

BEST AVAILABLE COPY

Drexel

Simazine 4L

Herbicide

Pre-emergence control of many annual broad-leaf weeds and grasses in agricultural and ornamental crops.

ACTIVE INGREDIENT:

(Simazine: 2-chloro-4,6-bis(ethylamino)-s-triazine)*

INERT INGREDIENTS: 40%

TOTAL: 60%

*Simazine 4L contains 4 lbs. active ingredient per gallon.

Keep Out Of The Reach Of Children
CAUTION

EPA Registration Number 19713-80

EPA Establishment Number 19713-MS-1

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: HARMFUL IF SWALLOWED. Avoid Breathing of Spray. Avoid Contact with Skin and Eyes. Wear regular long-sleeved work clothing. Change to clean clothing daily. Wash hands and face before eating. Wash thoroughly after handling.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF SPLASHED IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.

IF SPILLED ON SKIN: Immediately remove contaminated clothing, INCLUDING SHOES, and wash skin with soap and plenty of water. If irritation develops, send for a physician.

ENVIRONMENTAL HAZARDS

Simazine is a chemical which can travel (seep or leach) through soil and enter groundwater which may be used as drinking water. Simazine has been found in groundwater as a result of its use as a herbicide. Users of this product are advised not to apply simazine where the water table (groundwater) is close to the surface and where the soils are very permeable, i.e., well drained soils such as sandy sands. Users are advised to consult with their local agricultural agencies to obtain information on the location of groundwater and the type of soil in their area. Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not apply when weather conditions favor drift from areas treated.

DIRECTIONS FOR USE

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

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 and ornamental crops. When used at higher, nonselective rates in noncrop areas, it also controls many perennial broadleaf weeds and grasses.

Where a range of application rates is given, use the low rate on coarser textured

soil and soil lower in organic matter; use the high rate on finer textured soil and soil higher in organic matter.

Simazine Herbicide 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 or rotary hoeing. Simazine 4L is noncorrosive to equipment and nonflammable.

ANNUAL WEEDS CONTROLLED

abysm	annual	Brachiaria spp.	common
Amaranthus spp.	morningglory	burclover	chickweed
annual	annual ryegrass	carelessweed	crabgrass
bluegrass	barleygrass	carpetweed	downy brome
tall panicum	lonewal	purslane	smartweed
fireweed	lambsquarters	quackgrass*	spanishneedles
Florida's paintbrush	mustard	ragweed	speedwell
Florida pursley	nightshade	rattail fescue	tansymustard
foxtails	peppergrass	Russian thistle	wild mustard
goosegrass	pigweed	shepherdspurse	wild oats
henbit	prickly	shieldcress	wiregrass
junkerice	lettuce	silver hairgrass	witchgrass

*See specific use directions.

EQUIPMENT

Ground Application:

Use conventional spray equipment with 80° fan-type nozzles. Screens in nozzles as well as those in suction and in-line 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 in-line strainer should be no finer than 50 mesh. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

Avoid application directly to animals or humans. Although it is unnecessary for flagmen or loaders to wear protective clothing or equipment, care should be taken to avoid inhalation of dust or spray mist, or prolonged contact with skin. Flagmen and loaders should wash thoroughly before eating and at the end of each day's operation. Wash sprayer thoroughly with clean water immediately after use.

MIXING INSTRUCTIONS

Mix Simazine 4L with water and apply as a spray. Pour Simazine 4L into the tank during or after filling. Hydraulic (jet) or mechanical agitation is recommended during mixing and application to keep material in suspension.

All return lines to the tank must discharge below liquid level and agitation should not be so violent as to cause air bubbles to form in the liquid. Wash sprayer thoroughly after use.

Ground Application—where the amount of water is not specified, apply Simazine 4L in 20-40 gals. of water per acre.

Aerial Application—use a minimum of one gal. of water for each quart of

Simazine 4L applied per acre, unless otherwise specified.

BAND TREATMENT

The amount of Simazine 4L needed for band treatment may be calculated by the formula:

$$\frac{\text{band width in inches} \times \text{broadcast rate/acre}}{\text{row width in inches}} = \text{amount needed (per acre)}$$

FRUIT AND NUT CROPS

by 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, unless specified differently. Make only one application per year, except as noted otherwise. Recommended rates are based on broadcast treatment. For band applications or spot applications around trees in fruit or nut planting, reduce the broadcast rate of Simazine 4L and water per acre in proportion to the area actually sprayed.

PRECAUTION: DO NOT APPLY TO SANDY SOILS.

Apples, Pears, Sour Cherries: Apply 2-4 qts. per acre.

Avocados (California only): Apply 2-4 qts. per acre after final preparation of grove.

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 1/2 the above rates.

Do not apply when fruit is present.

Quackgrass Control: Apply 4 qts. per acre in the fall or split the application applying 2 qts. per acre in the fall plus 2 qts. per acre in the spring, when quackgrass is actively growing.

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.

Do not apply when nuts are on the ground during the harvest period. Do not use sandy soil.

NOTE: If trees are planted on a hillside, excessive soil erosion may result from the elimination of weeds.

Grapes: Apply 2-4.8 qts. per acre any time between harvest and early spring. 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 in a single application; or apply 2 qts. per acre in the fall and 2 qts. per acre in the spring. Do not use in the Imperial, Coachella, or Palo Verde Valleys.

Florida (Grapefruit and Oranges only): Apply 6.4-9.6 qts. per acre in the spring.

Texas (Grapefruit and Oranges only): Apply 4-4.8 qts. per acre.

NOTE (All Areas): Do not use in nurseries. Do not apply to bedded grapefruit, lemons or oranges. 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 1.6 qts.-4 qts. per acre. Apply in late fall to early spring prior to weed emergence.

Peaches: Use only in Ark., La., Mo., Okla., Tex., and the states east of the Mississippi River.

Plums and Sweet Cherries: Use only in Mo. and states east of the Mississippi River except Tenn. Do not apply to sandy or gravelly soil.

Pecans: Apply the appropriate rate in the following table before weeds emerge in the spring:

Soil Texture	Rate Per Acre
Sand, loamy sand	DO NOT USE
Sandy loam	4 pts.
Loam or clay soil low in organic matter	4 pts.-5.6 pts.
Clay soil high in organic matter	5.6-8 pts.

Do not use west of the Pecos River in Texas or in New Mex., Ariz., or Ga.

Do not make applications to transplanted trees that have been established less than two years in the groves as injury may occur.

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

Waterways: Apply 2-4 qts. per acre.

Do not apply when nuts are on the ground. Do not apply to sandy soil.

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

SIMAZINE HERBICIDE 4L PLUS PARAQUAT CL TANK-MIX COMBINATION

Apples, Peaches, 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, weeds and grasses 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. Add a nonionic surfactant at the rate of 1/2 pt. per 100 gals. Apply when the weeds and grasses are succulent and the new growth is from 1-6 inches tall. Make only one application per year. Make applications only in orchards or groves where trees have been established one year or more. Do not spray under windy conditions and use a shield for young trees. Do not allow animals to graze treated areas.

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

Broadcast* rate per acre

Crop	Simazine Herbicide 4L	Paraquat CL
Apples	2-4 qts.	1-2 qts.
Pears		
Peaches**	1.6-4 qts.	1-2 qts.

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 high organic matter soil.

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 soils. Use on peaches only in Arkansas, Louisiana, Missouri, Oklahoma, Texas, and states east of the Mississippi River.

FIELD AND FORAGE 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. Use 10-40 gals. of spray mixture per acre.

Pre-emergence: Apply before weeds and corn emerge. Use the appropriate rate in the table below.

Preplant: Broadcast 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 than pre-emergence.

Soil Texture	Broadcast* rate per acre
Coarse textured soil: Sand, silt, and loam that is low in organic matter	4 pts.
Medium textured soil: Soil containing a moderate amount of clay and organic matter	4.8 pts.
Fine textured soil: Loam that is high in organic matter and clay (including dark prairie soils of Corn Belt)	6 pts.
Organic soil: Peat, muck, and high-organic clay	8 pts.

*For calculation of band treatment rate, see Information Section.

Quackgrass Control: Broadcast 6-8 pts. 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.

If weeds develop, particularly under relatively dry conditions, a shallow cultivation will generally result in better weed control.

BEST AVAILABLE COPY

NURSERIES, CHRISTMAS TREE PLANTINGS, SHELTER BELTS

Nurseries (see list below)

Apply 4-6 pts. in at least 25 gals. of water per acre in fall or spring at least one year after transplanting.

Christmas Tree Plantings and Shelter Belts (see list below)

Remove weed growth before application. Apply 2-4 qts. in at least 25 gals. of water per acre after transplanting; use the same rate for annual maintenance applications.

Quackgrass Control: Apply 8 pts. per acre in the fall or apply a split application of 4 pts. per acre in early spring, after quackgrass begins growth.

CAUTION:

1. Do not use Simazine 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	caragana	Mugho pine	red spruce
Austrian pine	catenaster	Norway spruce	Russian olive
abutilon	dogwood	Oregon grape	Scratch pine
balsam fir	Douglas fir	(Mahonia spp.)	Siberian elm
barberry	Fraser fir	red cedar	white cedar
blue spruce	hemlock	red oak	white pine
boxelder	honey locust	red pine	white spruce
bush honeysuckle	juniper	(Norway pine)	yew (Taxus spp.)

TURF GRASSES FOR SOD

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

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

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

CAUTION:

1. Do not apply within 30 days before cutting or lifting.
2. Do not use north of North Carolina.

VEGETABLE CROPS

Asparagus (established): Apply 2-4 qts. per acre to beds established one year or more. Apply once per year either after disking in the spring before weeds emerge, or following harvest after removal of existing weed growth. Spring application must be made at least 3 days before first cutting.

CAUTION: (Washington and Oregon only):

1. Do not use on sand, loamy sand, or gravelly areas of fields as crop injury may result.
2. Do not allow irrigation water to stand or to form pools in the fields as injury may occur.

Artichokes: Apply 2-4 qts. per acre as a directed spray after the last fall tillage.

CAUTION:

1. Do not apply to sandy soil.
2. Apply only once per year.

NONSELECTIVE WEED CONTROL ON NONCROP LAND

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 long-term weed control 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 gal. of water for each 1 qt. of Simazine 4L; use more water if practical for both ground and aerial applications.

1. Land treated with Simazine should not be planted to any crop except corn until the following year as injury may occur.
2. 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.
3. If more than 6 pts. of Simazine 4L is used per acre (or equivalent rate in a band), a crop of untreated corn should precede the next rotational crop.
4. Do not apply Simazine 4L preplant incorporated for weed control 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.
5. 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.
6. In Western Minnesota and eastern parts of the Dakotas, Nebraska, and Kansas, do not rotate to soybeans following corn treated with Simazine if more than 4 pints of Simazine 4L per acre (or equivalent rate in a band) was applied as injury may occur.
7. 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

Apply the tank-mix combination of Simazine 4L plus Atrazine 4L 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, lamb-quarters, pigweed, and ragweed. Apply in 10-40 gals. of water per acre.

Preplant

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 2 weeks before planting.

Pre-emergence

Apply the tank mixture during or shortly after planting but prior to crop and J emergence.

Pre-plant and pre-emergence broadcast* rates per acre

Soil Texture	Simazine 4L	Atrazine 4L
Sand, loamy sand, sandy loam	2 pts.	2 pts.
Silt loam and clay loam low in organic matter	2.4 pts.	2.4 pts.
Silt loam and clay loam with medium to high organic matter and clay (including dark prairie soils of the Corn Belt)	3 pts.	3 pts.

*For Calculation of pre-emergence band treatment rate see Information Section.

NOTE:

1. If weeds develop, a shallow cultivation will generally result in better weed control.
2. Following harvest of the treated crop, plow (moldboard or disk-plow) and thoroughly till the soil in fall or spring to minimize possible injury to spring-seeded rotational crops, regardless of the rate used.
3. Do not plant any crop except corn until the following year, as injury may occur.
4. Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following application or injury may occur.

Refer to the Atrazine 4L label for further directions, limitations and cautions.

Sugarcane

Apply 2-4 qts. per acre at planting or after harvest if ratoon crop is to be grown, but before weeds or sugarcane emerge. Simazine 4L may also be applied interline-directed over the sugarcane to provide continuing control of germinating weeds.

IE:

1. Do not apply more than one 2-4 pts. application over the plants or more than two interline-directed applications.
 2. Do not apply after "close-in."
 3. Total application should not exceed 10 qts. per acre crop cycle.
- Do not feed or graze treated forage to livestock.

BEST AVAILABLE COPY

To control Annual Broadleaf and Grass Weeds (including barnyardgrass, chickweed, crabgrass, lambsquarters, foxtail, ragweed, puncturevine, and turkey mullein) apply 4.5-10 qts. per acre.

To control most Annual and many Perennial Broadleaf and Grass Weeds (including quackgrass, bluegrass, redtop, hardtail, Canada thistle, orchardgrass, purple top, smooth brome, dogfennel, and plantain) apply 2½-5 gals. per acre.

To control hard-to-kill Perennial Weeds (including bull thistle and sow thistle) apply 5-10 gals. per acre. For longer residual control in regions of high rainfall and a long growing season, apply 5-10 gals. per acre.

STORAGE AND DISPOSAL

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

STORAGE INSTRUCTIONS:

Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool, dry area away from any heat or ignition source. Do not stack over 2 pallets high. Move containers by handies or in cases. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid cross-contamination. Store in original containers only. If the contents are leaking or material is spilled, follow these steps:

1. Contain spill, absorb with a material such as saw dust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with water and soap to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Do not allow run off to enter sewer or contaminate water supplies.
6. Dispose of wastes as indicated below.

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

Container Disposal: Metal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Plastics: 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.

FARM WORKER SAFETY STATEMENTS

Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must inform workers of areas or fields that may not be entered without specific protective clothing until sprays have dried, and appropriate actions to take in case of accidental exposure, as described under Precautionary Statements on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. **CAUTION:** Area treated with Simazine 4L on [date of application]. Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, flush eyes or skin with plenty of water. Call physician if irritation persists. Remove and wash contaminated clothing before reuse.

WARRANTY—CONDITION OF SALE:

Drexel warrants that the product conforms to its chemical description and is reasonably fit for the purpose 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 conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

Manufactured By

Drexel Chemical Company

P.O. BOX 9308, MEMPHIS, TENN. 38109-0308

BEST AVAILABLE COPY