



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

November 10, 2021

Patricia McFadden  
Registration Manager, Agent for Sipcam Oxon, S.p.A.  
Sipcam Oxon S.p.A.  
c/o Sipcam Agro USA, Inc.  
2525 Meridian Parkway  
Durham, NC 27713

Subject: Registration Review Label Amendments for Simazine Mitigation Measures from the Interim Decision and the Technical Registrants' Commitments for the Endangered Species Act (ESA) Biological Evaluation  
*Product Name:* SIM-TROL 9DF  
*EPA Registration Number:* 35915-12  
*Application Date:* November 20, 2020  
*Decision Number:* 568085

Dear Ms. McFadden,

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Simazine Interim Decision and with the technical registrants' commitments for the ESA Biological Evaluation. The Agency has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling

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before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

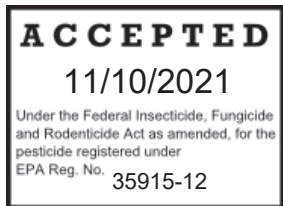
If you have any questions about this letter, please contact Natalie Bray at [bray.natalie@epa.gov](mailto:bray.natalie@epa.gov).

Sincerely,



Kelly Sherman  
Chief, Risk Management and Implementation  
Branch III (RMIB III)  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs  
U.S. Environmental Protection Agency

Enclosure



SIMAZINE	GROUP	<b>5</b>	HERBICIDE
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## Sim-Trol® 9DF

**For Weed Control in listed crops and ornamental plantings**

**Active Ingredient:**

Simazine (2-Chloro-4,6-bis (ethylamino)- s-triazine) .....	90.0%
Other Ingredients: .....	<u>10.0%</u>
Total: .....	100.0%

**KEEP OUT OF REACH OF CHILDREN  
 CAUTION**

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

FIRST AID	
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>Emergency Phone Numbers</b>	(800) 222-1222 Poison Control Center (human health) (800) 424-9300 CHEMTREC (transportation and spills)

EPA Reg. No. 35915-12  
 Net Contents: \_\_\_\_\_ [pounds] [lbs.] [(\_\_ kg)]  
 [Lot number / Label Date Code]

EPA Est. No. \_\_\_\_\_  
 [Lot no. begins with xx]

Sim-Trol is a registered trademark of Sipcam Agro USA, Inc.

Manufactured for SIPCAM OXON S.p.A. Via Sempione, 195-20016 PERO MILANO-ITALY	[Distributed by Sipcam Agro USA, Inc. 2525 Meridian Parkway Durham, NC 27713]
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See additional Precautionary Statements and Directions for Use inside booklet.  
Read the [entire] label carefully before opening the container

**NOT** for use in the states of Hawaii or Alaska or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands)

### **OPTIONAL LANGUAGE FOR LABEL**

[Pull open here]

[Pull back [book] [label] here]

[Application Type AG Agricultural]

[Application Type T/O Turf & Ornamental]

[Formulated in the United States of America, with U.S. and imported ingredients.]

[Herbicide]

## **PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION.** Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Causes moderate eye irritation.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Mixers, loaders, and handlers supporting groundboom applications must wear:**

- Coveralls over long sleeve shirt and long pants
- Chemical-resistant footwear plus socks
- Gloves
  - For mixing with water only: Waterproof gloves
  - For mixing with emulsifiable oil or oil concentrate: Barrier laminate, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥14 mils, or Viton ≥14 mils
- Chemical-resistant apron
- A minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R or P filter; OR a NIOSH-approved powered air purifying respirator with HE filters.

**All mixers, loaders, applicators, and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Shoes plus socks
- Gloves
  - For mixing with water only: Waterproof gloves
  - For mixing with emulsifiable oil or oil concentrate: Barrier laminate, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥14 mils, or Viton ≥14 mils

**For grapefruit and orange applications:**

Mixer, loader, and applicators for backpack application to grapefruit and oranges are required to wear shoes, socks, coveralls worn over long-sleeved shirts and long pants.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product concentrate. **DO NOT** reuse them.

## ENGINEERING CONTROLS

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

### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

Simazine can travel (seep or leach) through soil and enter ground water which may be used as drinking water. Simazine has been found in ground water as a result of its use as an herbicide. Users are advised not to apply Simazine to sand and loamy soils where the water table (ground water) is close to the surface and where the soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

Products must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. Product must not be applied within 66 feet of points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet of natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 foot buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop. Product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells and sink holes. Operations that involve mixing, loading, rinsing or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water and rain water that may fall on the pad. Surface water shall not be allowed to either flow over, or from, the pad which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain, at a minimum, 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide to the mixing/loading sites.

Additional state imposed requirements regarding well-head setbacks and operational area containment must be observed.

One of the following restrictions must be used in applying simazine to tile-outletted terraced fields containing standpipes:

- **DO NOT** apply within 66 feet of standpipes

- Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire field.
- Apply this product to the entire tile-outletted terraced field under a no-till practice only when a high crop residue management practice is practiced. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

### **Non-Target Organism Advisory Statement**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

### **PHYSICAL OR CHEMICAL HAZARDS**

This product is incompatible with strong oxidizing agents.

### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

#### **Aerial application is prohibited.**

For residential turf on lawns, institutional turf, parks or recreational fields, the maximum application rate may either be:

1.6 lbs.AI/A paired with the requirement of 0.5 inches of irrigation; or  
0.65 lbs.AI/A without irrigation.

Applications made by mechanically pressurized handguns are restricted to spot treatment only for the following uses

- Citrus (Grapefruit, Oranges, Lemons)
- Pome Fruits (Apples, Pears)
- Stone Fruits (Cherries [sweet and tart], peaches, Plums, Nectarines)
- Tree Nuts (Pecans, Walnuts, Filberts, Almonds, Macadamia Nuts)
- Berry and Small Fruit (Blueberries, Blackberries, Loganberries, Raspberries, Grapes, Lowbush Blueberries, Cranberries)
- Tropical and Sub-tropical Fruits (Avocado, Olive)
- Nursery/Ornamentals
- Sweet Corn

Not for use in the states of Hawaii or Alaska or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands)

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Simazine Watershed Information Center (SWIC) to determine whether the use of this product is prohibited in your watershed. SWIC can be accessed through [www.simazine-watershed.info](http://www.simazine-watershed.info) or 1-888-365-2874. If the SWIC indicates that use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact [Sipcam Oxon S.p.A.] [Sipcam Agro USA] for a refund.

**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.

**For Christmas trees, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours. For all other crops and use-patterns, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.** Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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:  
Coveralls, chemically resistant waterproof gloves and shoes plus socks.

### 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.

**DO NOT enter or allow others (including children or pet) to enter until sprays have dried.**

### ENDANGERED SPECIES

It is a Federal offense to use any pesticide in a manner that results in an unauthorized “take” (e.g., kill or otherwise harm) of an endangered species under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

### RESTRICTIONS

- **NOT** for use in the states of Hawaii or Alaska or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands)
- All shelterbelt and forestry uses, except “Christmas Tree Plantings”, are prohibited.
- For use on warm season turf grass only (e.g., Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysiagrass).

### WEED RESISTANCE MANAGEMENT

For resistance management, this product is a Group 5 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 5 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of this product or other Group 5 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.



- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage ( or other mechanical control methods), cultural ( e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact your local [Sipcam Oxon] [Sipcam Agro] [company] representatives.

## PRODUCT INFORMATION

Apply this herbicide before weeds emerge or after removal of weed growth. This product controls a wide variety of annual broadleaf and grass weeds when used at selective rates in agricultural crops and ornamental plantings.

Where a range of application rates is given, use the low rate on coarser-textured soil and soil lower in organic matter; use the high rate on fine-textured soil and soil higher in organic matter.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result.

Since this product enters weeds mainly through their roots, moisture is needed to move it into the root zone. Very dry soil conditions and lack of rainfall following application may necessitate shallow cultivation.

This product is non-corrosive to equipment, non-flammable, and has low electrical conductivity.

**FAILURE TO FOLLOW PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR WEED CONTROL, AND/OR ILLEGAL RESIDUES.**



### ANNUAL WEEDS CONTROLLED

alyssum	Flora's paintbrush	ragweed
annual bluegrass	Florida pusley	rattail fescue
annual morningglory	foxtails	redmaids
annual ryegrass	goosegrass	Russian thistle
barnyardgrass (watergrass)	groundsel	sheepspurse
burclover	henbit	signalgrass ( <i>Brachiaria</i> spp.)
carelessweed	junglerice	silver hairgrass
carpetweed	knawel (German moss)	smartweed
common chickweed	common lambsquarters	spanishneedles
crabgrass ( <i>Digitaria</i> spp.)	nightshade	speedwell
downey brome (cheatgrass)	pepperweed	tansymustard
fall panicum	pigweed	wild mustard
fiddleneck	pineappleweed	wild oats
filaree	prickly lettuce	witchgrass
fireweed	common purslane	yellow flower pepperweed
fivehook bassia		

Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported which cannot be effectively controlled by this and related herbicides. Where this is known or suspected, and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of this product in registered combinations or in sequence with other registered herbicides which are not triazines. If only resistant biotypes are expected to be present, use a registered nontriazine herbicide. Consult with your State Agricultural Extension Service for specific recommendations.

#### RESTRICTION

**DO NOT** apply this product through any type of irrigation system.

### GROUND APPLICATION

#### SPRAY EQUIPMENT

Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and the same size. Calibrate sprayer before use and recalibrate at the start of each season and when changing carriers. Unless otherwise specified, use a minimum of 20 gals. of spray mixture per acre.

Use a pump with capacity to: (1) maintain 35-40 psi at the nozzles, (2) provide sufficient agitation in the tank to keep the mixture in suspension, and (3) to provide a minimum of 20% bypass at all times. Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product. The pump should provide a minimum of 10 gals./minute/100 gal. tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on suction side of the pump should be 16-mesh or coarser. DO NOT place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

**For band applications, calculate amount to be applied per acre as follows:**

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast per acre} = \text{amount needed per acre of field}$$

### **Pre-Emergence Applications**

Make pre-emergence applications of this product in a spray volume of 10 to 80 gals/A.

### **Early Post-Emergence Applications**

For optimum weed control, good weed coverage is essential. For broadcast, over-the-top applications, boom height should be at least 15 inches above the crop canopy and no more than four (4) feet above the ground or crop canopy, high enough to give good, uniform coverage. Make applications in a spray volume of 10 to 30 gals/A. If weed pressure is high and foliage is dense, use a minimum spray volume of 20 gals/A. For post-emergence applications, use flat fan nozzles of 80° or 110° angled forward at 45° for best coverage. DO NOT use flood jet nozzles or controlled droplet application.

## **MANDATORY SPRAY DRIFT MANAGEMENT**

### **Ground Boom Applications:**

- Users must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.
- User must maintain a 15 foot (4.6 meter) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as the high-tide line for all estuarine/marine environments.

## **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.  
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

### **Controlling Droplet Size - Ground Boom**

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### **BOOM HEIGHT - Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

## TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## Handheld Technology Applications

- Take precautions to minimize spray drift.

## SENSITIVE AREAS

Apply this product only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoid application directly to animals or humans. Flagmen and loaders should avoid inhalation of dust or spray mist, and prolonged contact with skin.

## MIXING INSTRUCTIONS

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Mixing procedures – All Uses:** (1) Be sure sprayer is clean and not contaminated with any material, as crop injury or sprayer clogging may result. (2) Fill tank  $\frac{1}{4}$  full with clean water, nitrogen solution, or complete liquid fertilizer and start agitation. (3) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (4) Pour product directly from bag into the tank. (5) Continue filling the tank until 90% full. Increase agitation if necessary to maintain surface action. (6) Add tank mix herbicide(s) after this product is thoroughly suspended. (7) Finish filling tank, maintaining sufficient agitation to avoid separation of tank contents, and empty tank as completely as possible before re-filling in order to prevent buildup of oil or emulsifiable concentrate residue from possible tank mix herbicides. (8) If an oil or emulsifiable concentrate film starts to build up in the tank, drain it and clean with strong detergent solution or solvent. (9) Immediately after use, clean sprayer thoroughly by flushing system with water containing a detergent.

When mixing, gloves must be worn. For mixing with water only: Wear waterproof gloves. For mixing with emulsifiable oil or oil concentrate: Gloves made of Barrier laminate, Nitrile Rubber  $\geq 14$  mils, Neoprene Rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils must be worn.

**COMPATIBILITY TEST:** To determine the tank mix compatibility of this product with liquid fertilizer, crop oil, spreaders, or recommended pesticides, use this test method. Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray in corn. Since liquid fertilizers can vary, even within the same analysis, check compatibility each time before use. Be especially careful when using **complete** suspension or fluid fertilizers, as serious compatibility problems are more apt to occur. Commercial application equipment may improve compatibility in some instances. Check compatibility using this procedure:

- 1) Add 1 pint of liquid carrier (water, fertilizer suspension or solution) to each of two (2) one-quart jars with tight lids.
- 2) To **one** of the jars add ¼ teaspoon (1.2 milliliters) of a compatibility agent approved for this use, such as Compex® or Unite® (¼ teaspoon in one quart of compatibility test mixture is equivalent to approximately 2 pints per 100 gallons of spray mixture). Shake or stir gently to mix.
- 3) To **both** jars add the appropriate amount of herbicide(s) intended to be tank mixed. If more than one type of formulation is to be used, first add dry product(s), then flowables or liquid suspension concentrates, and emulsifiable concentrates last. After each addition, cap and shake the mixture gently to thoroughly mix. The appropriate amount of each herbicide to be used for this test is as follows (assuming a spray volume of 25 gals./A):

**Dry products:** For each pound per acre, add approximately 1.5 level teaspoons to each jar. Fluff up wettable powder products before measuring.

**Liquid products:** For each pint per acre, add 0.5 teaspoons (2.5 milliliters) to each jar.

For a spray volume other than 25 gals./A, change the teaspoons added to each jar as follows:

$$\frac{25 \text{ gals.} \times \text{no. teaspoons given above}}{\text{desired gals. spray volume per acre}} = \text{teaspoons to add to each jar}$$

- 4) After adding all ingredients, put lids on and tighten, then invert each jar ten times to mix. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, grease, gels, medium to heavy oily film in the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the contents of the two jars. If either mixture separates, but can be remixed readily, the mixture probably can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) slurry the dry herbicide(s) in water before addition, or (B) add ½ of the compatibility agent to the fertilizer and the other ½ to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If still incompatible, do not use the materials mixed in the same spray tank.

**When tank-mixing** or sequentially applying simazine or products containing simazine, the total pounds of simazine applied must not exceed the specific maximum rate per calendar year as noted in the use directions.

### PERENNIAL CROP REPLANTING

If replanting perennial crops do not apply this product in the year preceding planting these crops, unless otherwise stated in this label, or crop injury may occur.

### FRUIT AND NUT CROPS

Apply the spray to the orchard or vineyard floor avoiding contact with fruit, foliage or stems. Recommended rates are based on broadcast treatment. For band applications or spot applications around fruit or nut trees, reduce the broadcast rate of this product and water per acre in proportion to the area actually sprayed.

### USE RESTRICTIONS (all fruit and nut crops):

To avoid crop injury,

- Apply only to orchards or groves where trees have been established one year or more unless specified differently.

- Make only one application per year, except as noted otherwise.
- **DO NOT** use on gravelly, sand, or loamy sand soil.
- Immediately following application, limit overhead sprinkler irrigation to ½ inch.
- Applications made by mechanically pressurized handguns are restricted to spot treatment only for the following use:
  - Citrus (Grapefruit, Oranges, Lemons)
  - Pome Fruits (Apples, Pears)
  - Stone Fruits (Cherries (sweet and tart), Peaches, Plums, Nectarines)
  - Tree Nuts (Pecans, Walnuts, Filberts, Almonds, Macadamia Nuts)
  - Berry and Small Fruit (Blueberries, Blackberries, Loganberries, Raspberries, Grapes, Lowbush Blueberries)
  - Tropical and Sub-tropical Fruits (Avocado, Olive)
  - Nursery / Ornamentals
  - Sweet Corn
- Applications made by mechanically pressurized handguns to strawberries are restricted to either spot treatment only or mixer/loader/applicators are required to wear shoes, socks, coveralls worn over long-sleeved shirts and long pants.

**ALMONDS, PEACHES AND NECTARINES: Apply only in CA.** Apply 1.1-2.2 lbs. product (1.0-2.0 lbs.AI) per treated acre per calendar year. Must be applied in a 2-4 ft. band on each side of the tree rows. Apply before weeds emerge in late fall or early winter. Weeds controlled by 1.1 lbs. product (1.0 lbs.AI) include burclover, common chickweed, wild mustard, and shepherdspurse.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- To avoid crop injury:
  - **DO NOT** treat trees established in the grove less than 3 years.
  - **DO NOT** treat the Mission (TX) variety of almonds.
  - **DO NOT** apply to almond trees propagated on plum rootstocks.
  - **DO NOT** replant almonds, peaches or nectarines in treated soil for 12 months after treatment.
  - **DO NOT** apply to soil with less than 1% organic matter.
  - **DO NOT** treat areas where water will accumulate.
- **DO NOT** apply more than 2.2 lbs. product (2 lbs.AI) per treated acre per calendar year.
- **DO NOT** apply more than once per calendar year.

**APPLES, PEARS, TART CHERRIES:** Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) per acre per calendar year.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply more than 4.4 lbs. product (4.0 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than once per calendar year.
- Apples: Pre-harvest interval 150 days.

**AVOCADOS:** Apply only in CA and FL. Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) per acre per calendar year after final preparation of grove.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply more than once per calendar year.

**BLUEBERRIES AND CANEBERRIES (blackberries, boysenberries, loganberries, raspberries):** Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) per acre in the spring or apply a split application of 2.2 lbs. product (2.0 lbs.AI) per acre in the spring plus 2.2 lbs. product (2.0 lbs.AI) per acre in the fall.

On plantings less than 6 months old, use ½ the above rate.

To control quackgrass, apply 4.4 lbs. product (4.0 lbs.AI) per acre in the fall or split the application applying 2.2 lbs. product (2.0 lbs.AI) per acre in the fall plus 2.2 lbs. product (2.0 lbs.AI) per acre in the spring, when quackgrass is actively growing.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply when fruit is present, as illegal residues may result.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than twice per calendar year.
- Apply in a minimum of 40 gallons of water per acre.

**FILBERTS:** Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) per acre in the fall or apply a split application of 2.2 lbs. product (2.0 lbs.AI) per acre in the fall plus 2.2 lbs. product (2.0 lbs.AI) per acre in the spring.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- If trees are planted on a hillside, excessive soil erosion may result from the elimination of weeds.
- **DO NOT** apply when nuts are on the ground during the harvest.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than twice per calendar year.

**GRAPES:** Apply 2.2-4.4 lbs. per acre any time between harvest and early spring.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** use in vineyards established less than three years, or crop injury may occur.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than once per calendar year.

**GRAPEFRUIT, LEMONS, ORANGES**

**USE RESTRICTIONS (All states):**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply to bedded grapefruit, lemons or oranges (except for FL grapefruit and oranges).
- **DO NOT** apply to trees under stress from freeze damage for one year after the freeze.

**In AZ (Lemons, Oranges only):** Apply a split application of 1.75 lbs. product (1.6 lbs.AI) per acre in the spring plus 1.75 lbs. product (1.6 lbs.AI) per acre in the fall.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply more than 3.5 lbs. product (3.2 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than 1.75 lbs. product (1.6 lbs.AI) per acre per application.

**In CA: (Grapefruit, Lemons and Oranges):** Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) per acre in a single application, or apply 2.2 lbs. product (2.0 lbs.AI) per acre in the fall and 2.2 lbs. product (2.0 lbs.AI) per acre in the spring.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** use in the Imperial, Coachella, or Palo Verdes Valleys, or crop injury may occur.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than twice per calendar year.



**In FL (Grapefruit and Oranges only):**

Broadcast Applications: Apply up to 4.4 lbs. of this product (4 lbs.AI) per application to weed-free soil, once during the spring and/or once during the fall, to control weeds expected to emerge during these periods. Apply prior to emergence of weeds or after emerged weeds have been controlled with a contact herbicide.

**USE PRECAUTIONS:**

- Use caution to keep the treatment off the foliage, fruit, or trunk of citrus trees.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply more than 4.4 lbs. of this product per acre (4 lbs.AI/A) per application.
- **DO NOT** apply more than 8.8 lbs. of this product per acre (8 lbs.AI/A) per calendar year.

**Banded Applications:** For control of difficult species, such as balsamapple vine and spanishneedles, and partial control of honeyvine milkweed, apply a maximum of 8.8 lbs. of this product (8 lbs.AI/A) as a single application in the spring as a 50% band application.

The amount of this product applied per treated acre of field must not exceed 4.4 lbs. (4 lbs.AI/A). Apply once in the spring growing season between January and April. **DO NOT** make a fall application of this product if this treatment was used in the spring. When emerged weeds are present, apply this product in tank mixture with a recommended contact herbicide. Follow all directions, restrictions, and precautions on the tank mix products.

**In TX (Grapefruit & Oranges only):**

Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) per acre.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply more than 4.4 lbs. product (4.0 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than twice per calendar year.

**MACADAMIA NUTS:** Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) in 50 gallons of water per acre per calendar year before harvest and just prior to weed emergence.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply when nuts are on the ground during the harvest period, as illegal residues may result.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than once per calendar year.

**OLIVES:** Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) per acre per calendar year following grove preparation in the fall.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than once per calendar year.

**PEACHES, PLUMS, SWEET CHERRIES:** Apply 1.75-4.4 lbs. product (1.6-4.0 lbs.AI) per acre per calendar year. Apply in late fall to early spring prior to weed emergence.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than once per calendar year.
- Plums and sweet cherries: use only in MO and states east of the Mississippi River except TN.



**PEACHES (CA only):** This product must be applied as a 2 – 4 ft band on each side of tree rows.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply more than 2.2 lbs. product (2 lbs.AI) per treated acre per calendar year.
- **DO NOT** apply more than once per calendar year.

**PEACHES (States other than CA):** Apply 4.4 lbs. of this product (4 lbs.AI) per acre per calendar year.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- To avoid crop injury,
- Peaches: use only in AR, LA, MO, OK, TX, and the states east of the Mississippi River. For CA, see specific directions in the **Almonds, Peaches, and Nectarines (CA only)** section.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per treated acre per calendar year.
- **DO NOT** apply more than once per calendar year.

**PECANS:** Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) per acre per calendar year before weeds emerge in the spring.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- To avoid crop injury,
  - **DO NOT** use west of the Pecos River in TX or in NM, AZ, or CA, as injury will occur.
  - **DO NOT** make applications to transplanted trees that have been established less than two years in the grove.
  - **DO NOT** apply when nuts are on the ground, or illegal residues may result.
  - **DO NOT** allow animals to graze treated areas.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than once per calendar year.

**STRAWBERRIES (OR and WA Only):** For control of chickweed, groundsel, mustard, and shepherdspurse, apply broadcast a maximum of 1.1 lbs. product (1 lbs.AI) per acre per calendar year. **DO NOT** apply more than 1.1 lbs. product (1 lbs.AI) per acre per calendar year. In fields where overhead irrigation is used to activate this product, apply after harvest at time of bed renovation. In fields where overhead irrigation is not available, apply during early October through November.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns to strawberries are restricted to either spot treatment only or mixer/loader/applicators are required to wear shoes, socks, coveralls worn over long-sleeved shirts and long pants.

To avoid crop injury,

- **DO NOT** apply within 4 months after transplanting.
- **DO NOT** apply more than once per calendar year.

**WALNUTS:** Apply 2.2-4.4 lbs. product (2.0-4.0 lbs.AI) per acre per calendar year.

**USE PRECAUTIONS:**

- Leveling and furrowing operations after application will lessen effectiveness of weed control.

**USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- **DO NOT** apply when nuts are on the ground, or illegal residues may result.
- **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than once per calendar year.

### Tank Mixture with Bromacil for Grapefruit and Oranges (Florida only)

Use on grapefruit and oranges in FL for control of balsamapple, black nightshade, carpetweed, crabgrass, cudweed, dayweed, Florida pusley, horseweed, pepperweed, pigweed, poorjoe, ragweed, rattlebox, spanishneedles and sandbur, and for partial control of bermudagrass, bahiagrass, pangolagrass, paragrass, and torpedograss. Apply 4.4 lbs. of this product (4.0 lbs.AI) plus 2.4-3.2 lbs.AI of bromacil 80W per acre beneath trees in a minimum of 40 gals. of water per acre before or soon after weed growth begins.

Refer to the labels of both products for further directions, specific weeds controlled, and restrictions and precautions on each crop.

#### USE PRECAUTIONS:

- Use caution to keep the spray off the foliage, fruit, or trunk of citrus trees.
- Temporary yellowing of citrus leaves may occur following treatment.

#### USE RESTRICTIONS:

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- To avoid crop injury,
  - **DO NOT** use in nurseries, or where trees are under stress from freeze damage for one year after the freeze.
  - **DO NOT** use on soil with less than 1% organic matter or on poorly drained soil.
  - **DO NOT** treat trees planted in irrigation furrows.
  - **DO NOT** treat diseased trees such as those with foot rot.
  - **DO NOT** use in groves interplanted with other trees or desirable plants, nor in home grapefruit or oranges plantings, or in areas where roots of other valuable plants or trees may extend.
  - Treated areas may be planted to citrus trees one year after application.
  - **DO NOT** rotate to other crops within two years after application.
  - Apply only once per year and avoid contact with foliage and fruit with spray or mist, or illegal residues may result.

### Tank Mixture with Paraquat

This tank mix is effective in the following fruit and nut crops for kill of existing vegetation and for residual control of the annual broadleaf and grass weeds claimed for this product applied alone. This combination is also effective for top kill and suppression of perennial weeds. In FL, this mixture may be applied in spring or fall to emerged weeds.

#### Use this tank mix on these crops:

Almonds (CA only)	Grapes	Peaches <sup>3</sup>
Apples	Lemons (AZ & CA only)	Pears
Avocados (CA & FL <sup>1</sup> only)	Macadamia nuts*	Pecans
Cherries (tart and sweet <sup>4</sup> )	Olives	Plums <sup>4</sup>
Filberts	Oranges <sup>2</sup>	Walnuts
Grapefruit (CA & TX only)		

<sup>1</sup>In avocados in FL, this tank mix also controls balsamapple, rattail amaranth, and at the higher rate of each herbicide, it suppresses coral vine.

<sup>2</sup>In oranges in FL, apply 4.4 lbs. of this product (4.0 lbs.AI) per acre per application during Spring or Fall. **DO NOT** exceed 8.8 lbs. of this product during any one growing season.

<sup>3</sup>Limited to AR, CA, LA, MO, OK, TX, and states east of the Mississippi River. As appropriate, refer to the sections **Almonds, Peaches, and Nectarines (CA only)** or **Peaches, Plums, and Sweet Cherries** for rate of this product and other information.

<sup>4</sup>Limited to MO and states east of the Mississippi River except TN.

Apply this product at the rate given under the appropriate crop on this label plus 0.56-0.94 lbs. Paraquat cation in 50-200 gals. (30-50 gals. for pecans) of water per acre to the orchard floor avoiding contact with fruit, foliage, or stems. Add a nonionic surfactant, such as X-77®, at 0.5 pt. per 100 gals. of

spray. Apply when weeds are succulent and new growth is 1-6 inches tall. For mature woody weeds or difficult to control perennial weeds, re-treat or spot treat with paraquat if regrowth occurs.

Add this product to the spray tank first (refer to **Mixing procedures** section of this label), then add paraquat, and add the surfactant last. Provide constant agitation during mixing and application to keep the mixture in suspension.

Refer to the labels of both products for further directions, specific weeds controlled, and restrictions and precautions on each crop.

#### USE RESTRICTIONS:

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.
- To avoid crop injury,
  - Apply the tank mix only once per year.
  - Use a shield for young trees or vines.

#### Tank Mixture with Glyphosate

This tank mixture is effective in grape vineyards and in the following bearing or nonbearing tree crops for control of existing vegetation and for residual control of the annual broadleaf and grass weeds claimed for this product applied alone. This combination is also effective for partial control of perennial weeds contacted by the spray mixture during application.

Use this tank mixture on these crops:

Almonds** (CA only)	Grapefruit*** (CA, FL, TX)	Peaches* <sup>1</sup>
Apples*	Grapes*	Pears*
Avocados* (CA & FL only)	Lemons* (AZ and CA)	Pecans**
Cherries (tart and sweet**** <sup>2</sup> )	Macadamia nuts**	Plums**** <sup>2</sup>
Filberts**	Oranges*** (AZ, CA, FL & TX)	Walnuts**

\*Allow a minimum of 14 days between last application and harvest of these crops.

\*\*Allow a minimum of 21 days between last application and harvest of these crops.

\*\*\*Allow a minimum of 1 day between last application and harvest of these crops.

\*\*\*\*Allow a minimum of 17 days between last application and harvest of these crops.

<sup>1</sup>Limited to AR, CA, LA, MO, OK, TX, and states east of the Mississippi River. For CA, see specific directions in the **Almonds, Peaches, and Nectarines (CA only)** section.

<sup>2</sup>Plums and sweet cherries: limited to MO and states east of the Mississippi River except TN.

Use the appropriate rate given elsewhere on this label for this product applied alone to the crop being treated. Add to the spray tank 1-5 lbs. AI of glyphosate per acre depending on weeds present and their growth stage. Also add an agriculturally approved nonionic surfactant at 0.5% by volume of spray solution only if glyphosate product does not have nonionic surfactant added. Apply the mixture in 10-40 gals. of water per acre as a postemergence spray to the weeds at the appropriate weed growth stage given on the glyphosate product label.

Add this product to the spray tank first, then add glyphosate product. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to **Applications Procedures** section of this label for further directions.

#### USE PRECAUTIONS:

- To avoid crop injury, take extreme care to avoid contact of herbicide solution, spray, drift, or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of trees or vines.

#### USE RESTRICTIONS:

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.

Refer to the labels of both herbicides for further directions, specific weeds controlled, precautions and limitations on each crop.

### **Tank Mixture with Norflurazon**

For improved control of such weeds as clover (except CA), cutleaf evening primrose (except CA), dandelion (except CA), henbit, horseweed or marestail, lambsquarters, and puncture vine, apply this product in tank mixture with norflurazon on these crops: Oranges, grapefruit, lemons

Apply 4.4 pounds product (4.0 lbs.AI) per acre of this product plus 3.1-3.9 lbs.AI of norflurazon in 20-100 gallons of water per acre except in AZ. Use the same rates in all coarse-textured soils.

In AZ (Oranges and Lemons only): Apply 1.75 lbs. per acre of this product (1.6 lbs.AI) plus 1.55-1.95 lbs.AI of norflurazon in 20-100 gallons of water per acre in the spring. Repeat this application once in the fall.

A tank mixture of this product + norflurazon may be applied with paraquat or glyphosate.

Refer to the labels of both herbicides for further directions, specific weeds controlled, precautions and limitations on each crop.

### **USE PRECAUTIONS:**

- Keep mixtures of this product + norflurazon from contacting foliage, fruits, and stems of citrus trees during spraying.

### **USE RESTRICTIONS:**

- Applications made by mechanically pressurized handguns are restricted to spot treatment only.

### **Tank Mixture with Oryzalin**

Use the tank mix in the following crops for preemergence control of all weeds claimed on both labels:

Almonds	Filberts	Peaches
Apples	Grapes	Pears
Avocados	Grapefruit	Pecans
Caneberries	Lemons	Plums
Cherries	Orange	English Walnuts

Apply this product at the rate given under the appropriate crop on this label plus 2-4 lbs.AI of oryzalin in 20-40 gals. of water per acre. Refer to the oryzalin product label for complete tank mix directions.

Refer to the labels of both herbicides for further directions, specific weeds controlled, precautions and limitations on each crop.

## **FIELD AND FORAGE CROPS**

Apply a maximum of 2.2 lbs. (2 lbs.AI) per acre as a single preemergence application on soils that are not highly erodible or on highly erodible soils, as defined by the Natural Resources Conservation Service, if at least 30% of the soil is covered with plant residues. If a second treatment is required following an earlier herbicide application, the total amount applied for this product may not exceed 2.75 lbs. per acre per calendar year.

**CORN:** Nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier. Determine the physical compatibility of this product with fertilizer before use. Refer to the **Product Information** section of this label for a compatibility test.

**USE RESTRICTIONS:**

- **DO NOT** apply after corn has emerged, as there is danger of liquid fertilizers causing crop injury.
- For sweet corn, applications made by mechanically pressurized handguns are restricted to spot treatment only.

**Preemergence:** Apply before weeds and corn emerge. Apply a maximum of 1.8 lbs. per acre as a single preemergence application on highly erodible soils if <30% of the soil is covered with plant residues.

**Preplant:** Apply in the spring after plowing at the appropriate rate specified above. Apply before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation. Best results will be obtained when this product is applied within 2 weeks before planting. Under dry weather conditions, preplant applications may give better weed control. If weeds develop, particularly under relatively dry conditions, a shallow cultivation will generally result in better weed control.

**USE RESTRICTIONS:**

- Pre-grazing/pre-harvest interval for field corn: 60 days.
- Pre-grazing/pre-harvest interval for sweet corn: 45 days

**To Control Quackgrass:** Apply in the fall at the appropriate rate specified above. Plow two to three weeks later, or if erosion is a problem, delay plowing until spring. **DO NOT** plant any crop except corn in the spring following treatment. **DO NOT** graze treated area.

**Winter Annual Broadleaf Control – Preemergence Fall Application**

For preemergence control of winter annual weeds, such as common chickweed, henbit, shepherdspurse, tansymustard, wild mustard, annual bluegrass, downy brome, and others, broadcast 1.1 lbs. per acre of this product (1.0 lbs.AI) after harvest of the preceding crop and prior to weed emergence on land to be planted to corn the following year. A tillage operation may precede the application. **DO NOT** apply to frozen ground. If this product is used in the fall corn weed control program, **DO NOT** exceed 1.65 lbs. of this product (1.5 lbs.AI) preemergence in the spring.

**USE RESTRICTIONS:**

- **DO NOT** apply more than 4.4 lbs. product (4.0 lbs.AI) per acre to corn per year.
- **DO NOT** rotate to any crop except corn until the following year, as injury may occur.
- After harvest, plow and thoroughly till the soil in fall or spring to minimize possible injury to spring-seeded rotational crops, regardless of the rate used.
- If more than 3.3 lbs. product (3.0 lbs.AI) is used per acre (or equivalent rate in a band), a crop of untreated corn should precede the next rotational crop.
- **DO NOT** apply preplant incorporated in corn in the High Plains and Intermountain areas of the West (including central and western KS, western NE, western OK, and the Panhandle of TX) where rainfall is sparse and erratic or where irrigation is required.
- In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use this product to control weeds in corn only when corn is to follow corn or when a crop of untreated corn is to precede another rotational crop.
- In western MN and eastern parts of the Dakotas, NE, and KS, **DO NOT** plant soybeans following corn treated with this product if more than 2.2 lbs. product (2.0 lbs.AI) per acre (or equivalent rate in a band) was applied as injury may occur.

- Injury may occur to soybeans planted in north-central and northwest IA, south-central and southwest MN, northeast NE, southeast SD, and other areas the year following application on soils having a calcareous surface layer.
- **DO NOT** plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year after an application as injury may occur.

### **TANK MIXTURES ON CORN**

**ATRAZINE:** Use this product in a preplant or preemergence tank mixture with atrazine formulations for control of many annual weeds including carpetweed, crabgrass, fall panicum, lambsquarters, morning glory, pigweed, ragweed, and velvetleaf. Refer to the atrazine label for additional directions.

### **USE RESTRICTIONS:**

- When tank mixing or sequentially applying simazine and/or atrazine or products containing either active ingredient to corn, the total pounds of simazine and/or atrazine must not exceed 2.5 lbs.AI per acre per calendar year.

Refer to the labels of both herbicides for further directions, specific weeds controlled, precautions and limitations on each crop.

**PARAQUAT:** Use in a tank mixture where corn will be planted directly in a cover crop, established sod, or previous crop residues. This combination controls existing vegetation and provides residual control of the annual broadleaf and grass weeds listed under the **Product Information** section.

Add this product to the spray tank, mix thoroughly with water, and then add paraquat and a non-ionic surfactant. Provide constant agitation during mixing and application to keep the mixture in suspension.

Apply up to 2.2 lbs. of this product (2 lbs.AI) following the soil type restrictions specified earlier plus the specified label rate of paraquat cation in 20-60 gals. of water per acre as a broadcast spray either before or after planting but before corn emerges. Add a nonionic surfactant at the rate of 0.5 pt. per 100 gals. of spray volume.

Refer to the labels of both herbicides for further directions, specific weeds controlled, precautions and limitations on each crop.

## **NURSERIES, CHRISTMAS TREE PLANTINGS**

**NURSERIES (See list below):** Apply 2.2- 3.3 lbs. of this product (2.0-3.0 lbs.AI) in at least 25 gallons water per acre in fall or spring at least one year after transplanting.

### **USE RESTRICTIONS:**

- **DO NOT** apply more than 3.3 lbs. product (3 lbs.AI) per acre per calendar year.
- **DO NOT** apply more than once per calendar year.

**CHRISTMAS TREE PLANTINGS (See list below):** Remove weed growth before application. Apply 2.2-4.4 lbs. per acre per calendar year of this product (2.0-4.0 lbs.AI) in at least 25 gallons of water after transplanting. Use the same rate for annual maintenance applications.

For quackgrass control apply 4.4 lbs. product (4 lbs.AI) per acre in the fall or apply a split application of 2.2 lbs. product (2 lbs.AI) per acre in the fall plus 2.2 lbs. product (2 lbs.AI) per acre in early spring, after quackgrass begins growth.

### **USE RESTRICTIONS:**

- All shelterbelt and forestry uses, except Christmas Tree Plantings, are prohibited.



- For nursery and ornamentals, applications made by mechanically pressurized handguns are restricted to spot treatment only.
- To avoid tree injury,
  - **DO NOT** use on seedbeds or cutting beds.
  - In CA, OR, and WA, **DO NOT** apply to Christmas trees sooner than one year after transplanting. In other areas, **DO NOT** apply to Christmas tree transplants less than two years of age.
  - **DO NOT** use until soil is firmly settled around roots.
  - **DO NOT** apply more than once a year, except as directed for quackgrass control.
  - **DO NOT** apply more than 4.4 lbs. product (4 lbs.AI) per acre per calendar year.
  - **DO NOT** apply more than twice per calendar year.

Apply to these species of trees and shrubs, as specified above:

**CONIFERS**

arborvitae	Scotch pine	Fraser fir
Austrian pine	white pine	white fir
*Bishop pine	blue spruce	hemlock
*knobcone pine	Norway spruce	juniper
lodgepole pine (shore pine)	red spruce	red cedar
*Monterey pine	white spruce	white cedar
Mugho pine	balsam fir	yew ( <i>Taxus</i> spp.)
red pine (Norway pine)	Douglas fir	

**DECIDUOUS TREES AND WOODY ORNAMENTALS**

American elm	holly ( <i>Ilex</i> spp.)	**sugar maple
Siberian elm	(max. 3.5 lbs./A)	red oak
barberry	honey locust	white ash
boxelder	Oregon grape	Russian olive
bush honeysuckle	( <i>Mahonia</i> spp.)	*oleander
caragana	<i>Pieris</i> spp.	*palm (2.2 lbs./A)
cotoneaster	(max. 3.5 lbs./A)	*bottle brush
dogwood	red maple	*carob
eucalyptus		

\*For CA only

\*\*Note: **DO NOT** use on sugar maple trees intended for syrup production.

**Oryzalin Tank Mix:** On Christmas tree plantings, use this tank mix for preemergence control of weeds listed on the oryzalin product label. Use on field grown conifer species listed on the labels for each herbicide plus grand fir, alpine fir, Engelmann spruce, black spruce, Colorado blue spruce, Coulter pine, giant redwood, and Veitchi fir. Broadcast the mixture as a directed spray to the soil surface or as an overtop spray, using 2.2-4.4 lbs. of this product (2.0-4.0 lbs.AI) and 2-4 lbs.AI of oryzalin. Apply in sufficient water per acre to uniformly treat the area. Follow overtop sprays with sprinkler irrigation to move the herbicide from leaf surfaces to the soil. Remove weed growth before application. Mix weed residues, prunings, or trash into the soil, or remove them before treatment. Soil should be in good tilth and free of clods at time of application. Shallow cultivation (1-2 inches) after treatment will not reduce weed control.

Refer to the labels of both herbicides for further directions, specific weeds controlled, precautions and limitations on each crop.

**Note:** Length of weed control may be reduced when continuous wet soil conditions follow herbicide application.



**USE RESTRICTIONS:**

To avoid plant injury,

- **DO NOT** use on seedbeds or on unrooted cuttings.
- **DO NOT** use in greenhouses or other enclosed areas.

**TURFGRASSES FOR SOD (For Florida Only)**

**ST. AUGUSTINEGRASS, CENTIPEDEGRASS, AND ZOYSIA GRASS:** Apply 2.2-4.4 lbs. of this product (2.0-4.0 lbs.AI) per acre, according to soil texture as indicated below.

Muck or Peat	4.4 lbs.	Old beds	within 2 days after lifting of sod
		New beds	3-4 days after sprigging or plugging
Sandy Soil	2.2 lbs.	Old beds	within 2 days after lifting of sod
		New beds	7-10 days after sprigging or plugging

If weeds re-grow, apply an additional 2.2 lbs. product (2.0 lbs.AI) on muck or peat, or 1.1 lbs. product (1.0 lbs.AI) on sandy soil.

**USE RESTRICTIONS:**

- **DO NOT** apply within 30 days before cutting or lifting.
- This product must be watered in immediately after application if applied at a rate greater than 2 lbs.AI per acre.
- **DO NOT** apply more than 4.4 lbs of this product (4 lbs.AI) per acre per application.
- Applications must not exceed two per calendar year.
- **DO NOT** exceed a total of 6.6 lbs. of product (6 lbs.AI) per calendar year.

**TURFGRASSES FOR SOD (In States Except Florida)**

**St. Augustinegrass, Centipedegrass, and Zoysia Grass:** Apply 2.2 lbs. of this product (2 lbs.AI) per acre.

**USE RESTRICTIONS:**

- **DO NOT** apply more than 2 lbs.AI per acre in a single application.
- **DO NOT** exceed 3 lbs.AI per acre per calendar year. Applications must not exceed 2 per calendar year.

**TURFGRASS FOR FAIRWAYS AND LAWNS**

**Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysia Grass.**

Apply this product after September 1 (after October 1 for annual bluegrass) before emergence of winter annual weeds. This product will control annual bluegrass, burclover, lawn burweed, common and mouseear chickweed, corn speedwell, henbit, hop clover, spurweed, and parsley-piert. For control of summer annual weeds listed in the **Product Information** section of this label, apply this product in late winter before the weeds emerge. Apply in a minimum of 15 gallons of water per acre.

Irrigate with ½ inch of water if rainfall does not occur within 10 days after preemergence treatment.

<b>APPLICATIONS TO FAIRWAYS</b>			
	<b>Single Application Rate (lbs. product/acre)</b>	<b>Single Application Rate (lbs. AI/acre)</b>	<b>Single Application Rate (oz./1,000 sq.ft)</b>
When annual bluegrass is the major weed*	1.1 lbs./A	1.0 lbs.AI/A	0.4 oz./1,000 sq.ft.
For control of other weeds*	1.1 – 2.2 lbs./A	1.0 – 1.2 lbs.AI/A	0.4 – 0.8 oz./1,000 sq.ft.

\* **DO NOT** exceed 1.1 lbs. product (1.0 lbs.AI) per acre per treatment on newly sprigged Turfgrass or on hybrid bermudagrass such as Tiflawn, Tifway, and Ormond.

<b>APPLICATIONS TO LAWNS</b>			
	<b>Maximum Single Application Rate (lbs. product/acre)</b>	<b>Maximum Single Application Rate (lbs. AI/acre)</b>	<b>Maximum Single Application Rate (oz./1,000 sq.ft)</b>
When annual bluegrass is the major weed*	1.1 lbs./A with the requirement of 0.5 inches of irrigation following application	1.0 lbs.AI/A with the requirement of 0.5 inches of irrigation following application	0.4 oz./1,000 sq.ft. with the requirement of 0.5 inches of irrigation following application
	0.715 lbs./A without irrigation	0.65 lbs.AI/A without irrigation	0.26 oz./1,000 sq.ft. without irrigation
For control of other weeds*	1.8 lbs./A with the requirement of 0.5 inches of irrigation following application	1.6 lbs.AI/A with the requirement of 0.5 inches of irrigation following application	0.66 oz./1,000 sq.ft. with the requirement of 0.5 inches of irrigation following application
	0.715 lbs./A without irrigation	0.65 lbs.AI/A without irrigation	0.26 oz./1,000 sq.ft. without irrigation

\* **DO NOT** exceed 1.1 lbs. product (1.0 lbs.AI) per acre per treatment on newly sprigged Turfgrass or on hybrid bermudagrass such as Tiflawn, Tifway, and Ormond.

For control of summer annuals which emerge after the initial application, apply an additional 1.1 lbs. per acre at least 30 days after the initial application, but not after June 1.

**USE PRECAUTIONS:**

- On newly sprigged turfgrass, hybrid bermudagrass, nondormant bermudagrass, or nondormant Zoysia grass, temporary slowing of growth and yellowing may occur following application.

**USE RESTRICTIONS:**

- For use on warm season turf grass only (e.g., Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysiagrass).
- For residential turf on lawns, institutional turf, parks or recreational fields, the maximum application rate is: 1.6 lbs.AI/A with the requirement of 0.5 inches of irrigation; or 0.65 lbs.AI/A without irrigation.
- To avoid turf injury,
  - Use only on turfgrass reasonably free of infestations of insects, nematodes and diseases.
  - **DO NOT** use on golf greens.
  - **DO NOT** use north of NC, (except may be used in VA Coastal Plains) or on soil with a pH above 7.8.
  - **DO NOT** use on muck or alkaline soils.
  - **DO NOT** apply over the rooting area of trees or ornamentals not listed on this label.
  - **DO NOT** seed or overseed with desirable turfgrass within 4 months before or 6 months after treatment.
  - **DO NOT** apply this product on newly seeded grasses until they have overwintered and have a well-developed rhizome system.
  - **DO NOT** exceed 2.2 lbs. per acre within 12 months of seeding grasses.
- **DO NOT** graze or feed turf clippings to animals, or illegal residues may result.
- **DO NOT** make more than two applications per year. **DO NOT** apply more than 1.6 lbs.AI per acre per application. **DO NOT** exceed 3 lbs.AI per acre per calendar year.

### **STORAGE AND DISPOSAL**

**DO NOT contaminate water, food, or feed by storage or disposal.**

**Storage:** Store in a dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling: Nonrefillable container. DO NOT reuse or refill this container.**

Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### **WARRANTY AND LIMITATION OF DAMAGES**

**CONDITIONS OF SALE:** To the extent consistent with applicable law, [Sipcam Oxon S.p.A.] [Sipcam Agro USA] warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to [Sipcam Oxon S.p.A.] [Sipcam Agro USA].

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