

JUL - 5 1995

Ms. MILDRED BROWN  
 Grexel Chemical Company  
 P.O. Box 13327  
 1769 Channel Ave.  
 Memphis, TN 38113-0327

Dear Ms. Brown:

Subject: Grexel Simazine 20W  
 EPA Registration No. 19713-46  
 Grexel Simazine 4L  
 EPA Registration No. 19713-60  
 Grexel Simazine 500P  
 EPA Registration No. 19713-26  
 Simazine 20W Concentrate  
 EPA Registration No. 19713-27  
 Simazine 4L  
 EPA Registration No. 19713-27  
 Applications dated November 21, 1974, requests  
 to amend registrations by deletion of uses on  
 the following use-sites: Asparagus, Artichokes,  
 Legumes and Non-Crop Plants

The proposed amendments to delete the use-sites: Asparagus,  
 Artichokes, Legumes and Non-Crop Plants have been reviewed and  
 processed under section 1(f) of the Federal Insecticide, Fungicide  
 and Rodenticide Act as amended. A notice of receipt of these  
 applications was published on March 23, 1975 and the 90 day  
 withdrawal for requests for withdrawal occurred June 17, 1975.  
 There were no requests to withdraw any of these applications,  
 therefore they are acceptable provided that you:

1. Delete the phrase "for terrestrial uses," in the  
 Environmental Hazards section of the label of each  
 of these products.
2. Delete the statement "when used at higher, nonselective  
 rates in noncrop areas, it also controls many perennial  
 broadleaf weeds and grasses." The use-site "non-crop plants"  
 has been deleted.
3. Submit one (1) printed copy of the final printed label  
 before releasing the product for shipment.

If these conditions are not complied with, the registrations  
 will be subject to cancellation in accordance with FIFRA.

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Section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of each of these labels is enclosed for your records.

Sincerely yours,

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

Enclosures (5)

u. Wilson: Diskette # AEC-5:07-05-95

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Drexel

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

JUL - 5

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
19713-46

# Simazine 80W

## HERBICIDE

Preemergence control of many annual broadleaf weeds and grasses in agricultural and ornamental crops.

### ACTIVE INGREDIENT:

Simazine: 2-chloro-4, 6-bis(ethylamino)-s-triazine ..... 80%

INERT INGREDIENTS: ..... 20%

TOTAL: ..... 100%

**KEEP OUT OF THE REACH OF CHILDREN**  
**CAUTION**

EPA REG. NO: 19713-46

EPA EST. NO: 19713-MS-1

■ 46SP-1194

#### 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 and get medical attention.  
**IF SPILLED ON SKIN:** Wash skin with soap and plenty of water. If irritation develops, send for physician.

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMAN AND DOMESTIC ANIMALS

**CAUTION:** Causes eye and skin irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed. Avoid inhalation of dust and contamination of food and feed.

##### PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:  
Long-sleeved shirt and long pants  
Shoes plus socks  
Waterproof gloves

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.

#### USER SAFETY RECOMMENDATIONS

User 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.

#### ENVIRONMENTAL HAZARD

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 loam 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. 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. 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.

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.

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, shoes plus socks, and waterproof gloves.

#### CHEMIGATION

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 systems. 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. 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.

Public water system means a system for the provision of 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 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 shut down 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

Manufactured By

**Drexel Chemical Company**

P.O. BOX 9306, MEMPHIS, TN 38190-0306

JUL - 5 1995

Ms. BARBARA BROWN  
 Grexel Chemical Company  
 P.O. Box 13327  
 1709 Channel Ave.  
 Memphis, TN 38113-0327

Dear Ms. Brown:

SUBJECT: Grexel Siazaline 20W  
 EPA Registration No. 19713-46  
 Grexel Siazaline 4L  
 EPA Registration No. 19713-60  
 Grexel Siazaline 500P  
 EPA Registration No. 19713-76  
 Siazaline 20W Herbicide  
 EPA Registration No. 19713-271  
 Siazaline 4L  
 EPA Registration No. 19713-273  
 Applications dated November 23, 1994, requests  
 to amend registrations by deletion of uses on  
 the following use-sites: Asparagus, Artichokes,  
 Soybeans and Non-Cropland

The proposed amendments to delete the use-sites: asparagus, artichokes, soybeans and non-cropland have been reviewed and processed under section 4(f) of the Federal Insecticide, Fungicide and Herbicide Act as amended. A notice of receipt of these applications was published on March 23, 1995 and the 90 days allowable for requests for withdrawal occurred June 27, 1995. There were no requests to withdraw any of these applications, therefore they are acceptable, provided that you:

1. Delete the phrase "for terrestrial uses," in the Environmental Hazards section of the label of each of these products.
2. Delete the statement "when used at higher, nonselective rates in noncrop areas, it also controls many perennial broadleaf weeds and grasses." The use-site "non-cropland" has been deleted.
3. Submit one (1) printed copy of the final printed label before releasing the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA.

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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 2½ to 5 lbs. per acre following grove preparation in the fall. Repeat annually in midwinter.

**PEACHES, PLUMS, SWEET CHERRIES:** Apply 2 to 5 lbs. per acre. Apply in late fall to early spring prior to weed emergence.

**Peaches:** Use only in AR, LA, MO, OK, TX, and the states east of the Mississippi River.

**Plum and Sweet Cherries:** Use only in MO and states east of the Mississippi River except TN.

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	2½ lbs.
Loam or clay soil low in organic matter	2½ to 3½ lbs.
Clay soil high in organic matter	3½ to 5 lbs.

Do not use west of the Pecos River in Texas or in NM, AZ, or CA. Do not make applications to transplanted trees that have been established less than two years in the grove as injury may occur. Do not apply when nuts are on the ground. Do not allow animals to graze treated areas.

**STRAWBERRIES:** (Oregon and Washington): For control of chickweed, groundsel, mustard and shepherds-purse, apply broadcast 1½ lbs. 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.

Note: Make only one application per growing season. Do not apply within 4 months after transplanting.

**WALNUTS:** Apply 2½ to 5 lbs 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 80W HERBICIDE PLUS PARAQUAT CL TANK MIX COMBINATION

Simazine 80W plus paraquat CL tank mix combinations are 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 to 200 gals. of water per acre to the orchards floor avoiding contact with fruit, foliage or stems. Add a nonionic surfactant at the rate of ½ per 100 gals. Apply when the weeds and grasses are succulent and the new growth is from 1 to 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.

Crop	Broadcast* Rate Per Acre	
	Simazine 80W	Paraquat CL
Apples	2½ to 5 lbs.	1 to 2 qts.
Pears	2½ to 5 lbs.	1 to 2 qts.
Peaches**	2 to 5 lbs.	1 to 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 areas actually sprayed.

\*\*Do not apply to peaches on sandy or gravelly soils. Use on peaches only in AK, LA, MO, OK, TX, 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 waters as a carrier for Simazine 80W. 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 80W. Best results will be obtained when Simazine 80W is applied within 2 weeks before planting.

Note: Under dry weather conditions, preplant applications may give better weed control than preemergence.

Soil Texture	Broadcast* Rate Per Acre
<b>COARSE-TEXTURED SOIL:</b> Sand, silt, and loam that is low in organic matter	2½ lbs.
<b>MEDIUM-TEXTURED SOIL:</b> Soil containing a moderate amount of clay and organic matter	3 lbs.
<b>FINE-TEXTURED SOIL:</b> Loam that is high in organic matter and clay (including dark prairie soils of Corn Belt)	3½ lbs.
<b>ORGANIC SOIL:</b> Peat, muck, and high-organic clay	5 lbs.

\*For calculation of band treatment rate, see Information section.

**QUACKGRASS CONTROL:** Apply 3½ to 5 lbs. 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 in relatively dry conditions, a shallow cultivation will generally result in better weed control.

Note:

- Do not apply more than 5 lbs. of Simazine 80W per acre to corn in any one year.
- Land treated with simazine should not be planted to any crop except corn until the following year as injury may occur.
- 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.
- If more than 3½ lbs. of Simazine 80W is used per acre (or equivalent rate in a band), a crop of untreated corn should precede the next rotational crop.
- Do not apply Simazine 80W 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.
- In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use Simazine 80W to control weeds in corn only when corn is to follow corn or a crop of untreated corn is to precede another rotational crop.
- In western Minnesota and eastern parts of the Dakotas, Nebraska, and Kansas, do not plant soybeans following corn treated with simazine if more than 2½ lbs. of Simazine 80W per acre (or equivalent rate in a band) was applied as injury may occur.
- Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grass the year after Simazine 80W application as injury may occur.

### NURSERIES, CHRISTMAS TREE PLANTING, SHELTER BELTS

**NURSERIES (SEE LIST BELOW):** Apply 2½ to 3½ lbs. 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 2½ to 5 lbs. in at least 25 gals. of water per acre after transplanting. Use the same rate for annual maintenance applications.

**QUACKGRASS CONTROL:** Apply 5 lbs. per acre in the fall or apply a split application of 2½ lbs. per acre in early spring, after quackgrass begins growth.

Caution:

- Do not use simazine on seedbeds or cutting beds.
- Do not apply to Christmas tree or shelter belt transplants less than three years of age.
- Do not apply more than once a year, except as directed for quackgrass control.

### APPLY SIMAZINE 80W TO THESE SPECIES OF TREES AND SHRUBS, AS RECOMMENDED ABOVE:

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

### TURF GRASSES FOR SOD

**ST. AUGUSTINE, CENTIPEDE, ZOYSIA GRASS:** Apply 2½ to 5 lbs. per acre, according to soil texture as indicated below.

Muck or Peat	5 lbs.	Old beds:	within 2 days after lifting of sod
		New beds:	3 to 4 days after springing or plugging
Sandy Soil	2½ lbs.	Old beds:	within 2 day after lifting of sod
		New beds:	7 to 10 days after springing or plugging

Apply an additional 2½ lbs. on muck or peat, or 1½ lbs. on sandy soil if weed growth recurs.

Caution:

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

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

\*In states other than Florida

**BERMUDAGRASS, CENTIPEDEGRASS, ST. AUGUSTINE GRASS, AND ZOYSIA GRASS:** Apply after October 1 prior to emergence of winter annual weeds for control of bluegrass, burclover, carpet burweed, chickweed, corn speedwell, henbit, hop clover, and spurweed. Simazine 80W will control annual bluegrass even if it is emerged at the time of treatment. For control of summer annual weeds listed in the General Information portion of this label, also apply Simazine 80W in late winter before weeds emerge. Apply in a minimum of 15 gallons of water per acre or 1 gallon per 1,000 sq. ft.

1,000 sq. ft.). Use 2.5 lbs. per acre (1 oz. per 1,000 sq. ft.) for control of other weeds named above. Do not exceed 1.25 lbs. per acre per treatment on newly sprigged turfgrass or on hybrid Bermudagrass such as Tiflaw, Tifway, and Ormond. For continued summer annual weed control, apply another 1.25 lbs. per acre at least 30 days after the previous application, but not after April 15. Do not make more than two applications per year.

**Note:** On newly sprigged turfgrass and hybrid bermudagrass, temporary slowing of growth and yellowing may occur following application. Use only on turfgrass reasonably free of infestation of insects, nematodes, and diseases. Do not use on golf greens. Do not use north of North Carolina (except may be used in Virginia Coastal Plains) or west of the high rainfall areas of eastern Oklahoma and eastern Texas. Do not use on muck or alkaline soils. Do not apply over the rooting area of trees or ornamentals not listed on this label. Do not overseed with desirable turfgrass within 4 months before or 6 months after treatment. Do not apply to newly seeded bermudagrass until it has overwintered and has a well developed rhizome system. Do not exceed 2.4 lbs. product per acre within 12 months of seeding bermudagrass.

## 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. Avoid storage at high temperatures. Do not stack over 2 pallets high. Move bags carefully so as not to tear or puncture. Do not allow material to become wet or store in a damp, humid area. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Store in original container only. If the contents are leaking or material is spilled follow these steps:

1. Collect and place in suitable containers for disposal.
2. Wash area with water and soap to remove remaining pesticide.
3. Follow washing with clean water rinse.
4. Do not allow run off to enter sewer or contaminate water supplies.
5. Dispose of waste as indicated below.

**PESTICIDE DISPOSAL:** Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**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.

**OUR RECOMMENDATIONS FOR USE** of this product are based upon test believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. In no case shall Drexel or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by Drexel Chemical Company and is accepted as such by the Buyer.

where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use the 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. Information regarding agitation, time of pesticide application during water application and mixing instructions, is included in Sprinkler Chemigation statements. 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 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. **Preemergence or Postemergence:**

Apply Simazine 80W alone, or in tank mixtures with other herbicides on this label which are registered for center pivot application, with irrigation water. Apply either after planting before crop and weeds emerge, or after crop emergence, but before lay-by (20 to 30 inches) and before weeds exceed 1.5 inches in height. Apply at rates recommended on this label. Prepare mixture with minimum of 1 part water to 1 part product. Injecting a larger volume of a more dilute slurry per hour will assure more accurate calibration of metering equipment. Maintain sufficient agitation to keep herbicide in suspension. Meter slurry into irrigation water during entire period. Apply in 1/2 to 1 inch of water. Use the lower water volume on coarser textured soils, the higher volume on finer textured soils. More than 1 inch of water may reduce weed control by moving herbicide below the effective zone in the soil. Inject dilute slurry into system through a positive displacement pump.

**Precautions:**

1. Apply only through irrigation systems containing anti-siphon and check valves to prevent contamination of well during shutdown and overflow of solution.
2. Inject ahead of any right angle turn in the main line to insure adequate mixing.
3. Chemical injection pumps and water pumps must have interlocking controls to insure simultaneous shutoff.
4. Application when drift may occur from windy conditions, when system joints and connections are leaking, or when nozzles are not providing uniform distribution may cause crop injury.
5. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.

Simazine 80W 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 weed 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 texture soil and higher in organic matter.

Simazine herbicide enters weeds mainly through their roots, moisture 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 80W is noncorrosive to equipment and nonflammable.

**ANNUAL WEEDS CONTROLLED**

alyssum	Flora's paintbrush	ragweed
Amaranthus spp.	Florida pursley	rattail fescue
annual bluegrass	foxtails	Russian thistle
annual morningglory	goosegrass	redmaids
annual ryegrass	groundsel	shepherdspurse
barnyardgrass	henbit	shieldoress
Bracharia spp.	junglerice	smartweed
burdock	knawel	spanishneedles
carelessweed	lambquarters	speedwell
carpetweed	mustard	tansymustard
common chickweed	nightshade	wild mustard
crabgrass	peppergrass	wild oat
downy brome	pepperweed	wiregrass
fall panicum	pigweed	witchgrass
fiddleneck	pineapple weed	yellow flower
filaree	prickly lettuce	
fireweed	purslane	
fivehook bassia	*quackgrass	

\*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 to 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 strainers 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. Wash sprayer thoroughly with clean water immediately after use.

**MIXING INSTRUCTIONS**

Make a slurry by adding Simazine 80W to a small amount of waste in a separate container. Then pour the slurry into the spray tank partially filled with clean water, and add the rest of the water.

**Ground Application:** Where the amount of water is not specified, apply simazine 80W in 20 to 40 gals. of water per acre.

**Aerial Application:** Use a minimum of one gal. of water for each 1 to 1 1/2 lbs. of wettable powder applied per acre, unless otherwise specified.

**BAND TREATMENT**

The amount of Simazine 80W needed for band treatment may be calculated by the formula:

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

**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 or spot applications around trees in fruit or nut plantings, reduce the broadcast rate of simazine 80W and water per acre in proportion to the area actually sprayed.

**Precaution: DO NOT APPLY TO SANDY SOILS**

**ALMONDS (CA only):** Apply 1.25 to 2.5 lbs. of Simazine 80W per treated acre in a 2 to 4 ft. band on each side of the tree row. Apply before weeds emerge in late fall or early winter. Weeds controlled by 1.25 lbs. of Simazine 80W include Burdock, common chickweed, wild mustard, and shepherdspurse. Apply only once each 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 almond in treated soil for 12 months after treatment; 5) Do not apply on soil with less than 1% organic matter; 6) Do not treat trees where water will accumulate.

**APPLES, PEARS, SOUR CHERRIES:** Apply 2 1/2 to 5 lbs. per acre.

**AVOCADOS (California only):** Apply 2 1/2 to 5 lbs per acre after final preparation of grove.

**BLUEBERRIES AND CANEBERRIES (Blackberries, Boysenberries, Loganberries, Raspberries):** Apply 2 1/2 to 5 lbs. per acre in the spring or apply a split application of 2 1/2 lbs. per acre in the spring plus 2 1/2 lbs. 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 rate. Do not apply when fruit is present.

**QUACKGRASS CONTROL:** Apply 5 lbs. per acre in the fall or split the application applying 2 1/2 lbs. per acre in the fall plus 2 1/2 lbs. per acre in the spring, when quackgrass is actively growing.

**CRANBERRIES**

**Massachusetts:** Apply up to 5 lbs. per acre either before spring growth begins or in the fall after harvest.

**Other areas:** Apply 2 1/2 lbs. per acre before spring growth begins.

**FILBERTS (Oregon and Washington only):** Apply 2 1/2 lbs. per acre in the fall or apply a split application of 2 1/2 lbs. per acre in the fall plus 2 1/2 lbs. per acre in the spring. Do not apply when nuts are on the ground during the harvest period. Do not use on sandy soil.

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

**GRAPES:** Apply 2 1/2 to 6 lbs. 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 2 lbs. per acre in the spring plus 2 lbs. per acre in the fall.

**California:** Apply 2 1/2 to 5 lbs. per acre. Do not use in the Imperial, Coachella, or Palo Verde Valleys.

**Florida (Grapefruit and Oranges only). (RIDGE AREAS):** Apply only once per year. For control of weeds listed under General Information, apply 10 to 12 lbs. per acre in the spring; to control milkweed vine, use 10 to 12 lbs. per acre either pre-emergence or before vines are 12 inches tall. Complete control of milkweed vine may require repeat application over a period of 2 to 3 years. **(BEDDED AREAS)** Apply 4 lbs. per acre in bedded areas to control balsam apple vine and other weeds. Apply prior to periods of major weed seed germination in the soil where moisture conditions are good. Apply only once per year.

**Texas (Grapefruit and Oranges only):** Apply 5 to 6 lbs per acre.

**Note (All Areas):** Do not use in nurseries. Do not apply to buds of grapefruit, lemons or oranges except for Florida grapefruit and oranges. Do not apply to trees under stress from freeze damage for one year after the freeze.

**MACADAMIA NUTS:** Apply 2 1/2 to 5 lbs. 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 2½ to 5 lbs. per acre following grove preparation in the fall. Repeat annually in midwinter.

**PEACHES, PLUMS, SWEET CHERRIES:** Apply 2 to 5 lbs. per acre. Apply in late fall to early spring prior to weed emergence.

**Peaches:** Use only in AR, LA, MO, OK, TX, and the states east of the Mississippi River.

**Plum and Sweet Cherries:** Use only in MO and states east of the Mississippi River except TN.

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	2½ lbs.
Loam or clay soil low in organic matter	2½ to 3½ lbs
Clay soil high in organic matter	3½ to 5 lbs.

Do not use west of the Pecos River in Texas or in NM, AZ, or CA. Do not make applications to transplanted trees that have been established less than two years in the grove as injury may occur. Do not apply when nuts are on the ground. Do not allow animals to graze treated areas.

**STRAWBERRIES: (Oregon and Washington):** For control of chickweed, groundsel, mustard and shepherdspurse, apply broadcast 1½ lbs. 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.

**Note:** Make only one application per growing season. Do not apply within 4 months after transplanting.

**WALNUTS:** Apply 2½ to 5 lbs 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 80W HERBICIDE PLUS PARAQUAT CL TANK MIX COMBINATION**

Simazine 80W plus paraquat CL tank mix combinations are 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 to 200 gals. of water per acre to the orchards floor avoiding contact with fruit, foliage or stems. Add a nonionic surfactant at the rate of ½ per 100 gals. Apply when the weeds and grasses are succulent and the new growth is from 1 to 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.

Crop	Broadcast* Rate Per Acre	
	Simazine 80W	Paraquat CL
Apples	2½ to 5 lbs.	1 to 2 qts.
Pears	2½ to 5 lbs.	1 to 2 qts.
Peaches**	2 to 5 lbs.	1 to 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 areas actually sprayed.

\*\*Do not apply to peaches on sandy or gravelly soils. Use on peaches only in AK, LA, MO, OK, TX, 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 waters as a carrier for Simazine 80W. 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 80W. Best results will be obtained when Simazine 80W is applied within 2 weeks before planting.

**Note:** Under dry weather conditions, preplant applications may give better weed control than preemergence.

Soil Texture	Broadcast* Rate Per Acre
<b>COARSE-TEXTURED SOIL:</b> Sand, silt, and loam that is low in organic matter	2½ lbs.
<b>MEDIUM-TEXTURED SOIL:</b> Soil containing a moderate amount of clay and organic matter	3 lbs.
<b>FINE-TEXTURED SOIL:</b> Loam that is high in organic matter and clay (including dark prairie soils of Corn Belt)	3½ lbs.
<b>ORGANIC SOIL:</b> Peat, muck, and high-organic clay	5 lbs.

\*For calculation of band treatment rate, see Information section.

**QUACKGRASS CONTROL:** Apply 3½ to 5 lbs. 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.

**Note:**

1. Do not apply more than 5 lbs. of Simazine 80W per acre to corn in any one year.
2. Land treated with simazine 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 3½ lbs. of Simazine 80W 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 80W 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 80W 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 if more than 2½ lbs. of Simazine 80W 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 grass the year after Simazine 80W application as injury may occur.

**NURSERIES, CHRISTMAS TREE PLANTING, SHELTER BELTS**

**NURSERIES (SEE LIST BELOW):** Apply 2½ to 3½ lbs. 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 2½ to 5 lbs. in at least 25 gals. of water per acre after transplanting. Use the same rate for annual maintenance applications.

**QUACKGRASS CONTROL:** Apply 5 lbs. per acre in the fall or apply a split application of 2½ lbs. 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 80W TO THESE SPECIES OF TREES AND SHRUBS, AS RECOMMENDED ABOVE:**

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

**TURF GRASSES FOR SOO**

**ST. AUGUSTINE, CENTIPEDE, ZOYSIA GRASS:** Apply 2½ to 5 lbs. per acre, according to soil texture as indicated below.

Muck or Peat	5 lbs.	Old beds:	within 2 days after lifting of sod
		New beds:	3 to 4 days after sprigging or plugging
Sandy Soil	2½ lbs.	Old beds:	within 2 day after lifting of sod
		New beds:	7 to 10 days after sprigging or plugging

Apply an additional 2½ lbs. on muck or peat, or 1½ lbs. 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.

**TURFGRASS FOR FAIRWAYS, LAWNS SOO PRODUCTION\* AND SIMILAR AREAS**

\*In states other than Florida

**BERMUDAGRASS, CENTIPEDEGRASS, ST. AUGUSTINEGRASS, AND ZOYSIA GRASS:** Apply after October 1 prior to emergence of winter annual weeds for control of bluegrass, burdock, carpet burweed chickweed, corn speedwell, henbit, hop clover, and spurweed. Simazine 80W will control annual bluegrass even if it is emerged at the time of treatment. For control of summer annual weeds listed in the General Information portion of this label, also apply Simazine 80W in late winter before weeds emerge. Apply in a minimum of 15 gallons of water per acre or 1 gallon per 1,000 sq. ft.



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Where annual bluegrass is the major weed, use 1.25 lbs. per acre (0.5 oz. per 1,000 sq. ft.). Use 2.5 lbs. per acre (1 oz. per 1,000 sq. ft.) for control of other weeds named above. Do not exceed 1.25 lbs. per acre per treatment on newly sprigged turfgrass or on hybrid Bermudagrass such as Tiflaw, Way, and Ormond. For continued summer annual weed control, apply another 1.25 lbs. per acre at least 30 days after the previous application, but not after April 15. Do not make more than two applications per year.

**Note:** On newly sprigged turfgrass and hybrid bermudagrass, temporary slowing of growth and yellowing may occur following application. Use only on turfgrass reasonably free of infestation of insects, nematodes, and diseases. Do not use on golf greens. Do not use north of North Carolina (except may be used in Virginia Coastal Plains) or west of the high rainfall areas of eastern Oklahoma and eastern Texas. Do not use on muck or alkaline soils. Do not apply over the rooting area of trees or ornamentals not listed on this label. Do not overseed with desirable turfgrass within 4 months before or 6 months after treatment. Do not apply to newly seeded bermudagrass until it has overwintered and has a well developed rhizome system. Do not exceed 2.4 lbs. product per acre within 12 months of seeding bermudagrass.

**WARRANTY—CONDITION OF SALE**

OUR RECOMMENDATIONS FOR USE of this product are based upon test believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. In no case shall Drexel or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by Drexel Chemical Company and is accepted as such by the Buyer.

**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. Avoid storage at high temperatures. Do not stack over 2 pallets high. Move bags carefully so as not to tear or puncture. Do not allow material to become wet or store in a damp, humid area. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Store in original container only. If the contents are leaking or material is spilled follow these steps:

1. Collect and place in suitable containers for disposal.
2. Wash area with water and soap to remove remaining pesticide.
3. Follow washing with clean water rinse.
4. Do not allow run off to enter sewer or contaminate water supplies.
5. Dispose of waste as indicated below:

**PESTICIDE DISPOSAL:** Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**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.

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