

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PM 23 91177-295

10413

OCT 17 1995

Steve Rogosheske
 Riverside/Terra Corporation
 600 Fourth Street
 P.O. Box 6000
 Sioux City, IA 51102-6000

Dear Mr. Rogosheske:

Subject: Additional Tank Mixes; Addition of Use on Non-Crop Areas

Simazine 90DF
 EPA Registration No. 9779-295
 Your Submission Dated August 8, 1995

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable with the following provisions:

- 1) Add the statement "Keep unprotected persons and pets out of treated areas until sprays have dried." This statement must be placed within the Non-Agricultural Use box and should appear as a separate statement.
- 2) Delete the statement "Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin" that occurs under the heading "Aerial application" within the Application Procedures section of the labeling. This statement is redundant, since it is already covered by language concerning the Worker Protection Standards.
- 3) Within the directions for the recommended tank mixes with Bromacil 80W, Solicam, and Surflan, revise all references to "Simazine 4L" to read "Simazine 90DF". In addition, revise the application amount for this product from 4 quarts to 4.4 pounds in the directions for tank mixes with Bromacil 80W and Solicam.
- 4) Delete the proposed use on Non-Croplands, since this use is not being supported in the reregistration of products containing simazine.

DK: 305-7546: FHB/PM23		CONCURRENCES						
SYMBOL ▶	750.5C							
SURNAME ▶	D. KENNY							
DATE ▶	10/16/95							

A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the referenced label, incorporating the above changes, before releasing the product for shipment.

Sincerely yours,

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

Enclosure

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SIMAZINE 90DF

Water dispersible granule for control of many annual grasses and broadleaf weeds

ACTIVE INGREDIENT		
Simazine [2-chloro-4,6 bis(ethylamino)-s-triazine]	90.0%
INERT INGREDIENTS	10.0%
	Total	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

IF ON SKIN: Wash with plenty of water. Get medical attention if irritation persists.
 IF IN EYES: Flush with water for 15 minutes. Get medical attention.

PRECAUTIONARY STATEMENTS

CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed or absorbed through the skin. Avoid breathing spray mist.

Personal Protective Equipment:

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, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 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 is a chemical which 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 as a result of agricultural use. Users are advised not to apply simazine where the water table (ground water) is close to the surface and where the soils are very permeable, i.e., well-drained soils such as loamy sands. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Do not apply when weather conditions favor drift from areas treated.

Read Additional PRECAUTIONARY STATEMENTS

EPA Reg. No. 9779-295

EPA Est. No. 9779-AR-13

Manufactured For
 Riverside/Terra Corporation
 P O Box 6000, Sioux City, Iowa 51102-6000
 Riverside Serves Agriculture. Agriculture Serves Everyone.

NET CONTENTS
1 BS.

ACCEPTED
 with COMMENTS
 In EPA Letter Dated
 OCT 17 1990
 Under the Federal Insecticide,
 Fungicide, and Rodenticide Act
 as amended, for the pesticide
 registered under EPA Reg. No.
9779-295

DIRECTIONS FOR USE

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

Do not apply this product through any type of irrigation system.

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.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 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.

STORAGE AND DISPOSAL

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

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.

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: Completely empty bag into application equipment. Then 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.

GENERAL INFORMATION

Apply this herbicide before weeds emerge or after removal of weed growth. Simazine 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.

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 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.

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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.)	lambequarters	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

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.

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) maintain 35-40 psi at nozzles, (2) provide sufficient agitation in tank to keep 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 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:

$$\frac{\text{Band width}}{\text{Row width in inches}} \times \frac{\text{Broadcast rate}}{\text{Per acre}} = \text{Amount needed per acre of field}$$

Aerial application: Use aerial application only where specified in the use directions. Apply in a minimum of 1 gallon of water for each 1-1.5 lbs. of herbicide applied per acre. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Avoid application to animals or humans. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

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.

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- 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® Riverside Combine® or Unite®.
(NOTE: Complex, Riverside Combine and Unite are not registered for use in California.)
- 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:

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

- 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.

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.

Precautions (All fruit and nut crops): To avoid crop injury: 1) Apply only to orchards or groves where trees have been established 12 months or more unless specified differently. 2) Make only one application per year, except as noted otherwise. 3) Do not use on gravelly, sand, or loamy sand soil. 4) 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 year.

Precautions: 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.

Avocados

CA and FL only: Apply 2.2-4.4 pounds per acre after final preparation of grove.

Precaution: 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.

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Cranberries

MA: Apply up to 4.4 pounds per acre either before spring growth begins or in the fall after harvest.

Other areas: Apply 2.2 pounds per acre before spring growth begins.

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.

Precautions: 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 2.2-5.3 pounds per acre any time between harvest and early spring.

Precaution: Do not use in vineyards established less than three years or crop injury may occur.

Grapefruit, Lemons, Oranges

AZ (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.

CA: In grapefruit, lemons, and oranges, 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.

Precaution: Do not use in the Imperial, Coachella, or Palo Verde valleys, or crop injury may result.

FL (Grapefruit and Oranges only): ~~Apply only once per year. For control of weeds listed under GENERAL INFORMATION, apply 7.1-10.6 pounds per acre in the spring; to control milkweed vine, use 8.9-10.6 pounds per acre either preemergence or before vines are 12 inches tall.~~ 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.

TX (Grapefruit and Oranges only): Apply 4.4-5.3 pounds per acre.

Precautions (All Areas): To avoid crop injury, 1) Do not use in nurseries. 2) Do not apply to bedded grapefruit, lemons, or oranges. 3) 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. Repeat application as necessary.

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.

Peaches, Plums, Sweet Cherries

Apply 1.75-4.4 pounds per acre. Apply in late fall to early spring prior to weed emergence.

Precautions: 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.

Precautions: 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

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.

Precautions: To avoid crop injury, 1) Make only one application per growing season. 2) 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.

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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, cudweed, 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 qts. of Simazine 4L 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 4L 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:

Almonds (CA only)	Grapes	Pears
Apples	Lemons (AZ and CA only)	Pecans
Avocados (CA and FL ¹ only)	Macadamia nuts	Plums ⁴
Cherries (sour and sweet ⁴)	Olives	Walnuts
Filberts	Oranges ²	
Grapefruit (CA and TX only)	Peaches ³	

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.

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

²In 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.

³Limited 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 rare of this product and other information.

⁴Limited 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*	Oranges* (AZ, CA, FL and TX)
Avocados*(CA and FL only)	Peaches*(1)
Cherries (sour and sweet)(2)	Pears*
Filberts**	Pecans**
Grapefruits* (CA, FL, TX)	Plums*(2)
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.

(1) 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.

(2) Plums and sweet cherries: limited to MO and states east of the Mississippi River except TN.

Simazine 4L Plus Solicam[®] Tank Mix

To obtain improved control of such weeds as clover, cutleaf evening primrose, dandelion, henbit, horseweed or maretail, lambsquarters and puncture vine, apply Simazine 4L in tank mixtures with Solicam DF. Apply 4 qtz. per acre of Simazine 4L 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 2 times per year. Simazine 4L + 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 4L + Solicam mixtures from contacting foliage, fruits and stems of citrus trees during application. Do Not apply within 12 weeks of citrus harvest.

Simazine 4L Plus Surflan[®] 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 4L 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. Use the appropriate rate in the table below.

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)	3.3 pounds
Organic soil: Peat, muck, and high-organic clay	4.4 pounds

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

To control quackgrass: Apply 3.3-4.4 pounds per acre in the fall. Plow two to three weeks later, or if erosion is a problem, delay plowing until spring.

Precautions: 1) Do not apply more than 4.4 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 3.3 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.

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Note: Do not graze treated areas, or illegal residues may result.

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 Riverside 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[®] 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 1.1-3.3 lbs. 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 limitation 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 2.2-3.3 lbs. 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 +[®] 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 1.1-3.3 lbs. of Simazine 90DF plus 4.75 pts. of Sutan + 6.7E per acre. Observe and follow all precaution and limitations on both labels.

NURSERIES, CHRISTMAS TREE PLANTING, SHELTERBELTS

Nurseries (see list below)

Apply 2.2-3.4 pounds in at least 25 gallons of water per acre in fall or spring.

Precautions. To avoid plant injury, do not apply for at least one year after transplanting.

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Christmas Tree Plantings and Shelterbelts (see list below)

Remove weed growth before application. Apply 2.2-4.4 pounds in at least 25 gallons of water per acre after transplanting. Use the same rate for annual maintenance applications.

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.

Precautions: 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 or shelterbelts sooner than 1 year after transplanting. In other areas, do not apply to Christmas trees or shelterbelt transplants less than two 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.

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

CONIFERS		
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

DECIDUOUS TREES AND WOODY ORNAMENTALS		
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[®] 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 thith 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)

St. Augustinegrass, Centipedegrass, and Zoysia Grass

Apply 2.2-4.4 pounds per acre, according to soil texture as indicated below.

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

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

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Precautions: 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.

TURFGRASS FOR FAIRWAYS, LAWNS, SOD PRODUCTION*, AND SIMILAR AREAS

*In states other than Florida. For use on turfgrass for sod in Florida, see "Turfgrass for Sod (Florida Only)" section above.

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.

Irrigate with 1/2 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 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.

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.

Precautions: 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.

~~NONSELECTIVE WEED CONTROL ON NONCROP LAND~~

~~This product provides long-term weed control of weeds listed under General Information, on industrial sites, highway medians and shoulders, railroad rights-of-way, lumberyards, petroleum tank farms, and in noncrop areas on farms, such as around buildings, equipment and fuel storage areas, along fences, roadsides and lanes.~~

~~For best results apply this product before weeds emerge. If weed growth has begun and removal is not feasible, include a contact or translocated herbicide in the spray.~~

~~Aerial applications may be made where it is feasible. Use at least 1 gallon of water for each 0.9 lbs. of this product for both ground and aerial applications. Use more water if practical.~~

~~Precautions: (1) Do not use this product for nonselective weed control on land to be cropped, near adjacent desirable trees, shrubs or plants, or in greenhouses, as injury may occur. (2) Do not use in areas accessible to livestock or allow livestock to graze treated weed foliage.~~

~~To control annual broadleaf and grass weeds (including barnyardgrass, cheat, crabgrass, common lambsquarters, foxtail, ragweed, puncturevine, and turkey mullein) apply 5.3-11.1 lbs. per acre.~~

~~To control most annual and many perennial broadleaf and grass weeds (including quackgrass, bluegrass, redtop, burdock, Canada thistle, orchardgrass, purpletop, smooth brome, dogfennel, and plantain) apply 11.1-20 lbs. per acre.~~

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, apply 4.4-8.9 lbs. of Simazine 90DF plus 3-5 oz. of Oust in a minimum of 25 gals. of water per acre.

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

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

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.

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

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 Roundup® is a trademark of Monsanto Company
 Solicam® is a trademark of Sandoz Crop Protection
 Surflan® is a trademark of DowElanco
 Unite® is a trademark of HACO, Inc.

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Seller, and Buyer assumes the risk of any such use.