



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

November 10, 2021

Lisa Mathias  
Registration Specialist  
Winfield Solutions, LLC  
P.O. Box 64589  
St. Paul, MN 55164-0589

Subject: Registration Review Label Amendments for Simazine Incorporating Mitigation Measures from the Interim Decision and the Technical Registrants' Commitments for the Endangered Species Act (ESA) Biological Evaluation  
*Product Name: SIMAZINE 90DF*  
*EPA Registration Number: 9779-295*  
*Application Date: 11/17/2020*  
*Decision Number: 567981*

Dear Ms. Mathias:

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 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

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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 Anna Senninger at [Senninger.Anna@epa.gov](mailto:Senninger.Anna@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a stylized flourish at the end.

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

<b>SIMAZINE</b>	<b>GROUP</b>	<b>5</b>	<b>HERBICIDE</b>
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# Simazine 90DF

**Water Dispersible Granule For Control Of Many Annual Grasses And Broadleaf Weeds**

<b>ACTIVE INGREDIENT</b>	
Simazine [2-chloro-4,6 bis(ethylamino)-s-triazine] .....	90.0%
<b>INERT INGREDIENTS</b> .....	10.0%
<b>TOTAL</b> .....	100.0%

## KEEP OUT OF REACH OF CHILDREN CAUTION

**FIRST AID**

**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 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.
- Call a poison control center or doctor for treatment advice.

**IF INHALED:**

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

Have the product container or label with you when calling a poison control center or doctor or going to treatment.  
For additional information in case of medical emergency call toll free 1-877-424-7452.

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

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

**Personal Protective Equipment:**

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

- Coveralls worn over long-sleeved shirt and long pants,
- Chemical-resistant footwear plus socks,
- Waterproof gloves,
- Chemical-resistant apron, and
- A minimum of a NIOSH-approved particulate filtering facepiece respirator with any R or P filter; OR a NIOSH-approved elastomeric particulate respirator with any R or P filter; OR a NIOSH-approved powered air purifying respirator with HE filters.

**Mixers, loaders and applicators for backpack application to grapefruit and oranges must wear:**

- Coveralls worn over long-sleeved shirt and long pants,
- Waterproof gloves, and
- Shoes plus socks.

**Applications made by mechanically pressurized handguns to strawberries are restricted to either spot treatment only OR mixers, loaders and applicators must wear:**

- Coveralls worn over long-sleeved shirt and long pants,
- Waterproof gloves, and
- Shoes plus socks.

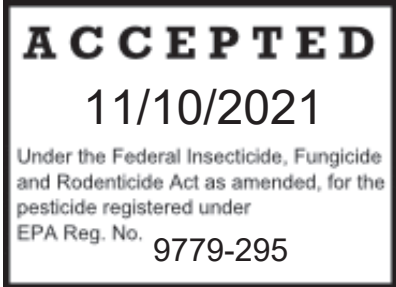
**All other mixers, loaders, applicators, and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Waterproof gloves, and
- Shoes plus socks.

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 the product's concentrate. Do not reuse them.

EPA Reg. No. 9779-295  
 Distributed By:  
 Winfield Solutions, LLC  
 P.O. Box 64589, St. Paul, MN 55164-0589

EPA Est. No. \_\_\_\_\_  
 NET CONTENTS: \_\_\_\_\_  
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### Engineering Controls:

When handlers use 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, 5)], 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. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should 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 can contaminate ground water which may be used as drinking water. Simazine has been found in ground water. 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 product is toxic to aquatic invertebrates. Do not apply directly to water, or 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.

Product must not be mixed or loaded within 50 feet of intermittent streams or rivers, natural or impounded lakes and reservoirs. Product must not be applied within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft. of natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 foot buffer or setback from runoff points must be planted to crop or seeded with grass or other suitable crop.

Product must not be mixed/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 spill or equipment leaks, container or equipment rinse or washwater 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 that 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 a minimum of 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 capacity of 100% 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 shipments to the mixing or 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 in tile-outletted terraced fields.
- 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:** 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.

### DIRECTIONS FOR USE

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

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 Winfield Solutions for a refund.

**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](mailto:ESPP@epa.gov). You must use the Bulletin valid for the month in which you will apply the product.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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.

#### RESTRICTIONS:

- **AERIAL APPLICATION IS PROHIBITED.**
- **Chemigation Prohibition:** Do not apply this product through any type of irrigation system.
- 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).
- Areas where sale, use or distribution of this product is prohibited include (but are not limited to) 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).
- 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.
- Applications made by mechanically pressurized handguns are restricted to spot treatment only for the following uses: Citrus (Grapefruit, Orange, Lemons); Pome Fruit (Apples, Pears); Stone Fruits (Cherries [sweet, tart], Peaches, Plums); 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; and Sweet Corn.
- Applications made by mechanically pressurized handguns to strawberries are restricted to either spot treatment only OR mixers, loaders and applicators must wear: coveralls worn over long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks

#### 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 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, 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 pets) to enter until sprays have dried.

#### PRODUCT INFORMATION

Apply this herbicide before weeds emerge or after removal of weed growth. SIMAZINE 90DF controls a wide variety of annual broadleaf and grass weeds when used at selective rates in agricultural crops and ornamental plantings. When used at higher nonselective rates in noncrop areas, it also controls many perennial broadleaf and grass weeds.

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

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 noncorrosive to equipment, nonflammable, and has low electrical conductivity.

Failure to follow the directions for use and precautions on this label may result in crop injury, poor weed control, and/or illegal residues.

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

### WEED RESISTANCE MANAGEMENT

FOLLOWING MANY YEARS OF CONTINUOUS USE OF SIMAZINE 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 NON-TRIAZINE HERBICIDE. CONSULT YOUR STATE AGRICULTURAL EXTENSION SERVICE FOR SPECIFIC RECOMMENDATIONS.

For resistance management, SIMAZINE 90DF contains a Group 5 herbicide – simazine. Any weed population may contain or develop plants naturally resistant to SIMAZINE 90DF 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 SIMAZINE 90DF 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.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- 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, certified crop advisors, and/or Winfield Solutions, LLC representative for pesticide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.
- For further information or to report suspected resistance, contact your Winfield Solutions, LLC representative.

## APPLICATION PROCEDURES

Ground application: 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 gallons of spray mixture per acre.

Use a pump with capacity to (1) provide sufficient agitation in tank to keep mixture in suspension, and (2) 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 gals. 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 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:

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

Mixing procedures--all uses: (1) Be sure sprayer is clean and not contaminated with any other materials, or crop injury or sprayer clogging may result. (2) Fill tank ¼ full with clean water, nitrogen solution or complete, fluid fertilizer. (3) Start agitation. (4) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (5) Pour product directly from bag into tank. (6) Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. (7) Add tank mix herbicide(s) after this product is thoroughly suspended. (8) Finish filling tank. Maintain agitation to avoid separation of materials. (9) Empty tank as completely as possible before refilling to prevent buildup of emulsifiable concentrate residue from possible tank mix herbicides. (10) If an emulsifiable concentrate film starts to build up in tank, drain it and clean with strong detergent solution or solvent. (11) Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent.

Compatibility test: To determine the tank mix compatibility of SIMAZINE 90DF 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 fertilizer to each of 2 one-quart glass jars with tight lids.
2. To one of the jars add ¼ teaspoon of a compatibility agent approved for this use (¼ teaspoon is equivalent to 2 pints per 100 gallons spray). Cap and shake until mixed. Examples of compatibility agents include Complex<sup>®</sup>, Combine or Unite<sup>®</sup>.  
(NOTE: Complex, Combine and Unite are not registered for use in California.)
3. To both jars add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, cap and shake until thoroughly mixed. The appropriate amount of herbicides for this test follows (assuming a spray volume of 25 gallons per acre):  
  
Dry herbicides: For each pound per acre add 1.5 teaspoons to each jar. Fluff up wettable powder products before measuring.  
  
Liquid herbicides: For each pint per acre add 0.5 teaspoons to each jar.

For a spray volume other than 25 gallons per acre, change the teaspoons added to each jar as follows:

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

4. After adding all ingredients, put lids on and tighten. Shake jars vigorously one minute. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, grease, gels, medium to heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing 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.

### Rotational Crops and Perennial Crop Replanting

To avoid crop injury, observe the following precautions: (1) If rotating treated land the year following application, plant only corn, unless otherwise stated in this label. (2) If replanting perennial crops or if rotating land to crops other than corn, do not apply this product in the year preceding planting these crops.



## SPRAY DRIFT MANAGEMENT

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Ground Boom Applications:

- User 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).
- 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 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.

Avoid spray overlap as crop injury may result.

#### 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 Application

Take precautions to minimize drift.

## 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 application, 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 Precautions and Restrictions (All fruit and nut crops): 1) Applications made by mechanically pressurized handguns are restricted to spot treatment only for the following uses: Citrus (Grapefruit, Orange, Lemons); Pome Fruit (Apples, Pears); Stone Fruits (Cherries [sweet, tart], Peaches, Plums); Tree Nuts (Pecans, Walnuts, Filberts, Almonds, Macadamia Nuts); Berry and Small Fruit (Blueberries, Blackberries, Loganberries, Raspberries, Grapes, Lowbush blueberries); and Tropical and Sub-tropical Fruits (Avocado, Olive). 2) To avoid crop injury: a) Apply only to orchards or groves where trees have been established 12 months or more unless specified differently. b) Make only one application per year, except as noted otherwise. c) Do not use on gravelly, sand, or loamy sand soil. d) Immediately following application, limit overhead sprinkler irrigation to ½ inch.



### **Almonds and Peaches (CA only)**

Apply 1.1-2.2 pounds per treated acre in a 2-4 foot band on each side of the tree row. Apply before weeds emerge in late fall or early winter. Weeds controlled by 1.1 pounds include burclover, common chickweed, wild mustard, and shepherdspurse. Apply only once per calendar year. Do not apply more than 2.2 lbs per calendar year.

Use Precautions and Restrictions: To avoid crop injury: 1) Do not treat trees established in the grove less than 3 years. 2) Do not treat the Mission (Texas) variety of almonds. 3) Do not apply to almond trees propagated on plum rootstocks. 4) Do not replant almonds or peaches in treated soil for 12 months after treatment. 5) Do not apply on soil with less than 1% organic matter. 6) Do not treat areas where water will accumulate.

### **Apples, Pears, Sour Cherries**

Apply 2.2-4.4 pounds per acre. Do not apply more than once per calendar year. Do not apply more than 4.4 pounds per acre per calendar year. Pre-harvest interval for apples: 150 days.

### **Avocados**

CA and FL only: Apply 2.2-4.4 pounds per acre after final preparation of grove. Do not apply more than once per calendar year. Do not apply more than 4.4 pounds per acre per calendar year.

Use Precautions and Restrictions: Do not apply on gravelly, sand, or loamy sand soil.

### **Blueberries and Caneberries (blackberries, boysenberries, loganberries, raspberries)**

Apply 2.2-4.4 pounds per acre in the spring or apply a split application of 2.2 pounds per acre in the spring plus 2.2 pounds per acre in the fall. Apply in a minimum of 40 gallons of water per acre.

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

To control quackgrass, apply 4.4 pounds per acre in the fall or split the application applying 2.2 pounds per acre in the fall plus 2.2 pounds per acre in the spring, when quackgrass is actively growing.

**Note:** Do not apply when fruit is present, or illegal residues may result. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than twice per calendar year.

### **Filberts**

Apply 2.2-4.4 pounds per acre in the fall or apply a split application of 2.2 pounds per acre in the fall plus 2.2 pounds per acre in the spring. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than twice per calendar year.

Use Precautions and Restrictions: 1) If trees are planted on a hillside, excessive soil erosion may result from the elimination of weeds. 2) Do not use on gravelly, sand, or loamy sand soil.

Note: Do not apply when nuts are on the ground during the harvest period.

### **Grapes**

Apply 2.2-4.4 pounds per acre any time between harvest and early spring. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than once per calendar year.

Use Precautions and Restrictions: Do not use in vineyards established less than three years or crop injury may occur.

### **Grapefruit, Lemons, Oranges**

**Arizona** (Lemons and Oranges only): Apply a split application of 1.75 pounds per acre in the spring plus 1.75 pounds per acre in the fall. Do not apply more than 1.75 pounds per acre per application. Do not apply more than 3.5 pounds per acre per calendar year.

**California:** Apply 2.2-4.4 pounds per acre in a single application; or apply 2.2 pounds per acre in the fall and 2.2 pounds per acre in the spring. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than twice per calendar year.

Use Precautions and Restrictions: Do not use in the Imperial, Coachella, or Palo Verde valleys, or crop injury may result.

**Florida** (Grapefruit and Oranges only): Apply 4.4 lbs. SIMAZINE 90DF to weed-free soil during the spring and/or fall to control weeds expected to emerge during these periods. Apply prior to emergence of weeds or if weeds have emerged, apply in tank mixture with a contact herbicide. Use caution to keep the treatment off the foliage, fruit or trunk of citrus trees. For control of difficult species, such as balsamapple vine and spanishneedles, and partial control of honeyvine milkweed, apply no more than 8.8 lbs. of SIMAZINE 90DF per treated acre as a single application in the spring using a 50% band application. The amount of SIMAZINE 90DF applied per acre of field should not exceed 4.4 pounds. Apply in the spring growing season between January and April. Do not make a fall SIMAZINE 90DF application if this treatment was used in the spring. When emerged weeds are present, apply SIMAZINE 90DF in a tank mix with a labeled contact herbicide. Follow all directions, precautions, limitations, etc. on the tank mix products. Do not apply more than 8.8 pounds per acre per calendar year. Do not apply more than 4.4 pounds per acre per application.

**Texas** (Grapefruit and Oranges only): Apply 4.4 pounds per acre. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than twice per calendar year.

Use Precautions and Restrictions (All Areas): 1) Do not use in nurseries. 2) Do not apply to bedded grapefruit, lemons, or oranges (except for FL grapefruit and oranges). 3) To avoid possible injury, do not apply to trees under stress from freeze damage for one year after the freeze. 4) Do not use around trees that have been established in the grove less than 2 years except in Florida.

### **Macadamia Nuts**

Apply 2.2-4.4 pounds in 50 gallons of water per acre before harvest and just prior to weed emergence. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than once per calendar year.

Note: Do not apply when nuts are on the ground during the harvest period, as illegal residues may result.

### **Olives**

Apply 2.2-4.4 pounds per acre following grove preparation in the fall. Repeat annually in mid-winter. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than once per calendar year.

### **Peaches (except in CA), Plums, Sweet Cherries**

Apply 1.75-4.4 pounds per acre. Apply in late fall to early spring prior to weed emergence. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than once per calendar year.

Use Precautions and Restrictions: To avoid crop injury: 1) Peaches: Use only in Arkansas, Louisiana, Missouri, Oklahoma, Texas, and states east of the Mississippi River. For California, see specific directions in the section "Almonds and Peaches (CA only)." 2) Plums and sweet cherries: use only in Missouri and states east of the Mississippi River except Tennessee.

### **Pecans**

Apply 2.2-4.4 pounds per acre before weeds emerge in the spring. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than once per calendar year.

Use Precautions and Restrictions: To avoid crop injury: 1) Do not use west of the Pecos River in Texas or in New Mexico, Arizona, or California. 2) Do not make applications to transplanted trees that have been established less than two years in the grove.

Note: Do not apply when nuts are on the ground, or illegal residues may result. Do not allow animals to graze treated fields.

### **Strawberries**

Apply only in Oregon and Washington: For control of chickweed, groundsel, mustard, and shepherdspurse, apply broadcast 1.1 pounds per acre. 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. Do not apply more than 1.1 pounds per acre per calendar year. Do not apply more than once per calendar year.

Use Precautions and Restrictions: 1) Applications made by mechanically pressurized handguns to strawberries are restricted to either spot treatment only **OR** mixers, loaders and applicators must wear: coveralls worn over long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks. 2) To avoid crop injury, do not apply within 4 months after transplanting.

### **Walnuts**

Apply 2.2-4.4 pounds per acre. Leveling and furrowing operations after application will lessen effectiveness of weed control.

Note: Do not apply when nuts are on the ground, or illegal residues may result. Do not apply more than 4.4 pounds per acre per calendar year. Do not apply more than once per calendar year.

### **SIMAZINE 90DF Plus Bromacil 80W Tank Mix For Weed Control in Grapefruit and Oranges (FL Only)**

Use this tank mix in FL to control balsamapple, black nightshade, carpetweed, crabgrass, cutweed, dayweed Florida pusley, horse weed, pepperweed, pigweed, poorjoe, ragweed rattlebox, spanishneedles and sandbur, and for partial control of bermudagrass, bahiagrass, pangolagrass, paragrass, and torpedograss. Apply 4.4 lbs. of SIMAZINE 90DF plus 3-4 lbs. of Bromacil 80W per acre beneath trees in a minimum of 40 gals. of water per acre before or soon after weed growth begins. Use caution to keep the spray off the foliage, fruit or trunk of citrus trees. When mixing, add Bromacil 80W slurry to water in spray tank, agitate thoroughly, then add SIMAZINE 90DF and agitate thoroughly again. Use the lower rates for light weed infestations or all applications in bedded citrus areas. Use the higher rates for heavy weed infestations only in ridge grown citrus areas. Temporary yellowing of citrus leaves may occur following treatment. 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 diseased trees such as those with foot rot. Do not use on soil with less than 1% organic matter or on poorly drained soils. Do not use on trees planted in irrigation furrows. Do not use in groves interplanted with other trees or desirable plants, nor in home grapefruit or orange 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 illegal residues may result.

**SIMAZINE 90DF Plus Gramoxone® Extra Tank Mix**

Use this tank mix on the fruit and nut crops listed below for kill of existing vegetation and for residual control of the 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:	Grapes	Pears
Almonds (CA only)	Lemons (AZ and CA only)	Pecans
Apples	Macadamia nuts	Plums <sup>4</sup>
Avocados (CA and FL <sup>1</sup> only)	Olives	Walnuts
Cherries (sour and sweet <sup>4</sup> )	Oranges <sup>2</sup>	
Filberts	Peaches <sup>3</sup>	
Grapefruit (CA and TX only)		

Apply the rate given under the appropriate crop on this label plus 1.5-2.5 qts. Gramoxone Extra 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 Activate Plus™ 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 Gramoxone Extra if regrowth occurs. Add this product to the spray tank first, then add the Gramoxone Extra and add the surfactant last. Provide constant agitation during mixing and application to keep the mixture in suspension.

Note: To avoid crop injury, apply the tank mix only once per year. Use a shield for young trees or vines. Observe all precautions and limitations on each label in the tank mix.

<sup>1</sup>In avocados in FL, this tank mix also controls balsam apple vine, 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 per acre per application during Spring or Fall. Do not exceed 8.8 lbs. of SIMAZINE 90DF 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 and Peaches (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.

**SIMAZINE 90DF Plus Roundup® Tank Mix**

Use this tank mix for effective control of existing vegetation and for residual control of the annual broadleaf and grass weeds claimed for this product alone in grape vineyards and in the following bearing and nonbearing tree crops:

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

Use the appropriate rate given elsewhere on this label for SIMAZINE 90DF applied alone to the crop being treated. Add to the spray tank 1-5 qts. of Roundup per acre depending on weeds present and their growth stage. Also add an agriculturally approved nonionic surfactant such as Activate Plus, at 0.5% by volume of spray solution. 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 Roundup label. Mixing: With the spray tank half filled with water add SIMAZINE 90DF to the spray tank first, then add Roundup and the surfactant. Provide constant agitation during mixing and application to keep the mixture in suspension. 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. Observe and follow all precautions and limitations on both SIMAZINE 90DF and Roundup labels for each crop involved.

\*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 24 hours 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 and Peaches (CA only) section.

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

**SIMAZINE 90DF Plus Solicam<sup>(R)</sup> Tank Mix**

To obtain improved control of such weeds as clover, cutleaf evening primrose, dandelion, henbit, horseweed or marestail, lambsquarters and puncture vine on the crops below, apply SIMAZINE 90DF in tank mixtures with Solicam DF.

**Oranges, Grapefruit, Lemons**

Use the appropriate rate given elsewhere on this label for SIMAZINE 90DF applied alone to the crop being treated plus 4-5 lbs. of Solicam DF in 20-100 gals. of water per acre. Use the same rates in all coarse-textured soils. Do not apply this combination more than 1 time per year. SIMAZINE 90DF + Solicam may be applied in tank mix with Gramoxone Extra or Roundup. Refer to the respective labels of all herbicides when applying tank mixtures. Keep SIMAZINE 90DF + Solicam mixtures from contacting foliage, fruits and stems of citrus trees during application. Do not apply within 12 weeks of citrus harvest.

**SIMAZINE 90DF Plus Surflan<sup>(R)</sup> Tank Mix**

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

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

Apply the SIMAZINE 90DF rate given under the appropriate crop on this label plus 2.67-5.33 lbs. of Surflan 75W or 2-4 qts. of Surflan A.S. in 20-40 gals. of water per acre. Refer to the Surflan 75W or Surflan A.S. label for complete tank mix directions and observe all precautions and limitations on all labels in tank mix.

**FIELD CROPS****Corn**

Nitrogen solutions or complete fluid fertilizers may replace all or part of the water as a carrier in the spray. Determine the physical compatibility of this product with fertilizer before use. Refer to the GENERAL INFORMATION section of this label for a compatibility test. Do not apply after corn has emerged as there is a danger of liquid fertilizers causing crop injury.

Preemergence: Apply before weeds and corn emerge. Apply a maximum of 2.2 pounds 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 SIMAZINE 90DF applied may not exceed 2.7 pounds per acre per calendar year. Apply a maximum of 1.7 pounds 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 in the table below. 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 of 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.

SOIL TEXTURE	BROADCAST* RATE PER ACRE
Coarse-textured soil: Sand, silt, and loam that is low in organic matter	2.2 pounds
Medium-textured soil: Soil containing a moderate amount of clay and organic matter	2.6 pounds
Fine-textured soil: Loam that is high in organic matter and clay (including dark prairie soils of Corn Belt)	2.7 pounds
Organic soil: Peat, muck, and high-organic clay	2.7 pounds

\*For calculation of band treatment rate, see the GENERAL INFORMATION section.

To control quackgrass: Apply 2.7 pounds per acre in the fall. Plow two to three weeks later, or if erosion is a problem, delay plowing until spring.

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

For preemergence control of winter annual weeds, such as common chickweed, henbit, shepherds purse, tansy mustard, wild mustard, annual bluegrass, downy brome, and others, broadcast 1.1 pounds per acre of SIMAZINE 90DF after harvest of the preceding crop and prior to weed emergence on land to be planted only to corn the following year. A tillage operation may precede the application. Do not apply to frozen ground. If SIMAZINE 90DF is used in a fall corn weed control program, do not exceed 1.6 pounds of SIMAZINE 90DF preemergence the following spring.

Use Precautions and Restrictions: 1) Do not apply more than 2.7 pounds per acre to corn per year. 2) Do not rotate to any crop except corn until the following year or injury may occur. 3) 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. 4) If more than 2.7 pounds is used per acre (or equivalent rate in a band), a crop of untreated corn should precede the next rotational crop. 5) Do not apply preplant incorporated in corn in the High Plains and Intermountain areas of the West (including central and western Kansas, western Nebraska, western Oklahoma, and the Panhandle of Texas) where rainfall is sparse and erratic or where irrigation is required. 6) 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. 7) In western Minnesota and eastern parts of the Dakotas, Nebraska, and Kansas, do not plant soybeans following corn treated with this product if more than 2.2 pounds per acre (or equivalent rate in a band) was applied or injury may occur. 8) Injury may occur to soybeans planted in north-central and northwest Iowa, south-central and southwest Minnesota, northeast Nebraska, southeast South Dakota, and other areas the year following application to soils having a calcareous surface layer. 9) 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, or injury may occur. 10) Pre-grazing/pre-harvest interval for field corn: 60 days. 11) Pre-grazing/pre-harvest interval for sweet corn: 45 days. 12) Applications made by mechanically pressurized handguns are restricted to spot treatment only for sweet corn.

**SIMAZINE 90DF PLUS ATRAZINE 4L\* or ATRAZINE 90DF TANK MIX COMBINATION FOR WEED CONTROL IN CORN:** The tank mix combination of SIMAZINE 90DF plus ATRAZINE 4L or ATRAZINE 90DF may be applied either before, during or after planting corn but before weeds emerge to control early germinating annual weeds and late competing grasses. One application will control most annual broadleaf and grass weeds including fall panicum, crabgrass, barnyardgrass, foxtail, velvetleaf, carpetweed, morningglory, lambsquarters, pigweed and ragweed. Preplant Application: Apply the tank mixture as broadcast treatment in the spring after plowing either before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of SIMAZINE 90DF plus ATRAZINE. Best results will be obtained when the tank mix is applied within two weeks before planting.

Preemergence Application: Apply the tank mixture during or shortly after planting but prior to crop and weed emergence.

\*NOTE: Tank mix with Atrazine is not registered for use in California.

SOIL	PREPLANT AND PREEMERGENCE BROADCAST RATE IN 10-40 GALS. OF WATER PER ACRE		
	SIMAZINE 90DF	ATRAZINE 90DF	ATRAZINE 4L
Coarse textured soil: Sand, loamy sand, sandy loam	1.1 lbs.	1.125 lbs.	1qt.
Medium textured soil: Silt loam and clay loam low in organic matter	1.33 lbs.	1.35 lbs.	1.2 qts.
Fine textured soil: Silt loam and clay loam with medium to high organic matter and clay (including dark prairie soils of the Corn Belt)	1.6 lbs.	1.62 lbs.	1.5 qts.

**SIMAZINE 90DF Plus Eradicane<sup>(R)</sup> Tank Mix In Corn**

Use this tank mixture preplant incorporated for control of all weeds claimed on both the SIMAZINE 90DF and Eradicane labels, including partial control (suppression) of shattercane (wild cane). Liquid fertilizer may replace all or part of the water in the spray. Check the physical compatibility of mixture with fertilizer before use. Refer to the General Information section of this label for the compatibility test procedure. Use a minimum of 20 gallons of spray volume per acre. Refer to the Eradicane label for incorporation directions. Use the higher rate of SIMAZINE 90DF on fine-textured soil and where heavy broadleaf infestations are expected. Use the higher rate of Eradicane for heavy nutsedge and bermudagrass infestations. For partial control (suppression) of shattercane, broadcast and incorporate **immediately** before planting 1.1-2.2 lbs. of SIMAZINE 90DF plus 7.33 pts. of Eradicane 6.7E (or 8 Pts. Eradicane Extra) per acre. For control of other weeds claimed on both label, broadcast and incorporate 1.1-2.7 pounds of SIMAZINE 90DF plus 4.75-7.33 pts. of Eradicane 6.7E (or 5.33 pts. of Eradicane Extra) per acre. Observe and follow all precautions and limitations on the labels of both products.

**SIMAZINE 90DF Plus Gramoxone Extra Tank Mix in Corn**

Use this tank mix 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 General Information section of this label.

Add SIMAZINE 90DF to the spray tank, mix thoroughly with water, and then add Gramoxone Extra and a nonionic surfactant, such as Activate Plus. Provide constant agitation during mixing and application to keep the mixture in suspension. Apply 2.2-2.7 pounds of SIMAZINE 90DF plus 1.5-2.5 pts. of Gramoxone Extra in 20-60 gals. of water per acre as a broadcast spray either before or after planting, but before corn emerges. Add the nonionic surfactant at the rate of 0.5 pts./100 gals. of spray volume. Observe and follow all precautions and limitations on both labels.

**SIMAZINE 90DF Plus Sutan+<sup>(R)</sup> Tank Mix in Corn**

Use this tank mixture preplant incorporated for control of all weeds claimed on both labels, including partial control (suppression) of shattercane (wild cane). Liquid fertilizer may replace all or part of the water in the spray. Check the physical compatibility of the mixture with the fertilizer of choice before use. Refer to the General Information section of this label for the compatibility test procedure. Use a minimum of 20 gals. of spray volume per acre. Refer to the Sutan+ label for incorporation directions. Use the higher rate of SIMAZINE 90DF on fine-textured soil and where heavy broadleaf infestations are expected. For partial control (suppression) of shattercane, broadcast and incorporate **immediately** before planting 1.1-2.2 lbs. of SIMAZINE 90DF plus 7.33 pts. of Sutan+ 6.7E per acre. For control of the other weeds claimed on both labels, broadcast and incorporate 1.1- 2.7 pounds of SIMAZINE 90DF plus 4.75 pts. of Sutan+ 6.7E per acre. Observe and follow all precautions and limitations on both labels.

## NURSERIES AND CHRISTMAS TREE PLANTING

### NURSERIES: (Woody Ornamentals, Deciduous Trees, and Conifers. See list below):

Apply 2.2-3.3 pounds in at least 25 gallons of water per acre in fall or spring. Do not apply more than 3.3 pounds per acre per calendar year. Do not apply more than once per calendar year.

Use Precautions and Restrictions: 1) Applications made by mechanically pressurized handguns are restricted to spot treatment only for nursery/ornamental uses. 2) To avoid plant injury, do not apply for at least one year after transplanting.

### Christmas Tree Plantings (see list below)

Remove weed growth before application. Apply 2.2-4.0 pounds in at least 25 gallons of water per acre after transplanting. Do not apply more than 4 lbs. per acre per calendar year. Do not apply more than twice per calendar year.

For quackgrass control, apply 4.4 pounds per acre in the fall or apply a split application of 2.2 pounds per acre in the fall plus 2.2 pounds per acre in early spring, after quackgrass begins growth.

Use Precautions and Restrictions: To avoid tree injury: 1) Do not use on seedbeds or cutting beds. 2) In California, Oregon, and Washington, do not apply to Christmas trees sooner than 1 year after transplanting. In other areas, do not apply to Christmas trees less than three years of age. 3) Do not use until soil is firmly settled around roots. 4) Do not apply more than once a year, except as directed for quackgrass control. 5) Do not apply more than 4.4 pounds per acre per calendar year.

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

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

\*For California only

<b>DECIDUOUS TREES AND WOODY ORNAMENTALS</b>		
American elm Siberian elm barberry boxelder bush honeysuckle caragana cotoneaster	dogwood eucalyptus holly (Ilex spp.) (max. 3.5 lbs./A) honey locust Oregon grape (Mahonia spp.) Pieris spp. (max. 3.5 lbs./A)	red oak Russian olive *oleander *palm (2.2 lbs./A) *bottle brush *carob

\* For California only

### SIMAZINE 90DF Plus Pennant<sup>(R)</sup> Tank Mix

This tank mix may be used to control weeds in containerized, field and liner\* grown ornamentals and commercial landscapes. See the Pennant label for ornamental species, weeds controlled with this tank mix, and for other information.

\*Plants transplanted normally in rows in a nursery or similar area for further growth prior to transplanting to final growing place.

### SIMAZINE 90DF Plus Surflan Tank Mix For Christmas Tree Plantings

Use this tank mix for preemergence control of weeds listed on the Surflan 75W (or Surflan A.S.) label on Christmas tree plantings. 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 SIMAZINE 90DF and 2.67-5.33 lbs. of Surflan 75W (or 2-4 qts. of Surflan A.S.). 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 tillth and free of clods at time of application. Shallow cultivation (1-2 inches) after treatment will not reduce weed control. Observe and follow all precautions and limitations on both labels. Length of weed control may be reduced when continuous wet soil conditions follow herbicide application.

Note: To avoid plant injury: Do not use on seedbeds or on unrooted cuttings. Do not use in greenhouses or other enclosed areas.



### TURF GRASSES FOR SOD (FLORIDA ONLY)

For use on warm season turf grass only (St. Augustinegrass, Centipedegrass, and Zoysia Grass).

Apply 2.2-4.4 pounds per acre, according to soil texture as indicated below. Do not apply more than 2 times per year. Do not exceed 6.6 lbs. per acre per calendar year.

Muck or Peat	4.4 pounds	Old beds: Within 2 days after lifting of sod New beds: 3-4 days after sprigging or plugging
Sandy Soil	2.2 pounds	Old beds: Within 2 days after lifting of sod New beds: 7-10 days after sprigging or plugging

SIMAZINE 90DF must be watered in immediately after application if applied at rate greater than 2.2 pounds per acre.

If weeds regrow, apply an additional 2.2 pounds on muck or peat, or 1.1 pounds on sandy soil.

Use Precautions and Restrictions: To avoid crop injury, (1) Do not apply within 30 days prior to cutting or lifting. (2) Do not apply in combination with surfactants or other spray additives. (3) Use only on turfgrass reasonably free of infestations of insects, nematodes and diseases. (4) On new sprigged turfgrass, temporary slowing of growth may follow application.

### TURF GRASSES FOR SOD (IN STATES EXCEPT FLORIDA)

For use on warm season turf grass only (Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysia Grass).

Apply SIMAZINE 90DF after September 1 (after October 1 for annual bluegrass) before emergence of winter annual weeds. SIMAZINE 4L will control annual bluegrass, burclover, lawn burweed, common and mouseear chickweed, corn speedwell, henbit, hop clover, spurweed, and parsley-piert. SIMAZINE 90DF will also control these weeds soon after emergence. For control of summer annual weeds listed in the General Information section of this label, apply SIMAZINE 90DF 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.

Where annual bluegrass is the major weed, use 1.1 lbs of SIMAZINE 90DF per acre (0.4 oz. per 1000 sq. ft.). Use 1.1-2.2 lbs. per acre (0.4-0.8 oz. per 1000 sq. ft) for control of other weeds. However, do not exceed 1.1 lbs 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/A at least 30 days after the initial application, but not after June 1. However, do not make more than two applications per year.

Apply no more than 2.2 lbs. per acre in a single application with a calendar year maximum of 3.3 lbs per acre. Do not apply more than two times in a calendar year.

Use Precautions and Restrictions: On newly sprigged turfgrass, hybrid bermudagrass, nondormant bermudagrass, or nondormant zoysia grass, temporary slowing of growth and yellowing may occur following application. To avoid turf injury, (1) Use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases. (2) Do not use north of NC (except may be used in the Virginia Coastal Plains) or west of Highway 281 in Texas and Oklahoma. (3) Do not use on muck or alkaline soils. (4) Do not apply over the rooting area of trees or ornamentals not listed on this label. (5) Do not seed or overseed with desirable turfgrass within 4 months before or 6 months after treatment. (6) Do not apply this product on newly seeded grasses until they have overwintered and have a well-developed rhizome system. (7) Do not exceed 2.2 lbs. product/A within 12 months of seeding grasses.

Do not graze or feed turf clippings to animals.

### TURFGRASS FOR FAIRWAYS, LAWNS, AND SIMILAR AREAS

For use on warm season turf grass only (Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysia Grass).

Apply SIMAZINE 90DF after September 1 (after October 1 for annual bluegrass) before emergence of winter annual weeds. SIMAZINE 90DF will control annual bluegrass, burclover, lawn burweed, common and mouseear chickweed, corn speedwell, henbit, hop clover, spurweed, and parsley-piert. SIMAZINE 90DF will also control these weeds soon after emergence. For control of summer annual weeds listed in the General Information section of this label, apply SIMAZINE 90DF in late winter before the weeds emerge. Apply in a minimum of 15 gallons of water per acre.

**Turfgrass for Fairways:** Where annual bluegrass is the major weed, use 1.1 lbs. of SIMAZINE 90DF per acre (0.4 oz. per 1000 sq. ft.). Use 1.1-2.2 lbs. per acre (0.4-0.8 oz. per 1,000 sq. ft.) for control of other weeds. However, do not exceed 1.1 lbs. per acre per treatment on newly sprigged turfgrass or on hybrid bermudagrass such as Tiflawn, Tifway, and Ormond. Irrigate with ½ inch of water if rainfall does not occur within 10 days after preemergence treatment. For control of summer annuals which emerged after the initial application, apply an additional 1.1 lbs./A at least 30 days after the initial application, but not after June 1. However, do not make more than two applications per year.



**Turfgrass for Lawns & Similar Areas:** Where annual bluegrass is the major weed, use 1.1 lbs. of SIMAZINE 90DF (0.99 lb. ai) per acre (0.4 oz. per 1000 sq. ft.). Use 1.1 - 1.75 lbs. of SIMAZINE 90DF (0.99 - 1.57 lbs. ai) per acre (0.4 - 0.64 oz. per 1,000 sq. ft.) for control of other weeds. However, do not exceed 1.1 lbs. of SIMAZINE 90DF (0.99 lb. 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 emerged after the initial application, apply an additional 1.1 lbs. of SIMAZINE 90DF (0.99 lb. ai) per acre at least 30 days after the initial application, but not after June 1. However, do not make more than two applications per year. **Important: The treated area must be irrigated with 0.5 inches of water immediately after treatment. If no irrigation is planned the maximum amount of SIMAZINE 90DF that may be applied per treatment is 0.7 lb. (0.63 lb. ai) per acre (0.26 oz. per 1000 sq. ft).**

**Use Precautions and Restrictions:** On newly sprigged turfgrass, hybrid bermudagrass, nondormant bermudagrass, or nondormant zoysia grass, temporary slowing of growth and yellowing may occur following applications. To avoid turf injury: (1) Use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases. (2) Do not use on golf greens. (3) Do not use north of NC (except may be used in the Virginia Coastal Plains) or west of Highway 281 in Texas and Oklahoma. (4) Do not use on muck or alkaline soils. (5) Do not apply over the rooting area of trees or ornamentals not listed on this label. (6) Do not seed or overseed with desirable turfgrass within 4 months before or 6 months after treatment. (7) Do not apply this product on newly seeded grasses until they have overwintered and have a well-developed rhizome system. (8) Do not exceed 2.2 lbs. per acre within 12 months of seeding grasses.

Note: Do not graze or feed turf clippings to animals or illegal residues may result.

**Tank Mixture with Glyphosate (4 lb. ai/gal.)**

This tank mixture will provide control of emerged annual weeds and residual control of weeds listed on this label. The combination also will partially control emerged perennial weeds listed on this label. Add to the spray tank the appropriate rate of SIMAZINE 90DF noted above when used alone. Then add 1-5 qts. of a 4 lb. ai/gal. glyphosate depending on weeds present and their growth stage. Also add an agriculturally approved nonionic surfactant at the rate recommended by the specific glyphosate label used. Apply the mixture in 10-40 gals. of water per acre as a postemergence spray at the appropriate weed growth stage given on the glyphosate label. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to the Application Procedures section of this label for further directions. Refer to the labels of both herbicides for specific noncrop sites, rates, weeds controlled, and further directions, precautions and limitations.

**Tank Mixture with Oust®**

Use this tank mixture to control the weeds listed below with either preemergence, early postemergence, or postemergence applications. Use the higher rates within the ranges given under conditions of heavy weed growth, on soil with over 2½% organic matter, on areas with heavy decaying plant residues, or on high moisture areas such as along road edges or railroad shoulders. To improve wetting and/or contact activity on emerged weeds, add a nonionic surfactant at 1 qt. per 100 gals. of spray. Do not apply by aircraft. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to the labels of both herbicides for specific noncrop sites and further directions, precautions, and limitations.

**Preemergence to Early Postemergence:** To control the weeds listed below, use the appropriate rate given elsewhere on this label for SIMAZINE 90DF applied alone to the crop being treated plus 3-5 oz. of Oust in a minimum of 25 gals. of water per acre.

<b>BROADLEAF WEEDS (Up to 3-4" in Height or Diameter)</b>		
bouncingbet buckhorn plantain burclover Carolina geranium common chickweed common dandelion common speedwell common yarrow crimson clover dogfennel filaree hoary cress	horsetail kochia lambsquater little mallow mustard ox-eye daisy pigweed prickly lettuce puncturevine purple starthistle ragweed Russian thistle	sowthistle St. Johnswort sunflower sweet clover tansymustard tansy ragwort tumble mustard turkey mullein vetch wild carrot yellow rocket

<b>GRASSES (Up to 6-12" in Height)</b>		
Alta fescue annual bluegrass annual ryegrass bahagrass barnyardgrass cheatgrass crabgrass downy brome fall panicum	fescue foxtails Indiangrass Italian ryegrass johnsongrass (short-term control) little barley red brome	red fescue reed canarygrass ripgut brome ryegrass smooth brome sprangletop witchgrass

**Postemergence:** To control actively growing weeds listed below, apply 8.9-17.8 lbs. of SIMAZINE 90DF plus 6-12 oz. of Oust in a minimum of 25 gals. of water per acre.

<b>ACTIVELY GROWING WEEDS</b>		
bedstraw Canada thistle curly dock dewberry fiddleneck fleabane goldenrod	hemlock honeysuckle Jerusalem artichoke kudzu mayweed musk thistle poison ivy	spanish needles turkey mullein Virginia pepperweed wild blackberry johnsongrass (season-long control) yellow nutsedge

### **STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in a safe manner. Store in original container only. Store in a cool, dry place. Reduce stacking height where local conditions such as humidity or pallet overhang can affect package strength. Do not store under conditions which might adversely affect the container or its ability to function properly. Such conditions include, but are not limited to, positioning of the container in storage, storage temperature, potential for crushing or damage due to stacking, and penetration of moisture.

**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 and Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL: 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.

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure or accident, call  
CHEMTREC 1-800-424-9300.**

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