

34704-687

02-02-2004

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 2 2004

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Ms. Glenda Haage
Loveland Products Inc.
P.O. Box 1286
Greeley, CO 80632-1286

Dear Ms. Haage:

Subject: Simazine 4L Flowable Herbicide
EPA Registration Number 34704-687
Application dated January 12, 2004

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable, provided you make the following changes before you release the product for shipment.

1. Under the ingredient statement, add the following text "Simazine 4L contains ___ lbs active ingredient per gallon."

2. Under the FIRST AID statements, add the following text:

"IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person." Place before the IF IN EYES statement.

3. Remove the statements "If swallowed, induce vomiting. Get medical attention. If inhaled, contact your nearest Poison Control Center. If on skin, remove by washing. Get medical attention, if irritation persists. If in eyes, flush with plenty of water. Get medical attention if irritation persists." from under PRECAUTIONARY STATEMENTS.

4. Change "waterproof gloves" to "chemical resistant gloves made of waterproof material" under Agricultural Use Requirements.

5. Change "Storage" subheading to "Pesticide Storage" under STORAGE AND DISPOSAL heading

6. Remove the word "Prohibitions" from under the heading STORAGE AND DISPOSAL.

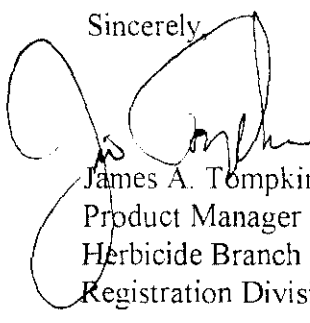
7. Remove the text "Do not store under conditions which might adversely affect the container or its ability to function properly. Such conditions include, but are not limited to, positioning of the container in storage, storage temperature, potential for crushing or damage due to stacking, and penetration of moisture " from under the heading STORAGE AND DISPOSAL, and place under the subheading Pesticide Storage.

8. Add the restriction, "In FL, do not exceed 8 qts of Princep 4L during any one growing season" as on the 100-526 approved label under Florida (Grapefruit and Oranges only) section.

9. Add the attached Spray Drift Management text, as is required for any label allowing aerial application.

Submit three (3) copies of final printed labeling incorporating the above changes before you release the product for shipment. Amended labeling will supercede all previously accepted ones. A stamped copy of labeling is enclosed for your records.

If you have any questions, please contact Hope Johnson at 703-305-5410.

Sincerely

James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505C)



OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Attachment-Spray Drift Management

Under the heading **Spray Drift Management** the text should read as follows:

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed $3/4$ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversion section of this label).

Controlling Droplet Size

Volume-Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure-Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of nozzles-Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation-Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

Nozzle Type-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

Boom Length-For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application-Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

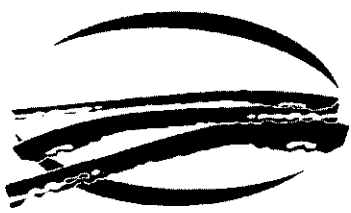
Temperature Inversions

Applications should not occur during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun set and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

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

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SIMAZINE 4L

FLOWABLE HERBICIDE

ACTIVE INGREDIENT:		
Simazine (2-Chloro-4,6 bis (ethylamino)-s-triazine)	42.8%
INERT INGREDIENTS:	57.2%
	TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN CAUTION

See Below for Additional Precautionary Statements.

FIRST AID

If in eyes:	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15 -20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a <u>poison control center or doctor</u> for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a <u>poison control center or doctor</u> for treatment advice.
If inhaled:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a <u>poison control center or doctor</u> for further treatment advice.

Applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber or Viton, and shoes plus socks.

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

Engineering controls statements:
When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with 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

For terrestrial uses, 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 by cleaning of equipment, or disposal of wastes.

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.

DIRECTIONS FOR USE

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

AGRICULTURAL USE REQUIREMENTS

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

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL:
1-800-301-7976.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 34704-687

Shake well before using.

EPA REG. NO. 34704-687

EPA EST. NO. 100-LA-1

NET CONTENTS 2½ GALS. (9.46 L)

IHT

EXP 12P03

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Do not get in eyes or on skin. Do not breathe spray mist. If swallowed, induce vomiting. Get medical attention. If inhaled, contact your nearest Poison Control Center. If on skin, remove by washing. Get medical attention, if irritation persists. If in eyes, flush with plenty of water. Get medical attention if irritation persists.

Personal Protective Equipment:
Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistant category selection chart.

ACCEPTED with COMMENTS in EPA Letter Dated FEB 2 2004

SIMAZINE 4L

EPA REG. NO. 34704-687

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 treated areas until sprays have dried.

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

GENERAL INFORMATION

SIMAZINE 4L is a herbicide that should be applied before weeds emerge or following removal of weed growth. It 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, non-selective rates in crop areas. It also controls many perennial broadleaf and grass weeds.

Since SIMAZINE 4L enters weeds mainly through their roots, rainfall or irrigation is needed to move it into the root-zone. Very dry soil conditions and lack of rainfall following application may necessitate shallow cultivation.

SIMAZINE 4L controls most annual broadleaf and grass weeds such as:

Amaranth	Downy Brome (Cheat)	Purslane
Annual Bluegrass	Fireweed	Ragweed
Annual Morningglory	Flora's Paintbrush	Rattail Fescue
Annual Ryegrass	Florida Pusley	Russian Thistle
Barnyardgrass	Foxtails	Shepherd's-purse
(Watergrass)	Goosegrass	Shieldscrees
Baccharia spp.	Junglerice	Silver Hairgrass
Carelessweed	Lambsquarters	Smartweed
Carpetweed	Mustard	Spanish Needles
Common Chickweed	Nightshade	Tansymustard
Crabgrass (<i>Digitaria</i>	Pigweed	Wild Oats
spp.)	Prickly Lettuce	Wiregrass
		Witchgrass

SIMAZINE 4L is non-corrosive to equipment, non-flammable, and has low electrical conductivity.

SIMAZINE 4L is a flowable formulation to be mixed with water and applied as a spray. Add SIMAZINE 4L to the spray tank during or after filling. Sufficient hydraulic (jet) or mechanical agitation should be provided during mixing and application to keep the material in suspension.

Shake well before using.

EQUIPMENT

Ground Application: Use conventional spray equipment with 80° fan-type nozzles. Screens in nozzles as well as those in suction and inline strainers, should be no finer than 50 mesh.

Use hydraulic or mechanical agitation during mixing and application to maintain a uniform suspension.

Use a pump with capacity to maintain 35-40 psi at the nozzles. If hydraulic agitation is used, the pump should also provide sufficient agitation in the tank to keep the mixture in suspension.

Wash sprayer thoroughly with clean water immediately after use.

Aerial Application: Use aerial application only where specified in the use directions. Screens in nozzles as well as those in suction and inline strainers should be no finer than 50-mesh.

Avoid application directly to animals or humans. Wash sprayer thoroughly with clean water immediately after use.

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

Apply this product only as specified on this label. Do not use on any crop in Kern County, California.

Add SIMAZINE 4L directly to the spray tank partially filled with clear water, add any tank mix ingredients and then add remainder of water and provide constant agitation during mixing to keep mixture in suspension. Agitation should not be so violent as to cause air bubbles to form in mixture.

For ground application where the amount of water is not specified, apply SIMAZINE 4L in 20-40 gals. of water per acre.

For aerial application, use a minimum of 1 gal. of water for each 1 qt. of SIMAZINE 4L per acre, unless specified differently.

FRUIT AND NUT CROPS

Apply the spray to the orchard or vineyard floor avoiding contact with fruit, foliage or stems. Make application only to orchards or groves where trees have been established one year or more. Make only one application per year, except as noted otherwise. Recommended rates are based on broadcast treatment. For band applications around trees in fruit or nut plantings, reduce the broadcast rate of SIMAZINE 4L and water per acre in proportion to the area actually sprayed.

APPLES, PEARS, SOUR CHERRIES: Apply 2-4 qts. per acre.

AVOCADOS: California only: Apply 2-4 qts. per acre after final preparation of grove. Precaution: Do not apply to sandy soil.

BLUEBERRIES AND CANEBERRIES: (Blackberries, boysenberries, loganberries, raspberries): Apply 2-4 qts. per acre in the spring or apply a split application of 2 qts. per acre in the spring plus 2 qts. per acre in the fall. Apply in a minimum of 40 gals. of water per acre.

On plantings less than 6 months old, use ½ the above rate. To control quackgrass, apply 4 qts. per acre in the fall or split application applying 2 qts. per acre in the fall plus 2 qts. per acre in the spring, when quackgrass is actively growing.

NOTE: Do not apply when fruit is present.

CRANBERRIES: Massachusetts: Apply up to 4 qts. per acre either before spring growth begins or in the fall after harvest. Other areas: Apply 2 qts. per acre before spring growth begins.

FILBERTS: (Oregon and Washington only): Apply 2-4 qts. per acre in the fall or apply a split application of 2 qts. per acre in the fall plus 2 qts. per acre in the spring. PRECAUTION: 1) If trees are planted on a hillside, excessive soil erosion may result from the elimination of weeds. 2) Do not use on sandy soil.

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

GRAPES: Apply 2-4.8 qts. per acre any time between harvest and early spring. PRECAUTION: Do not use in vineyards established less than three years.

GRAPEFRUIT, LEMONS, ORANGES: Arizona (Lemons and Oranges only): Apply a split application of 1.6 qts. per acre in the spring plus 1.6 qts. per acre in the fall. California: Apply 2-4 qts. per acre. Do not use in the Imperial, Coachella, or Palo Verde Valleys.

Florida (Grapefruit and Oranges only): Apply 4 qts. of SIMAZINE 4L 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 tree.

For control of difficult species, such as balsamapple vine and spanishneedles, and partial control of honeyvine milkweed, apply 8 qts. of SIMAZINE 4L as a single application in the spring as a 50% band application to the grove acre. Apply in the spring growing season between January and April. Do not make a fall SIMAZINE 4L application if this treatment was used in the spring. When emerged weeds are present, apply SIMAZINE 4L in tank mixture with a recommended contact herbicide. Follow all directions, precautions, limitations, etc. on the tank mix products.

Texas (Grapefruit and Oranges only): Apply 4-4.8 qts. PRECAUTIONS (All Areas): 1) Do not use in nurseries. 2) Do not apply to bedded grapefruit, lemons or oranges. 3) To avoid possible injury do not apply to trees under stress from freeze damage for one year after the freeze.

MACADAMIA NUTS: Apply 2-4 qts. in 50 gals. of water per acre before harvest and just prior to weed emergence. Repeat application as necessary. Do not apply when nuts are on the ground during the harvest period.

OLIVES: Apply 2-4 qts. per acre following grove preparation in the fall. Repeat annually in midwinter.

PEACHES, PLUMS, SWEET CHERRIES: Apply 2-4 qts. per acre. Apply in late fall to early spring prior to weed emergence.

PRECAUTIONS: 1) Do not apply to sandy or gravelly soil. 2) Peaches: use only in Ark., La., Mo., Okla., Tex., and the states east of the Miss. River. 3) Plums and sweet cherries: use only in Mo. and states east of the Miss. River except Tenn.

WALNUTS: Apply 2-4 qts. per acre. PRECAUTIONS: 1) Do not apply to sandy soil. 2) Leveling and furrowing operations after application will lessen effectiveness of weed control. NOTE: Do not apply when nuts are on the ground.

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SIMAZINE 4L
EPA REG. NO. 34704-687

SIMAZINE 4L plus PARAQUAT CL Tank Mix Combination For Weed Control in APPLES, PEACHES AND PEARS:

SIMAZINE 4L plus Paraquat CL Tank mix combination is effective in apple, peach and pear orchards for kill of existing vegetation and for residual control of the annual broadleaf and grass weeds listed under General Information. This combination is also effective for top kill and suppression of perennial weeds. Apply the rates shown in the following table as a tank mix in 50-200 gals. of water per acre to the orchard floor avoiding contact with fruit, foliage or stems. Apply when the weeds and grasses are succulent and the new growth is from 1-6 inches tall. Since Simazine enters weeds mainly through their roots, rainfall or irrigation is needed to move it into the root zone.

Crop	Broadcast* SIMAZINE 4L	Rate Per Acre Paraquat CL
Apples		
Pears	2-4 qts.	1-2 qts.
Peaches**	1.6-4 qts.	1-2 qts.

*For band applications or spot applications around trees, reduce the broadcast rate and the amount of water in proportion to the area actually sprayed.
 **Do not apply to peaches on sandy or gravelly soil. Use on peaches only in Arkansas, Louisiana, Missouri, Oklahoma, Texas and states east of the Mississippi River.

In the table above, use the low rate on coarse-textured soil and low organic matter soil. Use the high rate on fine textured soil and organic matter soil.

PRECAUTIONS: 1) Make only one application per year. 2) Make applications only in orchards or groves where trees have been established one year or more. 3) Do not spray under windy conditions and use a shield for young trees.

NOTE: Do not allow animals to graze treated areas.

SIMAZINE 4L plus Paraquat CL Tank-Mix Combination for Weed Control in ALMONDS:

SIMAZINE 4L plus Paraquat CL tank-mix combinations is effective on almonds for kill of existing vegetation and for residual control of the annual broadleaf and grass weeds listed under general information.

This combination is also effective for top kill and suppression of perennial weeds.

Apply the rate shown in the following table as a tank mix in 50-200 gallons of water per acre to the orchard floor avoiding contact with nut, foliage or stems. Apply when the weeds and grasses are succulent and the new growth is from 1-6 inches tall.

Since SIMAZINE 4L enters weeds mainly through their roots, rainfall or irrigation is needed to move it into the root zone.

ALMONDS: For use in California only.

Crop	Broadcast SIMAZINE 4L	Rate Per Acre Paraquat CL
Almonds***	1-2 qts.	1-2 qts.

***Do not apply to almonds when nuts are on the ground during the harvest period. Do not treat trees established in the grove less than 3 years. Do not treat Mission variety of almonds. Do not apply to almond trees propagated on plum rootstocks. Do not replant almonds in treated soil. Do not apply on gravelly, sand or loamy soil or on soil with less than 1% organic matter. Do not treat areas where water will accumulate.

PECANS: Apply the rate in the following table before weeds emerge in the spring.

Soil Texture	Rate Per Acre
Sand, loamy sand	Do not use
Loam or clay soil, low in organic matter	2-3 qts.
Clay soil high in organic matter	3 qts.-1 gal.

PRECAUTIONS: Do not use west of the Pecos River in Texas or in New Mexico, Arizona or California. Do not make applications to transplanted trees that have been established less than two years in the grove as injury may occur.

NOTE: Do not apply when nuts are on the ground. Do not allow animals to graze treated areas

FIELD CROPS

CORN: Nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier for SIMAZINE 4L. Do not apply after corn has emerged as there is 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 of SIMAZINE 4L. Best results will be obtained when SIMAZINE 4L is applied within 2 weeks before planting

NOTE: Under dry weather conditions, preplant applications may give better weed control

Soil Texture	Broadcast rate per acre
Coarse-textured soil: Sand, silt, and loam that is low in organic matter	2 qts.
Medium-textured soil: Soil containing a moderate amount of clay and organic matter	2.4 qts.
Fine-textured soil: Loam that is high in organic matter and clay (including dark prairie soils of Corn Belt)	3 qts.
Organic soil: Peat, muck, and high organic clay	4 qts.

To control quackgrass: Apply 3-4 qts. per acre in the fall. Plow two to three weeks later, or if erosion is a problem, delay plowing until spring. Do not plant any crop except corn in the spring following treatment. Do not graze treated area. NOTE: If weeds develop, particularly under relatively dry conditions, a shallow cultivation will generally result in better weed control.

Winter Annual Broadleaf Control — Preemergence Fall Application

For preemergence control of winter annual weeds, such as common chickweed, henbit, shepherd's-purse, tansymustard, wild mustard, annual bluegrass, downy brome, and others, broadcast 1 qt./A of SIMAZINE 4L after harvest of the preceding crop and prior to weed emergence on land to be planted to corn the following year. A tillage operation may precede the application. Do not apply to frozen ground. If SIMAZINE 4L is used in the fall corn weed control program, do not exceed 2 qts. of SIMAZINE 4L preemergence in the spring.

PRECAUTIONS: 1) Do not apply more than 4 qts. of SIMAZINE 4L to corn in any one year. 2) Land treated with SIMAZINE 4L should not be planted to any crop except corn until the following year as injury may occur. 3) After harvest of a treated crop, 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 qts. of SIMAZINE 4L 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 SIMAZINE 4L 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 SIMAZINE 4L to control weeds in corn only when corn is to follow corn, or 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 SIMAZINE 4L if more than 2 qts. of SIMAZINE 4L per acre (or equivalent rate in a band) was applied as injury may occur. 8) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year after SIMAZINE 4L application as injury may occur.

SIMAZINE 4L plus ATRAZINE 4L Tank-Mix Combination for Weed Control in CORN:

The tank-mix combination of SIMAZINE 4L plus ATRAZINE 4L 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 a 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 4L plus ATRAZINE 4L. 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.

Soil Texture	Preplant and pre-emergence broadcast rates in 10-40 gals. of water per acre	
	SIMAZINE 4L	ATRAZINE 4L
Coarse-textured soil: sand, loamy sand, sandy loam	1 qt.	1 qt.
Medium-textured soil: silt loam and clay loam low in organic matter	1.2 qts.	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)	1.5 qts.	1.5 qts.

CORN—CHEMIGATION

APPLY PREPLANT OR PREEMERGENT TO CROP AND WEEDS.

Do not apply this product preplant incorporated 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. 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 a crop of untreated corn is precede another rotational crop.

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation system(s) Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

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SIMAZINE 4L

EPA REG. NO. 34704-687

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Note: Platte Chemical Co. does not encourage connecting chemigation systems to public water supplies. The following information is provided for users who have diligently considered all other application and water supply options before electing to make such a connection.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

SPRINKLER CHEMIGATION

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment. Mix in clean supply tank the recommended amount of this product for acreage to be covered, and needed quantity of water.

This product should not be tank-mixed with other pesticides, surfactants or fertilizers unless prior use has shown the combination noninjurious under your conditions of use.

Follow precautionary statements and directions for all tank-mix products. Provide constant mechanical agitation in supply tank to keep this product suspended throughout application operations.

Use sufficient gallonage of water to obtain thorough and uniform coverage, but not cause runoff or excessive leaching. This will vary depending on equipment, pest problem and stage of crop growth. Application of more or less than optimal quantity of water may result in decreased chemical performance, crop injury or illegal pesticide residues. As a guide, 1/2 to 1 acre inch of water is suggested.

Meter this product into the irrigation water uniformly during the period of operation. Do not overlap application. Follow recommended label rates, application timing, and other directions and precautions for corn.

NURSERIES, CHRISTMAS TREE PLANTINGS, SHELTER BELTS

NURSERIES (See List Below): Apply 2-3 qts. in at least 25 gals. of water per acre in fall or spring at least one year after transplanting.

CHRISTMAS TREE PLANTING AND SHELTER BELTS (See List Below): Remove weed growth before application. Apply 2-4 qts. in at least 25 gallons of water per acre after transplanting. Use the same rate for annual maintenance applications. For quackgrass control apply 4 qts. per acre in the fall or apply a split application of 2 qts. per acre in the fall plus 2 qts. per acre in early spring after quackgrass

begins growth.

in California, Oregon, and Washington do not apply to Christmas trees or shelter belts sooner than one year after transplanting.

PRECAUTIONS: 1) Do not use SIMAZINE 4L on seedbeds or cutting beds. 2) Do not apply to Christmas tree or shelter belt transplants less than three years of age. 3) Do not apply more than once a year, except as directed for quackgrass control. Apply SIMAZINE 4L to these species of trees and shrubs, as recommended above:

American elm	dogwood	Siberian elm
Austrian Pine	Douglas fir	Fraser fir
arborvitae	honey locust	hemlock
balsam fir	juniper	red spruce
barberry	Mugho pine	Russian olive
blue spruce	Norway spruce	red oak
boxelder	Oregon grape	red pine (Norway pine)
bush honeysuckle	(Mahonia spp.)	white cedar
caragana	red cedar	white pine
cotoneaster	Scotch pine	white spruce
		yew (Taxus spp.)

TURF GRASSES FOR SOD (FLORIDA ONLY)

St. Augustine, Centipede and Zoysia Grass: Apply 2-4 qts. per acre according to soil texture as indicated below.

Muck or peat	4 qts.	Old beds, within 2 days after lifting of sod New beds: 3-4 days after sprigging or plugging
Sandy Soil	2 qts.	Old beds: within 2 days after lifting of sod New beds: 7-10 days after sprigging or plugging

Apply an additional 2 qts. on muck or peat, or 1 qt. on sandy soil if weed growth recurs.

PRECAUTIONS: 1) Do not apply within 30 days before cutting or lifting. 2) Do not apply in combination with surfactants or other spray additives. 3) Use only on turf grass reasonably free of infestations of insects, nematodes, and diseases. 4) On newly 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 Turfgrasses for Sod (Florida only) section above.

Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysiagrass

Apply SIMAZINE 4L 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 4L 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 4L in late winter before the weeds emerge. Apply in a minimum of 15 gals. of water per acre.

Irrigate with 1/2 inch of water if rainfall does not occur within 10 days after pre-emergence treatment.

Where annual bluegrass is the major weed, use 1 qt. of SIMAZINE 4L per acre (22 ml or 0.75 fl. oz./1,000 sq. ft.). Use 2 qts./A (22-44 ml or 0.75-1.5 fl. oz./1,000 sq. ft.) for control of other weeds. However, do not exceed 1 qt./A 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 qt./A at least 30 days after the initial application, but not after June 1. However, do not make more than 2 applications per year.

Precautions: On newly sprigged turfgrass, hybrid bermudagrass, nondormant bermudagrass or nondormant zoysiagrass, 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 on golf greens. 3) Do not use north of NC (except may be used in the VA Coastal Plains) or on soils with a pH above 7.8. 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 to newly seeded grasses until they have overwintered and have a well-developed rhizome system. 8) Do not exceed 2 qts. of product 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

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. Best results are obtained when SIMAZINE 4L is applied before weeds emerge. If weed growth has begun and removal is not feasible, include a contact or translocated herbicide in the spray.

SIMAZINE 4L can be used to provide residual weed control or suppression on industrial sites, highway medians and shoulders, railroad rights-of-way, lumber yards, petroleum tank farms, and in noncrop areas on farms, such as around buildings, equipment and fuel storage areas, along fences, roadsides and lanes. Aerial applications may be made where it is feasible.

Use at least 1 gallon of water for each 25.6 oz. of SIMAZINE 4L; use more water if practical for both ground and aerial applications.

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To control or suppress susceptible annual broadleaf and grass weeds (including barnyardgrass, cheat, crabgrass, lambsquarters, foxtail, ragweed, puncturevine, and turkey mullein) apply up to 4.8 qts. per acre.

To broaden weed control spectrum, or in areas where triazine resistant weeds are present, it is recommended to tank mix SIMAZINE 4L with other compatible herbicides registered for use on noncrop areas. For example, certain diuron, bromacil, glyphosate and 2,4-D formulations are registered for such use. Observe the most restrictive label statements of the various tank mix products used.

WARRANTY DISCLAIMER AND NOTICE

IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS INHERENTLY ASSOCIATED WITH THE USE OF THIS PRODUCT. CROP INJURY, INEFFECTIVENESS, OR OTHER UNINTENDED CONSEQUENCES MAY RESULT DUE TO SUCH FACTORS AS WEATHER CONDITIONS, PRESENCE OR ABSENCE OF OTHER MATERIALS, OR THE MANNER OF USE OR APPLICATION, ALL OF WHICH ARE BEYOND THE CONTROL OF LOVELAND PRODUCTS INC., THE MANUFACTURER OR SELLER.

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