen 2 as a result of multiple applications in one season.

# WESTERN STATES (ARIZONA, COLORADO, IDAHO, NEVADA, NEW MEXICO, OREGON, TEXAS, UTAH AND WASHINGTON)

Oxyfluorfen 2 is recommended for postemergence control at 0.5 to 1 pint (0.12 to 0.25 lb active) per acre when applied postemergence to garlic that has at least two (2) true leaves. Multiple treatments at the aforementioned rates may be applied. Do not apply more than 2.5 pints (0.5 lb active) per broadcast acre of Oxyfluorfen 2 as a result of multiple applications in one season.

# CALIFORNIA ONLY GENERAL INFORMATION

Oxyfluorfen 2 is a 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 listed broadleaf and grass weeds in garlic in California.

Chemigation: For application using only solid set or portable lateral sprinkler inigation systems, apply Oxyfluorfen 2 at the recommended broadcast application rate per acre as described below. Follow the application directions for "Sprinkler Chemigation" given in the CHEMIGATION section of this label.

#### Preemergence Garlic Applications in California

Apply Oxyfluorfen 2 at a rate of 1 pint (0.25 lb active) per broadcast acre as a preemergence application to garlic. Methods of application may be ground, sprinkler, or aerial.

41 775

Ground Application: If applied using ground application equipment, Oxyfluorfen 2 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:** Apply Oxyfluorfen 2 at the recommended broadcast application rate. Sufficient sprinkler irrigation water should be applied to ensure water penetration to a depth of two inches.

Aerial Application: If applied using aerial application, Oxyfluorfen 2 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 ¾ 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.

Gartic Response to Preemergence Applications With Oxyfluorfen 2: 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 Oxyfluorfen 2 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 Oxyfluorfen 2 used per acre should be reduced according to the following formula:

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

Accurate, uniform placement of Oxyfluorfen 2 spray is essential for effective weed control and to minimize garlic injury. As a directed, postemergence application, Oxyfluorfen 2 should be applied using a low-pressure sprayer using a minimum of 20 gallons of spray on a broadcast acre basis. Apply Oxyfluorfen 2 as a directed treatment to the soil area at the base of the plants and to the adjacent bed top and furrow areas. Nozzles should be adjusted to cover the weed foliage with minimum contact to the garlic plant. Reduce tractor speed and smooth furrows to minimize excessive bouncing of the spray boom.

**Sprinkler Chemigation:** Apply Oxyfluorfen 2 at the recommended broadcast application rate. Sufficient sprinkler irrigation water should be applied to ensure water penetration to a depth of two inches.

Garlic Response to Postemergence Applications With Oxyfluorfen 2: Oxyfluorfen 2 may cause chlorotic leaf banding, necrotic lesions, or stunting of the garlic plants. Symptoms will be more severe if applications are made during cool, wet, overcast, or foggy weather. Garlic will outgrow these conditions and continue to develop normally.

AVOID DRIFT: WHEN APPLYING OXYFLUORFEN 2 TO GARLIC IN CALIFORNIA, EXTREME CARE MUST BE EXERCISED TO PREVENT SPRAY DRIFT WHICH COULD RESULT IN DAMAGE TO OTHER CROPS OR DESIRABLE VEGETATION. WHEN APPLYING BY AIR OR THROUGH SPRINKLER CHEMIGATION SYSTEMS, USE THE FOLLOWING GUIDELINES:

- 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 domant treefruit, dormant vines, and overwintering sugar beets.
  - 650 feet from jojoba, legumes, small grains, seedling sugar beets, pastures, and 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 vegetable fallow bed, crop, or desirable vegetation.

#### Cultural Considerations for use in California

On mineral soils, in order to provide maximum preemergence activity, the soil surface should be smooth and free of excessive trash (clippings, dead weeds, etc.). Cultural practices that result in redistribution or disturbance of the soil surface after spraying or that mix untreated soil in treated areas will reduce the effectiveness of the treatment. The best results from Oxyfluorfen 2 are from applications on established beds that are left undisturbed during the time period for which weed control is desired.

### **ALL OTHER STATES**

Oxyfluorfen 2 is recommended for postemergence control at 0.5 pints (0.12 lb active) per acre when applied postemergence to garlic that has 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 Oxyfluorfen 2 as a result of multiple applications in one season.

#### TRANSPLANTED GARLIC

Transplanted garlic is most tolerant of a postemergence application immediately after transplanting. For all states except the northeastern states listed under the DOSAGE - SEEDED GARLIC section, an application of up to 2 pints (0.5 lb active) per acre within two days after transplanting may be made. If less than 2.5 pints per acre is 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 Oxyfluorfen 2 as a result of multiple applications in one season.

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

Dosages listed are for broadcast application. For banded application, the amount of Oxyfluorfen 2 used per acre should be reduced according to the following formula:

Band Width (in Inches)
Row Width (in Inches)

Rate per Broadcast Acre

X

Amount Needed per Acre for Banded Application

### **WEEDS CONTROLLED**

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

CANARYGRASS (ANNUAL)
EVENINGPRIMROSE, CUTLEAF
GROUNDSEL, COMMON
MALLOW, LITTLE (MALVA)
NIGHTSHADE, BLACK

† PIGWEED, PROSTRATE
† PIGWEED, REDROOT

PUNCTUREVINE

† PURSLANE, COMMON
ROCKET, LONDON
SAGE, LANCELEAF

† SHEPHERDSPURSE
SOWTHISTLE, ANNUAL

#### 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 Oxyfluorfen 2 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. Oxyfluorfen 2 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. Accurately calibrate spray equipment prior to each use. Avoid drift to all other crops and non-target areas. Thoroughly flush the spray equipment (tank, hose, pump, boom) with water before and after each use. Residual Oxyfluorfen 2 remaining in spray equipment may damage other crops.

#### **GARLIC - SPECIFIC USE RESTRICTIONS**

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

- In all states except Northeastern states, do not start spraying until the gartic (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 gartic
   (direct seeded) have three (3) fully developed true leaves. Applications made prior to the
   recommended gartic development stage may result in serious injury and is not recommended.
- Do not apply more than a total of 2 pints (0.5 lb active) per acre of Oxyfluorfen 2 during one use season.
- Do not apply within 60 days of harvest.
- Use only on dry bulb gartic.
- Do not apply to garlic grown for seed.
- Do not mix Oxyfluorfen 2 with oils, surfactants, liquid fertilizers or pesticides except as specified on other approved Nations Ag II Supplemental Labeling.
- Do not apply Oxyfluorfen 2 preemergence to direct-seeded garlic.
- Do not apply to garlic plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hall, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes or diseases.

# **GUAVA**

#### FOR USE ONLY IN HAWAII

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is effective as a preemergence herbicide when used alone for the control of listed annual broadleaf weeds in bearing and nonbearing guava plantings.

For broader spectrum postemergence control of grass and broadleaf weeds, a tank mixture of either paraquat (Gramoxone Herbicide) or glyphosate (Glyphomax Herbicide) with Oxyfluorfen 2 can be applied to seedling weeds. Check labels of tank mix partners to determine suitability and use rates for crop.

#### **OXYFLUORFEN 2 USED ALONE**

#### DOSAGE

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

<sup>&</sup>lt;sup>†</sup> Specific weeds controlled at rates recommended for use in Northeastern States (see DOSAGE section).

44 2 75

#### WEEDS CONTROLLED POSTEMERGENCE

Apply 2 to 8 pints (0.5 to 2.0 lb active) of Oxyfluorfen 2 per broadcast acre. Applications to weeds beyond the 4-leaf stage may result in partial control.

PURSLANE, COMMON

SPURGE, GARDEN

# WEEDS CONTROLLED PREEMERGENCE

Apply 5 to 8 pints (1.25 to 2.0 lb active) of Oxyfluorfen 2 per broadcast acre.

AGERATUM BUTTONWEED CROTALARIA PURSLANE, COMMON SPURGE, GARDEN

### TIMING AND METHOD OF APPLICATION

Treatments should be applied only to healthy guava trees. Care must be taken to prevent direct spray or drift from contacting green stems, fruit or foliage, as injury may result. Applications should be made only after new foliage has hardened off, or injury may result.

As a preemergence or postemergence treatment to weeds, apply in 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. Oxyfluorfen 2 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. An off-center nozzle positioned at the end of the boom may be desired. Spray shields are suggested for use in young trees.

#### **TANK MIXES WITH OXYFLUORFEN 2**

IMPORTANT: Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

#### DOSAGE

For posternergence control of susceptible grass and broadleaf weeds in guava plantings, a tank mixture of Oxyfluorfen 2 with either paraquat (Gramoxone) or glyphosate (Glyphomax) can be used. 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 Oxyfluorfen 2 used alone, control of susceptible weeds listed on the respective labels for the following products is also obtained:

paraquat (Gramoxone) glyphosate (Glyphomax)

### **GUAVA - SPECIFIC USE RESTRICTIONS**

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

- Do not apply more than 8 pints (2.0 lb active) per broadcast acre of Oxyfluorfen 2 in a single application or more than 16 pints (4.0 lbs active) per season.
- Do not apply Oxyfluorfen 2 within 1 day of harvest.
- Direct spray toward the base of the trees. Avoid direct plant contact.
- Oxyfluorfen 2 or any of the combinations recommended on this label should be applied to only healthy growing trees.
- Oxyfluorfen 2 applications should be made only after new foliage has hardened off.

45 775

# **HORSERADISH**

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is a herbicide recommended for preemergence control of listed broadleaf weeds.

Applications must be made after the horseradish roots have been planted and prior to plant emergence.

(Emerged 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 Oxyfluorfen 2 on horseradish plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.

#### DOSAGE

Apply Oxyfluorfen 2 at a rate of 2 pints (0.5 lb active) per broadcast acre as a preemergence application to horseradish.

#### **WEEDS CONTROLLED**

Oxyfluorfen 2 will provide preemergence control of the following weeds when used at the recommended dosage:

LAMBSQUARTERS, COMMON PIGWEED, REDROOT

PURSLANE. COMMON

SHEPHERDSPURSE SMARTWEED, PENNSYLVANIA

#### TIMING AND METHOD OF APPLICATION

Oxyfluorfen 2 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 beginning of this label.

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

# **JOJOBA**

# **GENERAL INFORMATION**

Oxyfluorfen 2 is a herbicide for postemergence and preemergence control of listed broadleaf weeds in jojoba. Oxyfluorfen 2 should be post-directed to the base of the jojoba plant to avoid possible phytotoxicity to the jojoba follage. Over-the-top applications may exhibit burning, crinkling or bronzing of jojoba follage, particularly to the youngest leaves, flowers, or buds present at the time of application.

# DOSAGE

Oxyfluorfen 2 is recommended for postemergence and preemergence control of susceptible seedling weeds (up to 12 inches in height) at 8 pints (2.0 lb active) per broadcast acre. For optimum residual control, apply during the fall or winter. For early postemergence control of susceptible seedling weeds (less than 8 inches in height) apply Oxyfluorfen 2 at a rate of 4 pints (1.0 lb. active) per broadcast acre.

#### WEEDS CONTROLLED POSTEMERGENCE

FIDDLENECK, COAST

\*\*FILAREE, BROADLEAF

MINERSLETTUCE NETTLE, BURNING

46 775

†† FILAREE, REDSTEM
†† FILAREE, WHITESTEM
† GROUNDSEL, COMMON
HENBIT
MALLOW, LITTLE (MALVA, CHEESEWEED)

† PIGWEED, REDROOT REDMAIDS SHEPHERDSPURSE SOWTHISTLE, ANNUAL

† Highest rate may be required for acceptable postemergence control.

#### WEEDS CONTROLLED PREEMERGENCE

BURCLOVER
FIDDLENECK, COAST
FILAREE, BROADLEAF
FILAREE, REDSTEM
FILAREE, WHITESTEM
GROUNDSEL, COMMON
HENBIT
KNOTWEED, PROSTRATE
LAMBSQUARTERS, COMMON

LETTUCE, PRICKLY
MALLOW, LITTLE (MALVA, CHEESEWEED)
PIGWEED, REDROOT
PURSLANE, COMMON
REDMAIDS
ROCKET, LONDON
SHEPHERDSPURSE
SOWTHISTLE, ANNUAL

#### TIMING AND METHOD OF APPLICATION

Apply the first application of Oxyfluorfen 2 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.

Oxyfluorfen 2 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 beginning of this label.

- Avoid direct spray or drift contact of Oxyfluorfen 2 with jojoba flowers or buds as severe injury may
  result
- Do not apply more than 8 pints (2.0 lb active) per broadcast care in a single application.

# MINT (SPEARMINT AND PEPPERMINT)

FOR USE ONLY IN CALIFORNIA, IDAHO, MONTANA, NEVADA, OREGON, SOUTH DAKOTA, UTAH AND WASHINGTON

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is a herbicide for the control of listed 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 during the dormant period.

### **METHOD OF APPLICATION**

Application must be made prior to new spring growth or severe crop injury may result. Oxyfluorfen 2 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.

The Oxyfluorfen 2 at the 8-pint rate (2.0 lbs active) will provide control of filaree not exceeding the 4-inches stage. Applications to filaree beyond the 4-inches stage may result in partial control.

#### WEEDS CONTROLLED

When Oxyfluorfen 2 is applied as a dormant application at recommended dosages in spearmint and peppermint, the following annual weeds are controlled:

BEDSTRAW, CATCHWEED †BLUEGRASS, ANNUAL

**FLIXWEED** 

GROUNDSEL, COMMON LAMBSQUARTERS, COMMON

LETTUCE, PRICKLY (CHINA LETTUCE) MUSTARD, BLUE (PURPLE MUSTARD)

NIGHTSHADE, HAIRY

<sup>†</sup>OATS, WILD ORACH, RED

PEPPERWEED, YELLOWFLOWER

PIGWEED, REDROOT <sup>†</sup>RYEGRASS, ITALIAN SHEPHERDSPURSE SOWTHISTLE, ANNUAL

MUSTARD, TUMBLE (JIM HILL MUSTARD) TANSYMUSTARD THISTLE. RUSSIAN

### **WESTERN OREGON**

# PEPPERMINT (WILLAMETTE VALLEY)

Apply 2 to 3 pints (0.5 to 0.75 lb active) of Oxyfluorfen 2 from November through 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 OXYFLUORFEN 2 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 lb active) of Oxyfluorfen 2 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 Oxyfluorfen 2 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) SPECIFIC USE RESTRICTIONS

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

- Do not apply more than one application of Oxyfluorfen 2 per season.
- Apply Oxyfluorfen 2 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, insects, or winter injury, as severe injury may result.

# MINT (SPEARMINT AND PEPPERMINT) GROWN IN MUCK SOILS

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

<sup>†</sup> Control of annual grasses is best obtained when Oxyfluorfen 2 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.

#### **GENERAL INFORMATION**

Oxyfluorfen 2 may be used for the control of listed annual broadleaf weeds in dormant spearmint and peppermint grown on muck soils. Note: If applied after spearmint and peppermint emerge, severe injury will result. Applications made to first year spearmint or peppermint should be made within four (4) days of planting (sprigging) to prevent excessive crop injury.

#### WEEDS CONTROLLED POSTEMERGENCE AND PREEMERGENCE

When Oxyfluorfen 2 is applied at recommended dosages in spearmint and peppermint, the following weeds are controlled:

KNOTWEED, PROSTRATE PIGWEED, REDROOT

PURSLANE, COMMON

#### DOSAGE

Oxyfluorfen 2 should be applied at a rate of 4 to 6 pints (1.0 to 1.5 lb active ingredient) per acre. Apply in a spray volume of 20 to 40 gallons per acre of clean water at 20 to 40 psi. When used postemergence (to weed), add an 80% active ingredient 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 Oxyfluorfen 2 be made prior to the emergence of the spearmint or peppermint.

FOR USE ONLY ON MINT GROWN ON MUCK SOILS 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 beginning of this label.

- Use directions in this section of the label for Oxyfluorfen 2 are applicable only to spearmint and peppermint grown on muck soils (muck soils should have organic matter content of 20% or greater).
- Apply Oxyfluorfen 2 only to healthy spearmint or peppermint. Do not apply to spearmint or peppermint that has been weakened by disease, nematodes, soil insects, or winter injury, as severe injury may result.
- Do not apply Oxyfluorfen 2 to mint that has emerged.
- Applications to first-year spearmint or peppermint should be made within four (4) days of planting (sprigging).

# **NON-CROP USE**

NON-FOOD-PRODUCING, NON-CULTIVATED AGRICULTURAL OR NON-AGRICULTURAL AREAS, SUCH AS HIGHWAY AND UTILITY RIGHTS-OF-WAY, INDUSTRIAL SITES, TANK FARMS, STORAGE AREAS, AIRPORTS, FENCEROWS, AND FARMSTEADS

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is recommended for postemergence and preemergence control of listed 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 ib active) of Oxyfluorfen 2 per broadcast acre. The lower rate in the rate range is recommended for control of susceptible weeds in the early postemergence stage--less than 4 inches in height. The higher rate (2.0 lb active) should be used for weeds up to 12 inches in height. Applications to weeds beyond the 4-inch stage may result in partial control.

WEEDS CONTROLLED POSTEMERGENCE

CHEESEWEED (MALVA)

FIDDLENECK, COAST

FILAREE, BROADLEAF

FILAREE, REDSTEM

**GROUNDSEL, COMMON** 

HENBIT

MINERSLETTUCE

NETTLE, BURNING

PIGWEED, REDROOT

PURSLANE, COMMON

REDMAIDS

SHEPHERDSPURSE

SOWTHISTLE, ANNUAL

**WEEDS CONTROLLED PREEMERGENCE:** Apply 5 to 8 pints (1.25 to 2.0 lb active) per broadcast acre.

# WEEDS CONTROLLED PREEMERGENCE

BURCLOVER

**CHEESEWEED (MALVA)** 

FIDDLENECK, COAST

FILAREE, BROADLEAF

FILAREE, REDSTEM

GROUNDSEL, COMMON

**HENBIT** 

KNOTWEED, PROSTRATE

LAMBSQUARTERS, COMMON

LETTUCE, PRICKLY

PIGWEED, REDROOT

PURSLANE, COMMON

REDMAIDS

ROCKET, LONDON

SHEPHERDSPURSE

SOWTHISTLE, ANNUAL

# TIMING AND METHOD OF APPLICATION

Oxyfluorfen 2 should be applied in a minimum of 40 gallons of water per acre. Best preemergence 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.

#### **TANK MIXES WITH OXYFLUORFEN 2**

**IMPORTANT:** Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

#### DOSAGE

For preemergence control of susceptible grass and broadleaf weeds, a tank mixture of Oxyfluorfen 2 with diuron (Karmex) 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 (Gramoxone) or glyphosate (Glyphomax) with Oxyfluorfen 2 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 beginning of this label.

Do not feed or allow animals to graze on any areas treated with Oxyfluorfen 2.

# **ONIONS**

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is a herbicide for postemergence application to direct-seeded and transplanted onions for early postemergence control of listed 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. Oxyfluorfen 2 can cause necrotic lesions, twisting, pigtailing 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)

Oxyfluorfen 2 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 Oxyfluorfen 2 as a result of multiple applications in one season.

# WESTERN STATES (ARIZONA, CALIFORNIA, COLORADO, IDAHO, NEVADA, NEW MEXICO, OREGON, TEXAS, UTAH AND WASHINGTON)

Oxyfluorfen 2 is recommended for postemergence control at 0.5 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 Oxyfluorfen 2 as a result of multiple applications in one season.

CHEMIGATION: For application using sprinkler irrigation (solid set or portable lateral) systems, apply specified dosage of Oxyfluorfen 2 per acre as described in this section. Follow all directions given in the CHEMIGATION section of this label when making applications using irrigation systems.

#### **AVOID DRIFT**

WHEN APPLYING TO ONIONS, 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 APPLICATIONS OF OXYFLUORFEN 2 ARE TO BE MADE THROUGH THE SPRINKLER IRRIGATION SYSTEM:

- 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 download buffer zone of at least ½ mile from all crops and desirable vegetation, except for the following:

  Maintain a minimum download buffer zone of:
  - 150 feet from dormant treefruit, dormant vines and overwintering sugar beets.

- 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets and 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 vegetable fallow bed, crop, or desirable vegetation.

#### **ALL OTHER STATES**

Oxyfluorfen 2 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 Oxyfluorfen 2 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, 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 is 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 Oxyfluorfen 2 as a result of multiple applications in one season.

CHEMIGATION: For application using sprinkler irrigation (solid set or portable lateral) systems, apply specified dosage of Oxyfluorfen 2 per acre as described in this section. Follow all directions given in the CHEMIGATION section of this label when making applications using 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.) Oxyfluorfen 2 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 Oxyfluorfen 2 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 is applied as a pre-transplant 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 Oxyfluorfen 2 as a result of multiple applications in one season.

Dosages listed are for broadcast application. For banded application, the amount of Oxyfluorfen 2 used per acre should be reduced according to the following formula:

Band Width (in inches)
Row Width (in inches)

Rate per Broadcast Acre

Χ

Amount Needed per Acre for Banded Application

### **WEEDS CONTROLLED**

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

CANARYGRASS (ANNUAL)

<sup>a</sup> EVENINGPRIMROSE, CUTLEAF
GROUNDSEL, COMMON
MALLOW, LITTLE (MALVA)
NIGHTSHADE, BLACK

PUNCTUREVINE ab purslane, common ROCKET, LONDON SAGE, LANCELEAF b SHEPHERDSPURSE b PIGWEED, PROSTRATE ab PIGWEED, REDROOT

### SOWTHISTLE , ANNUAL

<sup>a</sup> Weeds controlled when applied as a pre-transplant application. In addition, Oxyfluorfen 2 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 Oxyfluorfen 2 to muck soils may result in partial control or suppression of the weeds listed.

b 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 Oxyfluorfen 2 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.

Oxyfluorfen 2 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. Accurately calibrate spray equipment prior to each use. Avoid drift to all other crops and non-target areas. Thoroughly flush the spray equipment (tank, hose, pump, boom) with water before and after each use. Residual Oxyfluorfen 2 remaining in spray equipment may damage other crops.

#### **ONIONS - SPECIFIC USE RESTRICTIONS**

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the beginning 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 is not recommended.
- Do not apply more than a total of 2 pints (0.5 lb active) per acre of Oxyfluorfen 2 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 on other approved supplemental labeling.
- Tank mixtures of Oxyfluorfen 2 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 Oxyfluorfen 2 preemergence to direct-seeded onions.
- Do not apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil saits, 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**

Oxyfluorfen 2 is a herbicide for postemergence application to onlons grown for seed, for early postemergence control of listed annual broadleaf and grass weeds. Initial spray application should be made only when the onlons have reached the development stage specified in the DOSAGE section and the SPECIFIC USE RESTRICTIONS section of this label. Oxyfluorfen 2 can cause necrotic lesions, twisting, pigtailing or stunting of the onlon 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 onlon plants as specified in the DOSAGE section and the SPECIFIC USE RESTRICTIONS section of this label.

53 775

NOTICE: Some varieties or inbred lines of onions may be more susceptible to Oxyfluorfen 2. Care should be taken to ensure that the particular onion variety or line being grown is tolerant to Oxyfluorfen 2. 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**

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

CANARYGRASS (ANNUAL)
EVENINGPRIMROSE, CUTLEAF
GROUNDSEL, COMMON
MALLOW, LITTLE (MALVA)
NIGHTSHADE, BLACK

† PIGWEED, PROSTRATE
† PIGWEED, REDROOT

PUNCTUREVINE

TPURSLANE, COMMON
ROCKET, LONDON
SAGE, LANCELEAF
SHEPHERDSPURSE
SOWTHISTLE, ANNUAL

#### **DOSAGE**

NORTHEASTERN STATES (CONNECTICUT, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, RHODE ISLAND AND VERMONT)

Oxyfluorfen 2 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 onlons 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 Oxyfluorfen 2 as a result of multiple applications in one season.

#### **ALL OTHER STATES**

Oxyfluorfen 2 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 rates may be applied. Do not apply more than 2 pints (0.5 lb active) per broadcast acre of Oxyfluorfen 2 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 Oxyfluorfen 2 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.

Oxyfluorfen 2 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 nozzies, 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 Oxyfluorfen 2 remaining in spray equipment may damage other crops.

CHEMIGATION: For application using sprinkler irrigation (solid set or portable lateral) systems, apply specified dosage of Oxyfluorfen 2 per acre as described above. Follow all directions given in the CHEMIGATION section of this label when making applications using irrigation systems.

DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT. AVOID DRIFT TO ALL NON-TARGET AREAS. OXYFLUORFEN 2 IS PHYTOTOXIC TO PLANT FOLIAGE.

<sup>&</sup>lt;sup>†</sup> Specific weeds controlled at rates recommended for use in northeastern states (see DOSAGE section).

#### **AVOID DRIFT**

WHEN APPLYING TO ONIONS, 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 APPLICATIONS OF OXYFLUORFEN 2 ARE TO BE MADE THROUGH THE SPRINKLER IRRIGATION SYSTEM:

- 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 download buffer zone of at least ½ mile from all crops and desirable vegetation, except for the following:

  Maintain a minimum download buffer zone of:
  - 150 feet from dormant treefruit, dormant vines and overwintering sugar beets.
  - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets and 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 vegetable fallow bed, crop, or desirable vegetation.

# ONIONS GROWN FOR SEED SPECIFIC USE RESTRICTIONS

In addition to the following, also observe GENERAL USE RESTRICTIONS listed at the beginning 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 is not recommended.
- Do not apply more than a total of 2 pints (0.5 lb active) per acre of Oxyfluorfen 2 during one use season.
- Do not apply within 60 days of harvest.
- Do not mix Oxyfluorfen 2 with oils, surfactants, liquid fertilizers or other pesticides except as specified on other approved Nations Ag II Supplemental Labeling.
- 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**

Oxyfluorfen 2 is a herbicide for use as a post-directed application for broadleaf weed control in papaya. Occasionally, after the use of Oxyfluorfen 2, 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 Oxyfluorfen 2 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 Oxyfluorfen 2 at a rate of 4 pints (1.0 ib. 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 approximately 4-month intervals.

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Oxyfluorfen 2 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 Oxyfluorfen 2 per broadcast acre in a single application, or more than 12.0 pints (3.0 lb active) per broadcast acre per year as a result of multiple applications.

#### **WEEDS CONTROLLED**

Oxyfluorfen 2 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 PURSLANE, COMMON SPURGE, GARDEN

#### **METHOD OF APPLICATION**

Oxyfluorfen 2 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 Oxyfluorfen 2 is essential for effective weed control and to minimize crop injury. Oxyfluorfen 2 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. Oxyfluorfen 2 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 beginning of this label.

- 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 Oxyfluorfen 2 per broadcast acre in a single directed spray or more than 12 pints (3.0 lb active) per broadcast acre per year as a result of multiple applications.
- Do not apply Oxyfluorfen 2 within 1 day of harvest.
- For use only in papaya grown in Hawaii.

# **SOYBEANS**

#### NOT FOR USE IN CALIFORNIA

#### **GENERAL INFORMATION**

Oxyfluorfen 2 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. Seedling 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 Oxyfluorfen 2; however, under certain conditions, Oxyfluorfen 2 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

Oxyfluorfen 2 is effective for preemergence and posternergence control of susceptible broadleaf weeds when surface applied at 1.5 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 .75 lbs active) will assist in early season annual grass control. However, Oxyfluorfen 2 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 of other planting equipment that results in minimal soil disturbance is recommended. Soil surfaces should not be disturbed as the herbicidal effectiveness of Oxyfluorfen 2 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**

Oxyfluorfen 2 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 listed grass and broadleaf weeds, a tank mix of either paraquat (Gramoxone) or glyphosate (Glyphomax) with Oxyfluorfen 2 can be used. For residual grass control in no-till soybeans, a tank mixture of Bronco Herbicide, Dual Magnum, Lasso, or Surflan with Oxyfluorfen 2 or combinations of Oxyfluorfen 2 plus paraquat (Gramoxone) or glyphosate (Glyphomax) can be used. Follow specific use directions and restrictions for these combination tank mixes. Application should be made within one day after planting. Later applications may result in severe crop injury and are not recommended.

#### WEEEDS CONTROLLED PREEMERGENCE

Oxyfluorfen 2 used alone, at recommended dosages, provides preemergence control of the following broadleaf weeds:

T GROUNDCHERRY, CUTLEAF
JIMSONWEED
LAMBSQUARTERS, COMMON
T NIGHTSHADE, AMERICAN BLACK
T NIGHTSHADE, BLACK
PIGWEED, REDROOT

POINSETTIA, WILD SHEPHERDSPURSE SIDA, PRICKLY (TEAWEED) SMARTWEED, PENNSYLVANIA TSOWTHISTLE, COMMON VELVETLEAF

# WEEDS CONTROLLED POSTEMERGENCE (POST-DIRECTED APPLICATION)

When Oxyfluorfen 2 is applied as a post-direct application at the recommended weed stage and dosage in soybeans, the following weeds are controlled.

COCKLEBUR, COMMON CROTON, TROPIC GROUNDCHERRY, CUTLEAF GROUNDCHERRY, WRIGHT JIMSONWEED NIGHTSHADE, HAIRY PIGWEED, REDROOT T POINSETTIA, WILD PURSLANE, COMMON SESBANIA, HEMP

F Suppression of this weed occurs when Oxyfluorfen 2 is applied at the reduced rate recommended for the Oxyfluorfen 2/metribuzin tank mix combination.

LAMBSQUARTERS, COMMON SHEPHERDSPURSE
MORNINGGLORY ANNUAL (UP TO 6 LEAF)
MUSTARD, WILD
NIGHTSHADE, AMERICAN BLACK
NIGHTSHADE, BLACK
SHEPHERDSPURSE

\* T SICKLEPOD
\* SIDA, PRICKLY (TEAWEED)
SMARTWEED, PENNSYLVANIA
VELVETLEAF

Thultiple applications may be required for acceptable control.

Two parts of Latron AG-98, or comparable 80% active nonionic surfactant cleared for application to growing crops, per each 100 gallons of spray solution are suggested in all tank mixtures containing Oxyfluorfen 2 when postemergence weed control is desired.

#### **TANK MIXES WITH OXYFLUORFEN 2**

Oxyfluorfen 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 (Sencor® DF Herbicide or Lexone® DF Herbicide) 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 coarse 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. Applications should be made within one day following planting. Later applications may result in severe crop injury and are not recommended. The Oxyfluorfen 2/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 Dual Magnum, Lasso or Surflan.

IMPORTANT: Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

#### DOSAGE

Refer to the following tables for labeled use rates.

# NO-TILL (DOUBLE-CROP) SOYBEANS PREEMERGENCE

RATE OF PRODUCT PER BROADCAST ACRE (PINTS PER ACRE)									
Soil Texture	Oxyfluorfen 2	Dual Magnum	Lasso 4E	Surflan A.S. <sup>ŦŦ</sup>	Paraquat (Gramoxone)	Glyphosate (Glyphomax)	Bronco <sup>‡</sup>		
Coarse	0.5 to 1.5	1.0	4.0 to 5.0	1.5	1.0 to 2.0	2.0 to 3.0	6.5 to 10.0		
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	8.0 to 10.0		
Fine	0.5 to 2.0	1.33 - 1.67	5.0 to 6.0	3.0	1.0 to 2.0	2.0 to 3.0	8.0 to 10.0		
Muck or Peat	777	***	***	* * *	***	<b>ŦŦŦ</b>	***		

Tuse the higher rate of Bronco, Dual Magnum, or Lasso on soils containing more than 3% organic matter.

<sup>&</sup>lt;sup>† ‡</sup> Post-direct applications of Oxyfluorfen 2 will kill or suppress seedlings not exceeding the one true leaf stage.

When using Surflan 75 WP, multiply pints by 0.67 to obtain the amount of Surflan 75WP product required. Do not use Surflan on soils containing more than 5% organic matter.

# **CONVENTIONAL TILLED SOYBEANS PREEMERGENCE**

Oxyfluorfen 2 is effective for preemergence control of susceptible broadleaf weeds when applied at 1 to 5 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, Oxyfluorfen 2 must not be a basic portion of the grass herbicide program. Oxyfluorfen 2 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 Dual Magnum, Lasso or Surflan herbicides.

RATE O	(LB PER ACRE)				
Soil Texture	Oxyfluorfen 2	Dual Magnum <sup>‡</sup>	Lasso 4E <sup>†</sup>	Surflan A.S.	Metribuzin DF
Coarse	0.6 to 1.5	0.84 to 1.0	3.0 to 4.0	1.0 to 1.5	0.33
Medium	0.6 to 1.5	1.0 to 1.33	4.0 to 6.0	1.0 to 1.5	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	777	F F F	7.7.7	177	* * *

TUse the higher rate of Dual Magnum or Lasso on soils containing more than 3% organic matter.

#### WEEDS CONTROLLED PREEMERGENCE

When Oxyfluorfen 2 is tank mixed with Bronco, Dual Magnum, Lasso, or Surflan and applied preemergence, in addition to the weeds controlled preemergence by Oxyfluorfen 2 alone, control of the following weeds is also obtained.

**BARNYARDGRASS** 

JOHNSONGRASS, SEEDLING

CRABGRASS, LARGE

PANICUM, FALL RAGWEED, COMMON

FOXTAIL, GIANT FOXTAIL, YELLOW

SIGNALGRASS, BROADLEAF

#### WEEDS CONTROLLED POSTEMERGENCE

When Oxyfluorfen 2 is tank mixed with Bronco, paraquat (Gramoxone) or glyphosate (Glyphomax) and applied postemergence, in addition to the weeds controlled postemergence by Oxyfluorfen 2 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 Bronco or glyphosate (Glyphomax) are included in the tank mix, apply in 20 to 40 gallons of water per acre. To ensure 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.

THE When using Surflan 75 WP, multiply pints by 0.67 to obtain the amount of Surflan 75WP product required. Do not use Surflan on soils containing more than 5% organic matter.

TTT Do not use.

<sup>\*\*\*\*</sup> Sencor DF or Lexone DF.

# POST-DIRECTED SPRAY OXYFLUORFEN 2 USED ALONE DOSAGE

Oxyfluorfen 2 is recommended as a post-directed application at 1 pint (0.25 lb active) per acre. Optimum control is achieved when Oxyfluorfen 2 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 OXYFLUORFEN 2**

For improved broadleaf weed control, a tank mixture of Oxyfluorfen 2 plus Butoxone® Herbicide or Butyrac® 200 Herbicide is suggested. Use 1 pint of Oxyfluorfen 2 (0.25 ib active) with 1 pint of Butoxone (0.22 ib active) or 0.7 to 0.9 pint of Butyrac 200 (0.175 to 0.22 ib active) per broadcast acre. See MIXING DIRECTIONS for surfactant recommendations. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

#### TIMING

Soybean plant height must be a minimum 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 Oxyfluorfen 2 spray is essential for effective weed control and to minimize soybean injury. As a directed postemergence application, Oxyfluorfen 2 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.

Oxyfluorfen 2 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 OXYFLUORFEN WITH COMMAND 6EC HERBICICE SOYBEANS (NOT FOR USE IN CALIFORNIA)

Oxyfluorfen 2 when applied preemergence at 0.6 to 0.8 pint (0.16 to .2 lb active) per acre in a tank mix combination with Command 6EC (EPA Reg. No. 279-3054) at 1 to 1 2/3 pints (0.75 to 1.25 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 Oxyfluorfen 2 with Command 6EC at recommended dosages, provides preemergence control of the following weeds:

GRASS WEEDS
BARNYARDGRASS
CRABGRASS
(CRABGRASS, LARGE)
(CRABGRASS, SMOOTH)
CUPGRASS, SOUTHWEST
CUPGRASS, WOOLY
FOXTAIL

BROADLEAF WEEDS
BEGGARWEED, FLORIDA
CROTON, TROPIC
TGROUNDCHERRY, CUTLEAF
JIMSONWEED
LAMBSQUARTERS
MALLOW, VENICE
TNIGHTSHADE, BLACK

(FOXTAIL, GIANT)
(FOXTAIL, GREEN)
(FOXTAIL, ROBUST PURPLE)
(FOXTAIL, YELLOW)
GOOSEGRASS
JOHNSONGRASS (SEEDLING)
PANICUM
(PANICUM, FALL)
(PANICUM, TEXAS)
SANDBUR, FIELD
SIGNALGRASS, BROADLEAF
(BRACHIARIA)

PIGWEED, REDROOT
PURSLANE, COMMON
PUSLEY, FLORIDA
SHEPHERDSPURSE
SIDA, PRICKLY
SMARTWEED, PENNSYLVANIA
T SOWTHISTLE, COMMON
VELVETLEAF

#### SOYBEANS - SPECIFIC ENVIRONMENTAL HAZARDS

This product is highly toxic to freshwater clams, oysters, aquatic invertebrates, and aquatic plants. Do not apply Oxyfluorfen 2 where visible erosion to aquatic habitats and/or wetlands occurs. (See container for further information on Environmental Hazards).

#### **SOYBEANS - SPECIFIC USE RESTRICTIONS**

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

- Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.
- Do not make more than two applications of Oxyfluorfen 2 per growing season.
- Do not apply more than 2 pints (0.5 lbs. active) of Oxyfluorfen 2 per acre during one growing season as a result of preemergence application in no-till (double-crop) or conventional till soybeans, or postdirected in conventional till soybeans. If early preplant application is made, do not apply more than 3 pints (0.75 lb active) of Oxyfluorfen 2 per acre during one growing season.
- Do not apply a post-directed application of Oxyfluorfen 2 to soybeans after the initial appearance of blooms.

# **TARO**

#### FOR USE IN HAWAII ONLY

### **GENERAL INFORMATION**

Oxyfluorfen 2 is a herbicide for preemergence and post-direct application to dryland taro for the control of listed 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 Oxyfluorfen 2, 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 Oxyfluorfen 2 on taro plantings that are weak or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.

<sup>&</sup>lt;sup>†</sup> Suppression

#### **DOSAGE**

Apply Oxyfluorfen 2 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. Oxyfluorfen 2 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 Oxyfluorfen 2 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 Oxyfluorfen 2 used per acre should be reduced according to the following formula:

Band Width (in inches)

Rate per

X

Amount Needed per Acre for Banded Application

Row Width (in inches)

Broadcast Acre

# WEEDS CONTROLLED

Oxyfluorfen 2 will provide preemergence and postemergence control of the following weeds when used at the recommended dosage. Applications to weeds beyond the 3-leaf stage may result in partial control.

AMARANTH, SPINY PURSLANE, COMMON SPURGE, GARDEN

#### TIMING AND METHOD OF APPLICATION

Oxyfluorfen 2 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 Oxyfluorfen 2 is essential for effective weed control and to minimize crop injury. Taro foliage receiving accidental spray or drift will be injured. Oxyfluorfen 2 must be applied using rigid precision ground sprayer equipment. As a directed postemergence application, Oxyfluorfen 2 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.

# TARO - SPECIFIC USE RESTRICTIONS

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

- Do not apply more than 2 pints (0.5 lb active) of Oxyfluorfen 2 per broadcast acre as a single preemergence application.
- Do not apply more than 1 pint (0.25 lb active) of Oxyfluorfen 2 per broadcast acre in a single postdirect 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 Oxyfluorfen 2 per broadcast acre per season as a result of preemergence and post-direct applications.
- Do not apply Oxyfluorfen 2 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.)

# TREEFRUIT/NUT/VINE CROPS

### **DORMANT APPLICATION**

ALMOND, APPLE, APRICOT, AVOCADO, BEECHNUT, BRAZIL NUT, BUTTERNUT, CASHEW, CHERRY, CHESTNUT, CHINQUAPIN, CRAB APPLE, DATE, FEIJOA, FIG, FILBERT, GRAPES, HICKORY NUT, KIWI, LOQUAT, MACADAMIA NUT, MAYHAWS, NECTARINE, OLIVES, PEACH, PEAR, PECAN, PERSIMMON, PISTACHIO, PLUM, POMEGRANATES, PRUNE, QUINCE, WALNUT

#### **GENERAL INFORMATION**

Oxyfluorfen 2 is effective as a preemergence and/or postemergence herbicide when used alone or in recommended combinations, for the control of listed annual broadleaf weeds, in certain bearing and nonbearing treefruit, nut or vine plantings. The most effective postemergence weed control is achieved when Oxyfluorfen 2 is applied to seedling weeds. For broader spectrum postemergence control of listed grass and broadleaf weeds, a tank mixture of Oxyfluorfen 2 with either paraquat (Gramoxone) or glyphosate (Glyphomax) can be used.

For preemergence control of susceptible grass and broadleaf weeds in certain treefruit, nut or vine plantings, a tank mixture of Oxyfluorfen 2 with napropamide (Devrinol), diuron (Karmex), pronamide (Kerb\* herbicide), simazine, norflurazon (Solicam) or oryzalin (Surflan) can be applied. Contact herbicides such as paraquat (Gramoxone) or glyphosate (Glyphomax) may also be added to the tank mixture. Check product labels of the above tank mix partners to determine suitability and use rates for various crops.

# OXYFLUORFEN 2 USED ALONE GEOGRAPHIC USE DIRECTIONS ARIZONA AND CALIFORNIA

#### **DOSAGE**

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

WEEDS CONTROLLED POSTEMERGENCE (weeds up to 4 inches high): Apply 2 to 8 pints (0.5 to 2.0 lb active) of Oxyfluorfen 2 per broadcast acre. Applications to weeds beyond this 4-inch stage may result in partial control.

CHEESEWEED (MALVA)
FIDDLENECK, COAST

FILAREE, BROADLEAF

FILAREE, REDSTEM

FILAREE, WHITESTEM
GROUNDSEL, COMMON

HENBIT

MINERSLETTUCE NETTLE, BURNING PIGWEED, REDROOT REDMAIDS

SHEPHERDSPURSE SOWTHISTLE, ANNUAL

WEEDS CONTROLLED PREEMERGENCE: Apply 5 to 8 pints (1.25 to 2.0 lb active) of Oxyfluorfen 2 per broadcast acre.

BURCLOVER CHEESEWEED (MALVA) FIDDLENECK, COAST FILAREE, BROADLEAF LAMBSQUARTERS, COMMON LETTUCE, PRICKLY PIGWEED, REDROOT PURSLANE, COMMON

<sup>&</sup>lt;sup>1</sup> Oxyfluorfen 2 at the 8-pint rate (2.0 lb 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.

FILAREE, REDSTEM FILAREE, WHITESTEM GROUNDSEL, COMMON HENBIT KNOTWEED, PROSTRATE

**REDMAIDS** ROCKET, LONDON SHEPHERDSPURSE SOWTHISTLE, ANNUAL

#### ALL OTHER STATES (EXCEPT CALIFORNIA AND ARIZONA)

#### DOSAGE

Oxyfluorfen 2 is recommended for postemergence control at 2 to 8 pints (0.5 to 2.0 lb active) per broadcast acre. For preemergence control of susceptible weeds, use 5.0 to 8 pints (1.25 to 2.0 lb active) per broadcast acre.

WEEDS CONTROLLED POSTEMERGENCE: Apply 2 to 8 pints (0.5 to 2.0 lb active) of Oxyfluorfen 2 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 lb 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.

COCKLEBUR, COMMON CUDWEED, NARROWLEAF EVENINGPRIMROSE, CUTLEAF GROUNDCHERRY, CUTLEAF GROUNDCHERRY, WRIGHT

BALSAMAPPLE

**JIMSONWEED** LAMBSQUARTERS, COMMON

MORNINGGLORY, ANNUAL NIGHTSHADE, AMERICAN BLACK VELVETLEAF

NIGHTSHADE, BLACK

PEPPERWEED, VIRGINIA PIGWEED, REDROOT POINSETTIA, WILD PURSLANE, COMMON SESBANIA. HEMP SHEPHERDSPURSE

SIDA, PRICKLY (TEAWEED) SMARTWEED, PENNSYLVANIA

SOWTHISTLE, ANNUAL

Maximum 0.5-inch diameter

WEEDS CONTROLLED PREEMERGENCE: Apply 5 to 8 pints (1.25 to 2.0 lb active) of Oxyfluorfen 2 per broadcast acre.

CAMPHORWEED CUDWEED, NARROWLEAF <sup>†</sup> EVENINGPRIMROSE, CUTLEAF GROUNDCHERRY, CUTLEAF **JIMSONWEED** LAMBSQUARTERS, COMMON NIGHTSHADE, AMERICAN BLACK NIGHTSHADE, BLACK PEPPERWEED, VIRGINIA

PIGWEED. REDROOT POINSETTIA, WILD SIDA. PRICKLY SMARTWEED, PENNSYLVANIA SOWTHISTLE, ANNUAL SPURGE, PROSTRATE SPURGE, SPOTTED **VELVETLEAF** 

#### **ALL STATES**

# TIMING AND METHOD OF APPLICATION

In Arizona and California, Oxyfluorfen 2 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

The Highest rate and/or multiple applications may be required for acceptable control. Do not apply more than 8 pints (2.0 lb active) per broadcast acre of Oxyfluorfen 2 in one season.

Highest rate and/or multiple applications may be required for acceptable control. Do not apply more than 8 pints (2.0 lb active) per broadcast acre of Oxyfluorfen 2 in one season.

calendar dates above, but prior to bud swell, may result in significant crop injury and are the responsibility of the user.

In all states, do not apply Oxyfluorfen 2 after buds start to swell until completion of final harvest. Do not apply when fruit/nuts are present. Oxyfluorfen 2 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. Oxyfluorfen 2 should be directed to the soil and the base of domant 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. See SPECIFIC USE RESTRICTIONS for Oxyfluorfen 2 application on dormant tree or vine plantings.

In California, Oxyfluorfen 2 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. Do not apply over-the-top to grape plantings that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, half, injury from previously applied pesticides, or injury due to insects, nematodes, or diseases, as severe crop injury may result.

#### 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

CHEMIGATION (ALL STATES): For domant season application using sprinkler (low-volume (microsprinkler), drip (trickle), and flood (basin) irrigation systems, apply specified dosage of Oxyfluorfen 2 per acre as described in the applicable DOSAGE sections above. Follow all directions given in the CHEMIGATION section of this label when making applications using irrigation systems.

# **TANK MIXES WITH OXYFLUORFEN 2**

**IMPORTANT:** Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

#### **DOSAGE**

For preemergence control of susceptible grass and broadleaf weeds in certain bearing and nonbearing treefruit, nut or vine plantings, a tank mixture of Oxyfluorfen 2 with napropamide (Devrinol), diuron (Karmex), pronamide (Kerb), simazine, norflurazon (Sollcam) or oryzalin (Surflan) 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 in certain treefruit, nut or vine plantings, a tank mixture of paraquat (Gramoxone) or glyphosate (Glyphomax) with Oxyfluorfen 2 or combinations of Oxyfluorfen 2 plus napropamide (Devrinol), diuron (Karmex), pronamide (Kerb), simazine, norflurazon (Solicam) or oryzalin (Surflan) with either paraquat (Gramoxone) or glyphosate (Glyphomax) 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 Oxyfluorfen 2 used alone, control of susceptible weeds listed on the respective labels for the following products is also obtained:

diuron (Karmex)

oryzalin (Surflan)

65 775

glyphosate (Glyphomax) napropamide (Devrinol) norflurazon (Solicam)

paraquat (Gramoxone) pronamide (Kerb) \*\* simazine

# TREEFRUIT/NUT/VINE CROPS DORMANT APPLICATION SPECIFIC USE RESTRICTIONS

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

- Do not apply Oxyfluorfen 2 during the period between bud swell and completion of final harvest or when fruit/nuts are present. Oxyfluorfen 2 can be applied upon completion of final harvest.
- IN ARIZONA AND CALIFORNIA, Oxyfluorfen 2 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 lb active) per broadcast acre of Oxyfluorfen 2 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.
- Oxyfluorfen 2 or any of the combinations recommended on this label should be applied to only healthy growing trees or vines.
- Direct the spray toward the base of tree or vines unless specific recommendations allow over-the-top application. Avoid direct plant contact.

# GRAPES (CALIFORNIA ONLY) NON-DORMANT APPLICATION

**GENERAL INFORMATION** 

Oxyfluorfen 2 may be used for control/suppression of susceptible broadleaf weeds in non-dormant grapes (raisin and wine grapes only) when applied either as a directed spray or for supplemental preemergence weed control through low-volume sprinkler (microsprinkler) or drip irrigation systems. This product may also be applied to all grapes (raisin, table, wine) when applied as a dormant application as specified above. The total amount of Oxyfluorfen 2 applied during one season (from completion of final harvest through dormancy to non-dormant use covered by this section) cannot exceed a total of 8 pints (2.0 lb active ingredient) 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**

The use of Oxyfluorfen 2 may in some instances result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift, soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally. Grape leaves that are immature or expanding leaves at the time of contact with Oxyfluorfen 2 are the most susceptible to foliage injury. Grapes may exhibit some small blemishes (spots or flicks) on the fruit.

#### RATE AND APPLICATION TIMING

Applications to non-dormant grapes may be made during the period between the completion of bloom up through 14 days prior to harvest. Oxyfluorfen 2 is recommended for use at rates of 1 to 2 pints (0.25 to 0.5 lb active ingredient) per broadcast acre. Do not apply more than 8 pints (2.0 lb active ingredient) per broadcast acre per season as a result of multiple applications made during the dormant and non-dormant season (up to 14 days prior to harvest).

<sup>&</sup>lt;sup>1</sup> In addition, simazine provides preemergence control of horseweed (marestail).

WEEDS CONTROLLED OR SUPPRESSED POSTEMERGENCE (Weeds up to 4 inches in height)
For postemergence control/suppression, apply 1 to 2 pints (0.25 to 0.5 lb active ingredient) per broadcast acre to susceptible weed seedlings up to 4 inches in height. Repeat applications may be required.

Applications to weeds beyond the 4-inch stage or at reduced use rates will result in reduced herbicidal activity. For enhanced postemergence activity on listed grass and broadleaf weeds, a tank mixture of Oxyfluorfen 2 with either paraquat (Gramoxone) or glyphosate (Glyphomax) may be used when applied as a directed spray with ground application equipment.

CHEESEWEED (MALVA)
FIDDLENECK, COAST
GROUNDSEL, COMMON
HENBIT
MINERSLETTUCE

MINERSLETTUCE
MORNINGGLORY SPECIES, ANNUAL
MUSTARD, BLACK

NETTLE, BURNING NIGHTSHADE, BLACK PIGWEED, REDROOT PURSLANE, COMMON REDMAIDS

ROCKET, LONDON SOWTHISTLE, ANNUAL

Where postemergence weed activity is desired, add 1 quart of Latron AG-98 (or compatible 80% active nonionic surfactant cleared for application to growing crops) for each 100 gallons of spray.

# **TANK MIXTURES WITH OXYFLUORFEN 2**

IMPORTANT: Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive label limitations must apply.

#### WEEDS CONTROLLED OR SUPPRESSED-PREEMERGENCE

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

MUSTARD, BLACK

BURCLOVER
CHEESEWEED, MALVA
FIDDLENECK, COAST
GROUNDSEL, COMMON
HENBIT
KNOTWEED, PROSTRATE
LAMBSQUARTERS, COMMON
MINERSLETTUCE

NETTLE, BURNING
NIGHTSHADE, BLACK
PIGWEED, REDROOT
PURSLANE, COMMON
REDMAIDS
ROCKET, LONDON
SOWTHISTLE, ANNUAL

# **METHOD OF APPLICATION**

Apply Oxyfluorfen 2 at the recommended rate in a minimum of 20 gallons of water per acre (a minimum of 10 gallons per acre for Oxyfluorfen 2/glyphosate tank mix). Mix thoroughly. 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.

Oxyfluorfen 2 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 Oxyfluorfen 2 application in non-dormant vine plantings.

Thoroughly flush the spray equipment (tank, hose, pump and boom) with water before and after each use. Residual Oxyfluorfen 2 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. OXYFLUORFEN 2 IS PHYTOTOXIC TO PLANT FOLIAGE.

CHEMIGATION APPLICATION: Oxyfluorfen 2 may be applied using sprinkler (low volume (microsprinkler)) and drop (trickle) irrigation systems designed to distribute irrigation water beneath the vine canopy. The application of Oxyfluorfen 2 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 the specified dosage of Oxyfluorfen 2 per acre as described in the DOSAGE AND APPLICATION TIMING section above for non-dormant grapes. Meter Oxyfluorfen 2 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, Oxyfluorfen 2 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 ensure proper flushing of the irrigation system. Follow all directions given in the CHEMIGATION section of this label when making applications using sprinkler irrigation systems. Do not allow treated irrigation water to contact the fruit or foliage.

# GRAPES - NON-DORMANT APPLICATION (CALIFORNIA ONLY) SPECIFIC USE RESTRICTIONS

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

- The total amount of Oxyfluorfen 2 applied during one season (from completion of final harvest through dormancy to non-dormant use covered by this section) cannot exceed 8 pints (2.0 lb active ingredient) 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 system).
- Do not apply within 14 days of harvest.
- Do not initiate application of Oxyfluorfen 2 in non-dormant grapes until the completion of the bloom period.
- 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.
- Oxyfluorfen 2 should be applied only by ground application equipment or through low-volume sprinkler (microsprinkler) or drip (trickle) irrigation systems as specified above.
- Apply Oxyfluorfen 2 as a non-dormant application to wine grapes or raisin grapes only.

# GRAPES (WASHINGTON AND OREGON ONLY) WINE AND PROCESSING ONLY

#### **GENERAL INFORMATION**

Oxyfluorfen 2 may be used to assist with sucker control in grapes (wine and processing grapes only) when applied as a directed ground spray application to suckers growing from the base of the plant. The use of Oxyfluorfen 2 will typically reduce (but not eliminate) the need for sucker removal by hand.

# **CROP TOLERANCE**

The use of Oxyfluorfen 2 may in some instances result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift, soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally. Leaves that are immature or expanding at the time of contact with Oxyfluorfen 2 are the most susceptible to foliage injury. Grapes may exhibit some small blemishes (spots or flicks) on the fruit.

#### RATE AND APPLICATION TIMING

Apply Oxyfluorfen 2 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 newly 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 lb active ingredient) per

broadcast acre per season as a result of multiple applications made during a single season (dormant and non-dormant). The use of Oxyfluorfen 2 will typically reduce (but not eliminate) the need for sucker removal by hand. Applications may be made to non-dormant grapes up to three weeks after bloom. Do not apply within 60 days of harvest.

Add 2 pints of Latron AG-98 (or comparable 80 percent active nonionic surfactant cleared for application to growing crops) per each 100 gallons of spray.

For banded application, the amount of Oxyfluorfen 2 recommended per acre for broadcast application may be reduced according to the following formula:

Band Width (in inches) X

Rate per

Amount Needed per Acre

Row Width (in inches) Broadcast Acre

for Banded Application

#### METHOD OF APPLICATION

Oxyfluorfen 2 should be applied in a three-foot band directed towards the base of the grapevine. Applications are to be directed toward 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 Oxyfluorfen 2. Spray equipment should be calibrated carefully before each use.

#### **TANK MIXTURES WITH OXYFLUORFEN 2**

IMPORTANT: Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive requirements must apply. For enhanced postemergence sucker activity, a tank mixture of Oxyfluorfen 2 with either glufosinate (Rely) or paraquat (Gramoxone Extra) can be used. Apply at the recommended rates and growth stages in a manner described on the respective labels.

# GRAPES (WASHINGTON AND OREGON ONLY) WINE AND PROCESSING ONLY SPECIFIC USE RESTRICTIONS

- The total amount of Oxyfluorfen 2 applied during one crop year (dormant and non-dormant) cannot exceed 8 pints (2.0 lb active ingredient) per acre as a result of multiple applications in any given area (broadcast or banded).
- Oxyfluorfen 2 should be applied only by ground application equipment.
- Apply Oxyfluorfen 2 as a non-dormant application for sucker control only to wine or processed grapes.
- Do not apply when weather conditions favor drift. Avoid drift to all nontarget areas. Oxyfluorfen 2 is phytotoxic to plant foliage.
- Do not apply Oxyfluorfen 2 within 60 days of harvest.
- Do not apply Oxyfluorfen 2 to ditch banks or waterways.

# PISTACHIOS, WALNUTS, ALMONDS (CALIFORNIA ONLY) NON-DORMANT APPLICATION

#### **GENERAL INFORMATION**

Oxyfluorfen 2 provides effective vegetation management when applied to young broadleaf weed seedlings. For enhanced postemergence activity on listed grass and broadleaf weeds, a tank mixture of Oxyfluorfen 2 with either paraquat (Gramoxone) or glyphosate (Glyphomax) can be used when applied with ground application equipment.

#### **DOSAGE**

Oxyfluorfen 2 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 seedlings less than 4 inches in height. Repeat applications may be required.

For cleanup sprays and preharvest applications for contact (postemergence) control, apply Oxyfluorfen 2 at 2 to 8 pints (0.5 to 2.0 lb 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 lb active) per broadcast acre.

#### WEEDS SUPPRESSED AND/OR CONTROLLED

CHEESEWEED (MALVA) MORNINGGLORY SPECIES,

ANNUAL.

FIDDLENECK, COAST FILAREE, BROADLEAF

FILAREE, BROADLEAF FILAREE, REDSTEM

FILAREE, WHITESTEM GROUNDSEL, COMMON

HENBIT MINERSLETTUCE NETTLE, BURNING PIGWEED, REDROOT PURSLANE, COMMON

MUSTARD, BLACK

REDMAIDS

ROCKET, LONDON SOWTHISTLE, ANNUAL

### **TANK MIXTURES WITH OXYFLUORFEN 2**

IMPORTANT: Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive label limitations must apply.

#### DOSAGE

For enhanced postemergence activity on a broader spectrum of grass and broadleaf weeds in the tree row middles, a tank mixture of Oxyfluorfen 2 with either paraquat (Gramoxone) or glyphosate (Roundup, Glyphomax) 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

HORSEWEED (MARESTAIL)

BLUEGRASS, ANNUAL CHICKWEED, COMMON

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 Oxyfluorfen 2/glyphosate (Glyphomax) 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, Oxyfluorfen 2 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. Oxyfluorfen 2 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 Oxyfluorfen 2 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 Oxyfluorfen 2 at a continuous rate during the middle 1/3 of the irrigation period to allow for uniform distribution to the soil surface. For best results, Oxyfluorfen 2 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 ensure proper flushing of the irrigation system. Irrigation water treated with Oxyfluorfen 2 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 Oxyfluorfen 2, 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 trash into the soil through cultivation prior to herbicide application.

Cultural practices that result in redistribution or disturbance of the soil surface after treatment will decrease the herbicidal effectiveness of Oxyfluorfen 2. Cutting water furrow or cultivation that mixes 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 NON-DORMANT APPLICATION SPECIFIC USE RESTRICTIONS

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

- When applied as a non-dormant treatment, Oxyfluorfen 2 can only be applied to pistachio plantings between May and 7 days prior to harvest.
- When applied as a non-dormant treatment, Oxyfluorfen 2 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 Oxyfluorfen 2 within 7 days of harvest of pistachios.
- Do not apply Oxyfluorfen 2 within 30 days of harvest of almonds.
- Do not apply Oxyfluorfen 2 within 7 days of harvest of walnuts.
- Do not apply more than 8 pints (2.0 lb active ingredient) of Oxyfluorfen 2 per broadcast acre during the non-dormant season.
- Oxyfluorfen 2 should be applied only to healthy growing trees
- Direct spray toward the base of trees. Avoid direct contact with foliage or nuts.

# WINDBREAKS AND SHELTERBELTS

#### FOR USE ONLY IN MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA AND WYOMING

# **GENERAL INFORMATION**

Oxyfluorfen 2 is effective as a preemergence and/or posternergence herbicide for the control of listed 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 because the herbicidal effectiveness of Oxyfluorfen 2 may be decreased. Seedling weeds are controlled during emergence as they come in contact with the soil-applied herbicide. The most effective posternergence weed control is achieved when Oxyfluorfen 2 is applied with thorough coverage of weeds in the seedling stage.

Occasionally after the use of Oxyfluorfen 2, a spotting, crinkling or flecking may appear on the leaves of the deciduous species. Leaves that receive direct or indirect (drift) spray contact will be injured. Deciduous species typically outgrow this condition rapidly and develop normally.

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**IMPORTANT:** Some varieties or cultivars of conifers and deciduous species listed may be susceptible to Oxyfluorfen 2. Care should be taken to ensure that the particular variety to be sprayed with Oxyfluorfen 2 is tolerant. It is suggested that unfamiliar species be tested in limited areas prior to application for preemergence and posternergence weed control.

#### **WEEDS CONTROLLED**

When Oxyfluorfen 2 is applied preemergence or postemergence (up to 4-leaf weed stage) at recommended dosages, the following broadleaf weeds are controlled:

BUCKWHEAT, WILD

BURCLOVER CARPETWEED

DOCK, CURLY GROUNDCHERRY, CUTLEAF

GROUNDCHERRY, WRIGHT

GROUNDSEL, COMMON

HENBIT JIMSONWEED

KNOTWEED, PROSTRATE

**KOCHIA** 

LADYSTHUMB

LAMBSQUARTERS, COMMON

LETTUCE, PRICKLY

MALLOW, LITTLE

MAYWEED

MUSTARD, BLUE

MUSTARD, TUMBLE

MUSTARD, WILD

NETTLE, BURNING NIGHTSHADE, BLACK

NIGHTSHADE, HAIRY

OATS, WILD ORACH, RED

PEPPERWEED, YELLOW FLOWER

PIGWEED, PROSTRATE PIGWEED, REDROOT PURSLANE, COMMON ROCKET, LONDON

† SHEPHERDSPURSE

SMARTWEED, PENNSYLVANIA SOWTHISTLE. ANNUAL

TANSYMUSTARD

THISTLE, RUSSIAN (seedling)

VELVETLEAF

#### **GRASSES CONTROLLED**

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

BARNYARDGRASS BLUEGRASS, ANNUAL CRABGRASS, LARGE FOXTAIL, GIANT GOOSEGRASS WITCHGRASS

Oxyfluorfen 2 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 to growing crops, enhances herbicidal 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.

Oxyfluorfen 2 may be applied to numerous conifer and deciduous species, including the following:

#### **CONIFER SPECIES**

Common Name DOUGLAS-FIR Scientific Name

Pseudotsuga menziesii

FIR

GRAND FRASER Abies grandis Abies fraseri

<sup>&</sup>lt;sup>†</sup> The highest rate or multiple applications may be required for acceptable control.

NOBLE

**HEMLOCK** 

EASTERN HEMLOCK WESTERN HEMLOCK

**AUSTRIAN EASTERN WHITE** 

**JACK HIMALAYAN** LOBLOLLY LODGEPOLE LONGLEAF

MONTEREY **MUGHO PONDEROSA** SCOTCH SHORTLEAF SLASH **VIRGINIA** 

SPRUCE

BLUE **DWARF ALBERTA** 

**NORWAY** SITKA

**ARBORVITAE** 

**JUNIPER** 

Abies procera

Tsuga canadensis Tsuga heterophylla

Pinus nigra Pinus strobus Pinus banksiana Pinus graffithii Pinus taeda Pinus contorta Pinus palustris Pinus radiata Pinus mugo Pinus ponderosa Pinus sylvestris Pinus echinata Pinus elliottii Pinus virginiana

Picea pungens Picea glauca conica

Picea abies Picea sitchensis

Thuia occidentalis Thuja orientalis

Juniperus chinensis

Juniperus horizontalis Juniperus procumbens Juniperus sabina Juniperus scopulorum

**RED CEDAR** 

Juniperus virginiana

YEW

Taxus spp.

## **DECIDUOUS HARDWOOD SPECIES**

**ASH** 

LILAC

**CRABAPPLE** 

**EUCALYPTUS** 

Fraxinus spp. Malus spp.

Eucalyptus viminalis, E. pulverulenta,

E. camaldulensis Syringa vulgaris Acer nigrum Quercus rubra

OLIVE, RUSSIAN

OAK, NORTHERN RED

POPLAR (COTTONWOOD)

SWEETGUM **SYCAMORE** 

MAPLE, BLACK

WALNUT, BLACK

Populus spp. Liquidambar styraciflua

Platanus occidentalis

Elaeagnus angustifolia

Jugians nigra

#### DOSAGE

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

For banded application, the amount of Oxyfluorfen 2 recommended per acre for broadcast application may be reduced according to the following formula:

Band Width (in inches)

Rate per

Amount Needed per Acre

Row Width (in inches) Broadcast Acre

Х

for Banded Application

#### **METHOD OF APPLICATION**

**CONIFERS:** Oxyfluorfen 2 can be applied pre-transplant, 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 HARDWOODS: Oxyfluorfen 2 has exhibited selectivity to many deciduous species when applied pre-transplant 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 non-dormant 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.)

Oxyfluorfen 2 should be thoroughly mixed with clean water at the recommended rate 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 Oxyfluorfen 2. Spray equipment should be calibrated carefully before each use.

Pre-transplant 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 Oxyfluorfen 2 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

The following use restrictions must be observed when Oxyfluorfen 2 is used as recommended on this label.

- Do not apply more than 8 pints (2.0 lb active ingredient) of Oxyfluorfen 2 per treated acre per growing season as a result of single or multiple applications.
- Always apply Oxyfluorfen 2 to healthy deciduous and/or conifer species.
- Do not apply Oxyfluorfen 2 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.

# AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY

### FROM FEBRUARY 15 THROUGH MARCH 31 ONLY

In addition to aerial application directions contained elsewhere in this label, the following guidelines are required between the dates of February 15 and March 31 for applications in the following geographic area:

North: Fresno County Line
 South: Fresno County Line
 East: State Highway 99
 West: Fresno County Line

Observe the following restrictions to minimize off-site movement during aerial application of Oxyfluorfen 2. Minimization of off-site movement is the responsibility of the grower, pest control advisor and aerial applicator.

A written recommendation must be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation must state the proximity of surrounding crops, and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial application of Oxyfluorfen 2 is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno county Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to ensure that proper rates are being applied during the commercial use season. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved "fly-ins" constitutes such documentation; or other written records showing calculations and measurements of flight and spray parameters acceptable.

Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

**IMPORTANT:** Read the entire DIRECTIONS FOR USE and the CONDITIONS OF SALE AND WARRANTY before using this product. If terms are not acceptable, return the unopened product container at once.

# **CONDITIONS OF SALE AND WARRANTY**

The DIRECTIONS FOR USE of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of Nation's Ag, LLC or the seller. All such risks shall be assumed by the buyer.

Nation's Ag, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the DIRECTIONS FOR USE when it is used in accordance with such directions, subject to the inherent risks mentioned above.

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THIS WARRANTY EXTENDS TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS, OR CAUTIONS. BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY

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Questions? Call 1-800-979-8994.

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