

HELENA

BRAND

SIMAZINE 80 W HI

For weed control in certain crops, ornamental plantings, on industrial sites, and around-the-farm

Simazine 80W is a wettable powder

ACTIVE INGREDIENT:

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

INERT INGREDIENTS:

TOTAL

20%
100%

CAUTION: KEEP OUT OF THE REACH OF CHILDREN

CAUTION

Keep out of reach of children.

Harmful if swallowed.

Avoid inhalation of dust.

Avoid contamination of food and feed.

Do not contaminate domestic or irrigation water supplies or lakes, streams or ponds.

Do not reuse container. Destroy when empty.

Store in a dry place.

Apply this product only as specified on this label.

IMPORTANT: Read the entire Directions For Use and the Conditions of Sale before using this product.

DIRECTIONS FOR USE

The Directions For Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, lack of effectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of Helena Chemical Company or Seller. All such risks shall be assumed by the Buyer.

GENERAL INFORMATION

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 the rates in agricultural crops and ornamental plantings. When used at higher rates in non-crop areas, it also controls many perennial broadleaf and grass weeds.

Since Simazine 80W 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 80W controls most annual broadleaf and grass weeds such as:

- | | | |
|---------------------|--------------------|------------------|
| Amaranths | Florida Paintbrush | Pigweed |
| Annual Bluegrass | Florida Pusley | Rottail Fescue |
| Annual Morningglory | Foxtails | Russian Thistle |
| Annual Ryegrass | Goosegrass | Shepherdspurse |
| Barnyardgrass | Juglone | Shieldscress |
| Brachiaria spp. | Lambsquarters | Silver Hairgrass |
| Carolina Weed | Mustard | Smartweed |
| Carrotweed | Nightshade | Spanish Needle |
| Common Chickweed | Pigweed | Tansymustard |
| Crabgrass | Prickly Lettuce | Wild Oats |
| Dowry Bromes | Purslane | Wiregrass |
| Fareweed | | Witchgrass |

SELECTIVE WEED CONTROL

In each case where a range of rates is given, the lower rate should be used on light soils and soils low in organic matter; the higher rate should be used on heavy soils and soils high in organic matter. For band applications reduce the amount of Simazine 80W and the amount of water per acre in proportion to the area treated. For example, when applying a 20-inch band to a row crop planted in rows 40 inches apart, apply half the recommended amount of Simazine 80W and water per acre. For ground applications where amount of water is not specified apply Simazine 80W in 20-40 gals. of water per acre to assure uniform coverage.

FRUIT AND NUT CROPS

The spray should be applied to the orchard or vineyard floor to avoid contact with fruit or foliage. 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 per acre of Simazine 80W and amount of water in proportion to the area actually sprayed.

APPLES

Broadcast 2 to 5 lbs. per acre

AVOCADOS

In California only. Broadcast 2 to 5 lbs. per acre after final preparation of grove.

PRECAUTION: Do not apply to sandy soils.

BLUEBERRIES

Broadcast a single application of 2 to 5 lbs. per acre in the spring or make a split application, broadcasting 2 to 5 lbs. per acre in the spring and 2 to 5 lbs. per acre in the fall. Use a minimum of 40 gals. of water for each application. Do not apply when fruit is present.

NOTE: On new plantings, less than 6 months old, use 1/2 the above rate.

To control quackgrass, broadcast 5 lbs. per acre in the fall or split the application, broadcasting 2 to 5 lbs. per acre in the fall and 2 to 5 lbs. per acre in the spring, when quackgrass is actively growing.

CANEBERRIES

Use blackberries, boysenberries, loganberries, raspberries.

Broadcast a single application of 2 to 5 lbs. per acre in the spring or make a split application, broadcasting 2 to 5 lbs. per acre in the spring and 2 to 5 lbs. per acre in the fall. Use a minimum of 40 gals. of water for each application. Do not apply when fruit is present.

NOTE: On new plantings, less than 6 months old, use 1/2 the above rate.

To control quackgrass, broadcast 5 lbs. per acre in the fall or split the application, broadcasting 2 to 5 lbs. per acre in the fall and 2 to 5 lbs. per acre in the spring, when quackgrass is actively growing.

CRANBERRIES

In Massachusetts, Broadcast up to 5 lbs. per acre before spring growth begins or in the fall after harvest.

In other areas, Broadcast 2 to 5 lbs. per acre before spring growth begins.

FIBERTS - Oregon and Washington Only

Broadcast 2 to 5 lbs. of Simazine 80W in 20-40 gals. of water per acre in the fall or apply a split application of 2 to 5 lbs. per acre in the fall and 2 to 5 lbs. per acre in the spring.

PRECAUTIONS: 1. If trees are planted on a hillside, excessive soil erosion may result from the elimination of weeds. 2. Do not apply when nuts are on the ground during the harvest period. 3. Do not use on sandy soils. 4. Do not apply more than 5 lbs. per acre of Simazine 80W per year.

GRAPES

Broadcast 2 to 6 lbs. per acre any time between harvest and early spring.

NOTE: Do not use in vineyards established less than three years.

GRAPEFRUIT

In California, Broadcast 2 to 5 lbs. per acre. Do not use in Imperial, Coachella, or Palo Verde Valleys.

In Florida, Broadcast 8-12 lbs. per acre in the spring.

In Texas, Broadcast 5-6 lbs. per acre.

PRECAUTIONS (All Areas): 1) Do not apply to sandy or gravelly soils. 2) Use only in Missouri and all states to the east of the Mississippi River except Tennessee.

PEARS

Broadcast 2 to 5 lbs. per acre

PLUMS

Broadcast 2 to 5 lbs. per acre. Apply in late fall to early spring prior to weed emergence.

PRECAUTIONS: 1) Do not apply to sandy or gravelly soils. 2) Use only in Missouri and all states to the east of the Mississippi River except Tennessee.

SOUR CHERRIES

Broadcast 2 to 5 lbs. per acre

SWEET CHERRIES

Broadcast 2 to 5 lbs. per acre. Apply in late fall to early spring prior to weed emergence.

PRECAUTIONS: 1) Do not apply to sandy or gravelly soils. 2) Use only in Missouri and all states to the east of the Mississippi River except Tennessee.

WALNUTS

Broadcast 2 to 5 lbs. per acre

PRECAUTIONS: 1) Do not apply to sandy soils. 2) Do not apply when nuts are on the ground. 3) Leveling and furrowing operations after application will lessen effectiveness of weed control.

FIELD AND FORAGE CROPS

ALFALFA

Established pure alfalfa stands at least one year old; pure alfalfa stands less than one year old and established alfalfa orchardgrass mixtures at least one year old.

For ground applications use the broadcast rates listed below and apply in a minimum of 15 gallons of water. Fluid fertilizer may replace all or part of the water used as a carrier for Simazine 80W except fluid fertilizers should not be used when alfalfa is actively growing or injury may occur.

For aerial applications use the rates listed below and apply in a minimum of 20 gallons of water per acre.

Established Pure Alfalfa Stands At Least One Year Old - All Areas Listed

Make one application per year in the fall after the last cutting but prior to permanent frost on ground conditions. Alfalfa may be actively growing, semi-dormant or dormant when Simazine 80W applications are made.

Alfalfa stands must be growing for at least one year prior to treatment.

Pure Alfalfa Stands Less Than One Year Old - Northeastern U.S. Only

Pure Stands of Alfalfa which have been seeded in the spring prior to June 1, and have been established may be treated in the fall after the last cutting but prior to permanent frost on ground conditions. Alfalfa may be actively growing, semi-dormant or dormant when Simazine 80W is applied. Uniformly broadcast one application per year at the rate of 1 lb. of Simazine 80W per acre to control such weeds as henbit, wild mustard, lambsquarters, chickweed, German moss, alysium, downy brome, cheatgrass, wild oats, tansymustard, pigweed, speedwell and peppergrass.

Established Alfalfa-Orchardgrass Mixtures - Northeastern U.S. Only

Apply only to alfalfa orchardgrass mixtures which have been established for more than one year. Make a single application in the fall after the alfalfa orchardgrass mixture has a good crop on. Applications should be uniformly broadcast at the rate of 1 lb. of Simazine 80W per acre to control such weeds as henbit, wild mustard, lambsquarters, chickweed, German moss, alysium, downy brome, cheatgrass, wild oats, tansymustard, pigweed, speedwell and peppergrass.

PRECAUTIONS: For each use: 1) Do not use on sandy or loamy sands or on soils low in organic matter or on sandy and gravelly areas in the fields or crop injury may occur. 2) Application to alfalfa growing on highly calcareous or highly alkaline soils may result in crop injury. 3) Use only in areas of the country where frost occurs and alfalfa goes into a semi-dormant or dormant stage. 4) Do not apply in snow. 5) Simazine 80W will not control dodder and other seed perennial or biennial weeds such as dandelion, white clover, quackgrass, pigweed, wild carrot, and dock. 6) Temporary crop chlorosis may appear on areas where overlapping occurs.

The sprayer should be shut off when turning around at the end or corners of the field. 7) Simazine 80W treated alfalfa should not be planted to any rotational crop except corn for

FORAGE BERMUDA
annual broadleaf
goosegrass, foxtail
Russian thistle, chick
sprigging. If should
weed problem, but
minimum of 15 gal
listed below at a m
be applied per acre

Soil Type
Fine sandy soils low
Sandy loam soils
Loam and clay soils
Clay soils

PRECAUTIONS: 1) Plans of Texas. 2) cattle or sheep for application. 4) Do following 4 lbs. of

CORN
For ground applica
be made using the
wettable powder to
replace all or part
emerged as there

PRE-EMERGENCE:
Apply before weed

PREPLANT:
Broadcast in the s
Application may be
worked after appli
obtained when Sim

NOTE: Under dry

SOIL TYPE
Light soils Sandy soils and lo that are low in org matter
Medium soils Soils containing moderate amounts clay and organic m
Heavy soils Loams that are hig in organic matter clays, including do prairie soils of Cor Belt
Organic soils Peaty mucks and high organic clays

For other band
To control quackgr
seeds are on a p
spring-fall wing tr

NOTE: Should weed
cultivation will gen

PRECAUTIONS: 1) Do

DIRECTIONS FOR USE

The Directions For Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials or the manner of use or application all of which are beyond the control of Helena Chemical Company or Seller. All such risks shall be assumed by the Buyer.

GENERAL INFORMATION

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

Since Simazine 80W 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 80W controls most annual broadleaf and grass weeds such as:

- | | | |
|--------------------|--------------------|------------------|
| Amaranthus | Flora's Paintbrush | Ragweed |
| Annual Bluegrass | Florida Pusley | Rattail Fescue |
| Annual Meringglory | Footails | Russian Thistle |
| Annual Ryegrass | Goosegrass | Shepherdspurse |
| Barnyardgrass | Juglirice | Shieldscress |
| Brahmia spp. | Lambsquarters | Silver Hairgrass |
| Carelessweed | Mustard | Smartweed |
| Carpetweed | Nightshade | Spanish Needles |
| Common Chickweed | Pigweed | Tansymustard |
| Craggrass | Prickly Lettuce | Wild Oats |
| Downy Brome | Purslane | Wiregrass |
| Fireweed | | Witchgrass |

Simazine 80W is noncorrosive to equipment, nonflammable, and has low electrical conductivity.

Store Simazine 80W in a dry place.

Simazine 80W is a wettable powder formulation to be mixed with water and applied as a spray. Make a slurry by adding Simazine 80W to a small quantity of water. Pour the slurry into 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.

GROUND APPLICATION:

For uniform distribution in broadcast applications, TeeJet 8003 or 8004 fan type or similar nozzles with openings of equal or greater size should be used. For band applications, use TeeJet 8003 E or 8004 E or similar type nozzles. Screens in nozzles as well as those in suction and in line strainers should be no finer than 50 mesh size. A suitable pump with capacity to deliver 10-12 gpm should be used and operating pressure should be 35-40 p.s.i.

Wash sprayer thoroughly with clean water immediately after use.

AERIAL APPLICATION:

Under specific sections of this label may be found recommendations for aerial applications. In addition to the instructions and specific precautions noted under the various sections, the following should also be observed for aerial applications:

APPLICATION

Application should be uniform. Over application could cause injury to treated crops or adjacent crops. Weeds may leave residues that may affect crops planted in rotation or nearby. Excessive and illegal crop residues. Under application can result in poor or uneven weed control.

Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

Use minimum of one gallon of water for each 1 pound to 1 1/2 pounds of wettable powder to be applied per acre.

Screens in nozzles as well as those in suction and in line strainers should be no finer than 50 mesh size.

Wash sprayer thoroughly with clean water immediately after use.

INSTRUCTIONS FOR SAFE HANDLING

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.

broadcasting 2 1/2 lbs. per acre in the spring, and 2 1/2 lbs. per acre in the fall. Use a minimum of 40 gals. of water for each application. Do not apply when fruit is present.

NOTE: On new plantings (less than 6 months old) use 1/2 the above rate.

To control quackgrass, broadcast 5 lbs. per acre in the fall or split the application broadcasting 2 1/2 lbs. per acre in the fall and 2 1/2 lbs. per acre in the spring when quackgrass is actively growing.

CRANBERRIES

In Massachusetts, Broadcast up to 5 lbs. per acre before spring growth begins or in the fall after harvest.

In other areas, Broadcast 2 1/2 lbs. per acre before spring growth begins.

FIBERTS Oregon and Washington Only

Broadcast 2 1/2 lbs. of Simazine 80W in 20-40 gals. of water per acre in the fall or apply a split application of 2 1/2 lbs. per acre in the fall and 2 1/2 lbs. per acre in the spring.

PRECAUTIONS: 1. If trees are planted on a hillside, excessive surface erosion may result from the elimination of weeds. 2. Do not apply when nuts are on the ground during the harvest period. 3. Do not use on sandy soils. 4. Do not apply more than 5 lbs. per acre of Simazine 80W per year.

GRAPES

Broadcast 2 1/2 lbs. per acre any time between harvest and early spring.

NOTE: Do not use in vineyards established less than three years.

GRAPEFRUIT

In California, Broadcast 2 1/2 lbs. per acre. Do not use in Imperial, Coachella, or Palo Verde valleys.

In Florida, Broadcast 8-12 lbs. per acre in the spring.

In Texas, Broadcast 5-6 lbs. per acre.

PRECAUTIONS All Areas: 1. Do not use in nurseries. 2. Do not apply to bedded grapefruit. 3. Do not apply to trees under stress from freeze damage for one year following the freeze to avoid possible injury.

LEMONS

In Arizona, Make two applications per year. Broadcast 2 lbs. per acre in the spring and 2 lbs. per acre in the fall.

In California, Broadcast 2 1/2 lbs. per acre. Do not use in the Imperial, Coachella, or Palo Verde valleys.

PRECAUTIONS All areas: 1. Do not use in nurseries. 2. Do not apply to bedded lemons. 3. Do not apply to trees under stress from freeze damage for one year following the freeze to avoid possible injury.

MACADAMIA NUTS

Broadcast 2 1/2 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

Broadcast 2 1/2 lbs. per acre following grove preparation in the fall. Repeat annually in midwinter.

ORANGES

In Arizona, Make two applications per year. Broadcast 2 lbs. per acre in the spring and 2 lbs. per acre in the fall.

In California, Broadcast 2 1/2 lbs. per acre. Do not use in the Imperial, Coachella, or Palo Verde valleys.

In Florida, Broadcast 8-12 lbs. per acre in the spring.

In Texas, Broadcast 5-6 lbs. per acre.

PRECAUTIONS All Areas: 1. Do not use in nurseries. 2. Do not apply to bedded oranges. 3. Do not apply to trees under stress from freeze damage for one year following the freeze to avoid possible injury.

PEACHES

Broadcast 2-5 lbs. per acre. Apply in late fall to early spring prior to weed emergence.

water per acre.

Established Pure Alfalfa Stands At Least One Year Old (All Areas Listed):

Make one application per year in the fall after the last cutting but prior to permanently frozen ground conditions. Alfalfa may be actively growing, semi-dormant or dormant when Simazine 80W applications are made.

Alfalfa stands must be growing for at least one year prior to treatment.

Pure Alfalfa Stands Less Than One Year Old Northeastern U.S. Only

Pure Stands of Alfalfa which have been seeded in the spring prior to June 1 and have become well established may be treated in the fall after the last cutting but prior to permanently frozen ground conditions. Alfalfa may be actively growing, semi-dormant or dormant when Simazine 80W is applied. Uniformly broadcast one application per year at the rate of 1 lb. of Simazine 80W per acre to control such weeds as henbit, wild mustard, lambsquarters, chickweed, German moss, glyssum, downy brome, cheatgrass, wild oats, tansymustard, pigweed, speedwell and peppergrass.

Established Alfalfa-Orchardgrass Mixtures Northeastern U.S. Only

Apply only to alfalfa-orchardgrass mixtures which have been established for one year or more. Make a single application in the fall after the alfalfa-orchardgrass mixture has gone to maturity. Applications should be uniformly broadcast at the rate of 1 lb. of Simazine 80W per acre to control such weeds as henbit, wild mustard, lambsquarters, chickweed, German moss, glyssum, downy brome, cheatgrass, wild oats, tansymustard, pigweed, speedwell and peppergrass.

PRECAUTIONS: For each use: 1. Do not use on soils or loamy sands or on soils low in organic matter or on sandy and gravelly areas in the fields or crop injury may occur. 2. Applications made to alfalfa growing on highly calcareous or highly alkaline soils may result in crop injury. 3. Use only in areas of the country where frost occurs and alfalfa goes into a semi-dormant or dormant stage. 4. Do not apply on snow. 5. Simazine 80W will not control dodder and established perennial or biennial weeds such as dandelion, white cockle, quackgrass, inquefali, wild carrot, and dock. 6. Temporary crop chlorosis may appear on areas where overlapping occurs.

The sprayer should be shut off when turning around at the end or corners of the field. 7. Simazine 80W treated alfalfa land should not be planted to any rotational crop except corn for the growing season following application or injury may occur. 8. Allow 30 days between application and grazing to dairy and beef cattle and sheep, and 60 days between application and cutting for hay.

REGION	WEEDS CONTROLLED	SOIL TYPE	RATE OF SIMAZINE 80W PER ACRE
Washington, Oregon, Nevada, Utah, Idaho, Montana, Wyoming, Colorado and the California counties of Madra, Siskiyou and Del Norte	Downy brome grass, Cheatgrass, tansymustard, prickly lettuce, peppergrass, shieldscress seed, ling shepherdspurse	Sands and loamy sands, Sandy loam, Loam soils, Clay soils	DO NOT USE 1 lb. 1 1/2 lbs. 2 lbs.
N. Dakota, S. Dakota, Minnesota, Wisconsin, Nebraska, Kansas, Iowa, Michigan and New York	Henbit, wild mustard, chickweed, knawel, German moss, glyssum, downy brome, cheat grass, wild oats, peppergrass, tansy, mustard, pigweed, speedwell and seedlings of yellow rocket, shepherdspurse, white cockle, fanweed, pennycress, dandelion, Russian thistle, Kochia	Sands and loamy sands, Sandy loam, Loam soils, Clay soils	DO NOT USE 1 lb. 1 1/2 lbs. 2 lbs.
Illinois, Indiana, Ohio, Kentucky, Virginia, Pennsylvania, New Jersey, Delaware, Maryland, West Virginia, Vermont, Massachusetts, Connecticut, Maine, New Hampshire, Rhode Island, Missouri	Pigweed, common chickweed, mouse ear, chickweed, speedwell, henbit, knawel, German moss, peppergrass, downy brome, alysum, lambsquarters, wild oats and seedlings of shepherdspurse, fanweed, pennycress, yellow rocket, wintercress, Russian thistle, dandelion, Kochia, white cockle	Sands and loamy sands, Sandy loam, Loam soils, Clay soils	DO NOT USE 1 lb. 1 1/2 lbs. 2 lbs.

NOTE: Under dry

SOIL
Light soils, Sands, silts, and loams that are low in organic matter
Medium soils, Sands containing moderate amount of clay and organic matter
Heavy soils, Loams that are high in organic matter, clays, including deep prairie soils of Col. Belt
Organic soils, Peats, mucks, and high organic clays

*For other hand

To control quackgrass or if erosion is a problem, spring following tri

NOTE: Should weed cultivation will get

PRECAUTIONS: 1) Do not land treated with following year or in till the soil in fall, regardless of the rate higher than 3 1/2 lbs. corn should precede incorporation for weeds including central Panhandle of Texas, the High Plains and where irrigation is followed, corn or a crop Minnesota and east 80W should not be applied per acre or compared tobacco, vegetable, legumes and grasses.

Grasses Grown for Bentgrass, Quackgrass, Chewings and related annual ryegrass in Simazine 80W broadcast application is

PRECAUTIONS: 1. Allow 30 days between the

NURSERIES CHRISTMAS TREES

NURSERIES see list Broadcast 2 1/2 lbs. established at least

CHRISTMAS TREE PLANTATIONS Broadcast 2 1/2 lbs. applications reduce treated. For example, band one mile long. Remove weed growth applications.

For Quackgrass control, applying 2 1/2 lbs. per begins growth.

ZINE 80 W HERBICIDE

PRECAUTIONS (All Areas) 1) Do not apply to sandy or gravelly soils 2) Use only in Missouri and all states to the east of the Mississippi River except Tennessee

PEARS

Broadcast 2 1/2 lbs. per acre

PLUMS

Broadcast 2 1/2 lbs. per acre. Apply in late fall to early spring prior to weed emergence

PRECAUTIONS: 1) Do not apply to sandy or gravelly soils 2) Use only in Missouri and all states to the east of the Mississippi River except Tennessee

SOUR CHERRIES

Broadcast 2 1/2 lbs. per acre

SWEET CHERRIES

Broadcast 2 1/2 lbs. per acre. Apply in late fall to early spring prior to weed emergence

PRECAUTIONS: 1) Do not apply to sandy or gravelly soils 2) Use only in Missouri and all states to the east of the Mississippi River except Tennessee

WALNUTS

Broadcast 2 1/2 lbs. per acre

PRECAUTIONS: 1) Do not apply to sandy soils 2) Do not apply when nuts are on the ground 3) Leveling and furrowing operations after application will lessen effectiveness of weed control

FIELD AND FORAGE CROPS

ALFALFA

Established pure alfalfa stands at least one year old, pure alfalfa stands less than one year old and established alfalfa orchardgrass mixtures at least one year old

For ground applications use the broadcast rates listed below and apply in a minimum of 15 gallons of water. Fluid fertilizer may replace all or part of the water used as a carrier for Simazine 80W except fluid fertilizers should not be used when alfalfa is actively growing or injury may occur

For aerial applications use the rates listed below and apply in a minimum of 2 1/2 gallons of water per acre

Established Pure Alfalfa Stands At Least One Year Old All Areas Listed

Make one application per year in the fall after the last cutting but prior to permanently frozen ground conditions. Alfalfa may be actively growing, semi-dormant or dormant when Simazine 80W applications are made

Alfalfa stands must be growing for at least one year prior to treatment

Pure Alfalfa Stands Less Than One Year Old Northeastern U.S. Only

Pure stands of alfalfa which have been seeded in the spring prior to June 1 and have become well established may be treated in the fall after the last cutting but prior to permanently frozen ground conditions. Alfalfa may be actively growing, semi-dormant or dormant when Simazine 80W is applied. In fall broadcast one application per year at the rate of 1 lb. of Simazine 80W per acre to control such weeds as henbit, wild mustard, lambsquarters, chickweed, German chamomile, downy brome, cheatgrass, wild oats, ransymustard, pigweed, speedwell and perennials

Established Alfalfa-Orchardgrass Mixtures Northeastern U.S. Only

Apply to alfalfa orchardgrass mixtures which have been established for more than one year. Make a single application in the fall after the alfalfa orchardgrass mixture has a one to three leaf stage. Applications should be uniformly broadcast at the rate of 1 lb. of Simazine 80W per acre to control such weeds as henbit, wild mustard, lambsquarters, chickweed, German chamomile, downy brome, cheatgrass, wild oats, ransymustard, pigweed, speedwell and perennials

PRECAUTIONS: For each use 1) Do not use on sands or loamy sands or on soils low in organic matter or on sandy and gravelly areas in the fields or crop injury may occur 2) Applications made to alfalfa growing on highly calcareous or highly alkaline soils may result in crop injury 3) Use only in areas of the country where frost occurs and alfalfa goes into a semi-dormant or dormant stage 4) Do not apply on snow 5) Simazine 80W will not control dandelion and established perennial or biennial weeds such as dandelion, white clover, quackgrass, annual wild carrot and dock 6) Temporary crop chlorosis may appear on areas where overlapping occurs

The sprayer should be shut off when turning around at the end or corners of the field 7) Simazine 80W treated alfalfa land should not be planted to any rotational crop except corn for

FORAGE BERMUDAGRASSES (Such as Coastal and Midland) For pre-emergence control of most annual broadleaf and grassy weeds such as barnyardgrass, crabgrass, Bracharia spp, goosegrass, foxtail, creosote weed, carpetweed, annual morningglory, pigweed, purslane, Russian thistle, chickweed, henbit and burclover Simazine 80W should be applied shortly after sprigging. It should be applied to established Bermudagrass from fall to spring depending on weed problem but before weed emergence. Broadcast 1-4 lbs. of Simazine 80W per acre in a minimum of 15 gallons of water for ground application. For aerial applications use the rates listed below at a minimum of 1 gallon of water for each 1 lb. to 1 1/2 lbs. of wettable powder to be applied per acre

Soil Type	Rate Per Acre
Fine sandy soils low in organic matter	1 lb.
Sandy loam soils	1 1/2 - 2 1/2 lbs.
Loam and clay soils low in organic matter	2 1/2 - 3 lbs.
Clay soils	3-4 lbs.

PRECAUTIONS: 1) Do not use Simazine 80W on Bermudagrass in New Mexico and the High Plains of Texas 2) Do not apply within 7 days following cutting 3) Do not graze dairy or beef cattle or sheep for 30 days following 1-3 lbs. per acre application or 60 days following 4 lbs. application 4) Do not cut for hay 60 days following 1-3 lbs. per acre application or 90 days following 4 lbs. application

CORN - Quackgrass

For ground applications use a minimum of 20 gals. of water per acre. Aerial applications may be made using the broadcast rates listed below and 1 gal. of water for each 1 lb. to 1 1/2 lbs. of wettable powder to be applied per acre. Nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier for Simazine 80W. Do not apply after corn has emerged as there is danger of liquid fertilizers causing crop injury

PRE-EMERGENCE:

Apply before weeds and corn emerge. Use rates listed below

PREPLANT:

Broadcast in the spring after plowing at the broadcast rates indicated in the table below. Application may be made before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of Simazine 80W. Best results have been obtained when Simazine 80W is applied within 2 weeks prior to planting

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

SOIL TYPE	RATE PER ACRE	
	BROADCAST	13-INCH BAND ON 40-INCH ROWS*
Light soils Sands, silts and loams that are low in organic matter	2 1/2 lbs.	13 ozs.
Medium soils Soils containing moderate amounts of clay and organic matter	3 lbs.	1 lb.
Heavy soils Loams that are high in organic matter and clays including dark prairie soils of Corn Belt	3 1/2 lbs.	1 1/2 lbs.
Organic soils Peats, mucks and high organic clays	5 lbs.	1 lb. 10 ozs.

*For other band or row widths adjust the rate in proportion to area actually treated

To control quackgrass, broadcast 3 1/2 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

NOTE: Should weeds develop, particularly under dry or minimal moisture conditions, a shallow cultivation will generally result in better weed control

PRECAUTIONS: 1) Do not apply more than 5 lbs. of Simazine 80W to corn in any one year 2)

PRECAUTIONS: 1) Do not use Simazine 80W 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 Simazine 80W 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	Mugho Pine
Austrian Pine	Norway Spruce
Arbutus	Oregon Grape
Balsam Poplar	(Mahonia spp.)
Barberry	Red Cedar
Blue Spruce	Red Oak
Bowelder	Red Pine
Bush Honeysuckle	(Norway Pine)
Caragana	Red Spruce
Cotoneaster	Russian Olive
Dogwood	Scotch Pine
Douglas Fir	Siberian Elm
Fraser Fir	White Cedar
Hemlock	White Pine
Honey Locust	White Spruce
Juniper	Yew (Taxus spp.)

TURF GRASSES FOR SOD

ST. AUGUSTINE, CENTIPEDE, AND ZOYSIA GRASS

Broadcast 2 1/2-5 lbs. per acre according to soil type as indicated below. Apply in sufficient water for thorough coverage

Muck or Peat	5 lbs.	Old beds	within 2 days after lifting of sod
		New beds	3-4 days after sprigging or plugging
Sandy Soils	2 1/2 lbs.	Old beds	within 2 days after lifting of sod
		New beds	7-10 days after sprigging or plugging

Apply and additional 2 1/2 lbs. on muck or peat or 1 1/2 lbs. on sandy soils if weed growth recurs

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

VEGETABLE CROPS

ASPARAGUS, Established

Broadcast 2 1/2 lbs. per acre to beds established one year or more. Make one application per year either after disking in the spring and before weeds emerge or following harvest after removal of existing weed growth. Spring application must be made at least 3 days before first cutting. Precautions for Washington and Oregon only 1) Do not use on sand or loamy sand soils or gravelly areas of fields as crop injury may result 2) Do not allow irrigation water to stand or to form pools in the field or injury may occur in these areas

ARTICHOKES

Broadcast 2 1/2 lbs. per acre after last fall tillage. Apply as directed spray

PRECAUTIONS: 1) Do not apply to sandy soils 2) Do not make more than one application per year

NONSELECTIVE WEED CONTROL ON NONCROP LAND

Apply Simazine 80W at rates recommended below. Use the higher rates on heavy clay and muck soils. Best results are obtained when Simazine 80W is applied before weeds emerge. If weed growth has begun and removal is not practical, include a contact or translocated herbicide in the spray

Do not contaminate domestic or irrigation water supplies or irrigation water supplies in lakes, streams or ponds

Simazine 80W can be used to provide long term weed control on industrial sites, highway medians and shoulders, railroad rights of ways, lumberyards, petroleum tank farms and in noncrop areas on farms, such as around buildings, equipment and fuel storage areas, along

for aerial applications use the rates listed below and apply in a minimum of 2 1/2 gallons of water per acre

Established Pure Alfalfa Stands At Least One Year Old All Areas Listed

Make one application per year in the fall after the last cutting but prior to permanently frozen ground conditions. Alfalfa may be actively growing, semi-dormant or dormant when Simazine 80W applications are made.

Alfalfa stands must be growing for at least one year prior to treatment.

Pure Alfalfa Stands Less Than One Year Old Northeastern U.S. Only

Pure stands of alfalfa which have been seeded in the spring prior to June 1 and have become well established may be treated in the fall after the last cutting but prior to permanently frozen ground conditions. Alfalfa may be actively growing, semi-dormant or dormant when Simazine 80W is applied. Uniformly broadcast one application per year at the rate of 1 lb. of Simazine 80W per acre to control such weeds as henbit, wild mustard, lambsquarters, chickweed, German moss, alyssum, downy brome, cheatgrass, wild oats, tansymustard, pigweed, speedwell and peppergrass.

Established Alfalfa-Orchardgrass Mixtures Northeastern U.S. Only

Apply only to alfalfa-orchardgrass mixtures which have been established for more than one year. Make a single application in the fall after the alfalfa-orchardgrass mixture has gone dormant. Applications should be uniformly broadcast at the rate of 1 lb. of Simazine 80W per acre to control such weeds as henbit, wild mustard, lambsquarters, chickweed, German moss, alyssum, downy brome, cheatgrass, wild oats, tansymustard, pigweed, speedwell and peppergrass.

PRECAUTIONS: For each use: 1. Do not use on sands or loamy sands or on soils low in organic matter or on sandy and gravelly areas in the fields or crop injury may occur. 2. Applications made to alfalfa growing on highly calcareous or highly alkaline soils may result in crop injury. 3. Use only in areas of the country where frost occurs and alfalfa goes into a semi-dormant or dormant stage. 4. Do not apply on snow. 5. Simazine 80W will not control dodder and established perennial or biennial weeds such as dandelion, white cockle, quackgrass, cinquefoil, wild carrot and dock. 6. Temporary crop chlorosis may appear on areas where overlapping occurs.

The sprayer should be shut off when turning around at the end or corners of the field. 7. Simazine 80W treated alfalfa land should not be planted to any rotational crop except corn for the growing season following application or injury may occur. 8. Allow 30 days between application and grazing to dairy and beef cattle and sheep and 60 days between application and cutting for hay.

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

SOIL TYPE	RATE PER ACRE	
	BROADCAST	13-INCH BAND ON 40-INCH ROWS*
Light soils Sands, silts and loams that are low in organic matter	2 1/2 lbs	13 ozs
Medium soils Soils containing moderate amounts of clay and organic matter	3 lbs	1 lb
Heavy soils Loams that are high in organic matter and clays, including dark prairie soils of Corn Belt	3 1/2 lbs	1 1/4 lbs
Organic soils Peats, mucks and high organic clays	5 lbs	1 lb 10 ozs

*For other band or row widths adjust the rate in proportion to area actually treated.

To control quackgrass, broadcast 3 1/2-5 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.

NOTE: Should weeds develop particularly under dry or minimal moisture conditions, a shallow cultivation will generally result in better weed control.

PRECAUTIONS: 1) Do not apply more than 5 lbs. of Simazine 80W to corn in any one year. 2) Land treated with Simazine 80W should not be planted to any crop except corn until the following year or injury may occur. 3) Following harvest of a treated crop, plow and thoroughly till the soil in fall or spring to minimize possible injury to rotational spring-seeded crops regardless of the rate used. 4) If for any reason, Simazine 80W is used at a broadcast rate higher than 3 1/2 lbs. per acre (or comparable rates in a band application), a crop of untreated corn should precede the next rotational crop. 5) Do not apply Simazine 80W preplant incorporated for weed control in corn in the High Plains and Intermountain areas of the West (including central and western Kansas, 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 other rotational crops. 7) In western Minnesota and eastern parts of the Dakotas, Nebraska, and Kansas, corn treated with Simazine 80W should not be followed by soybeans if the broadcast rate applied was more than 2 1/2 lbs. per acre or comparable rate in a band; or 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 following Simazine 80W application or injury may occur.

Grasses Grown for Seed (Pacific Northwest Only): Perennial Ryegrass, Highland or Astoria Bentgrasses, Orchardgrass, Tall Fescue and Fine Fescues such as Illabe, Kanier, Penniawn, Chewings and related species. For the control of broadleaf weeds and annual grasses such as annual ryegrass, rattle fescue, silver hairgrass and downy brome (cheat), apply 2 1/2 lbs. Simazine 80W broadcast in 15 or more gallons of water per acre as soon as fall rains start. Early application is important. Use a spray rig having mechanical agitation.

PRECAUTIONS: 1. Apply only to grasses from which at least one seed crop has been cut. 2. Allow 30 days between last application or grazing to dairy and beef cattle and sheep and 60 days between the last application and cutting for hay.

NURSERIES, CHRISTMAS TREE PLANTINGS, SHELTER BELTS

NURSERIES (see list below)

Broadcast 2 1/2-3 1/2 lbs. in at least 25 gallons of water per acre in fall or spring to nursery stock established at least one year after transplanting.

CHRISTMAS TREE PLANTINGS AND SHELTER BELTS (see list below)

Broadcast 2 1/2-5 lbs. in at least 25 gallons of water per acre after transplanting. For band applications reduce the rate of Simazine 80W and volume of water in proportion to the area treated. For example, apply at the rate of 1 1/2-2 1/2 lbs. according to your soil type in a 4-foot band one mile long or 12 oz. per 1,000 sq. ft. (equivalent to 2 1/2-5 lbs. broadcast per acre). Remove weed growth before application. Use the same rate for annual maintenance applications.

For Quackgrass control broadcast 5 lbs. per acre in the fall or make a split application applying 2 1/2 lbs. per acre in the fall and 2 1/2 lbs. per acre in the early spring after quackgrass begins growth.

Apply and additional 2 1/2 lbs. on muck or peat or 1 1/4 lbs. on sandy soils if weed growth recurs.

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

VEGETABLE CROPS

ASPARAGUS (Established):

Broadcast 2 1/2-5 lbs. per acre to beds established one year or more. Make one application per year either after disking in the spring and before weeds emerge or following harvest after removal of existing weed growth. Spring application must be made at least 3 days before first cutting. Precautions for Washington and Oregon only: 1. Do not use on sand or loamy sand soils or gravelly areas of fields as crop injury may result. 2. Do not allow irrigation water to stand or to form pools in the field or injury may occur in these areas.

ARTICHOKES

Broadcast 2 1/2-5 lbs. per acre after last fall tillage. Apply as directed spray.

PRECAUTIONS: 1. Do not apply to sandy soils. 2. Do not make more than one application per year.

NONSELECTIVE WEED CONTROL ON NONCROP LAND

Apply Simazine 80W at rates recommended below. Use the higher rates on heavy clay and muck soils. Best results are obtained when Simazine 80W is applied before weeds emerge. If weed growth has begun and removal is not practical, include a contact or translocated herbicide in the spray.

Do not contaminate domestic or irrigation water supplies or irrigation water supplies or lakes, streams or ponds.

Simazine 80W can be used to provide long-term weed control on industrial sites, highway medians and shoulders, railroad rights-of-ways, lumberyards, 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 practical.

Use sufficient water to assure thorough coverage. Use at least 1 gal. of water for each 1 lb. of Simazine 80W more if practical for both ground and aerial applications. Mechanical by-pass or jet agitation is necessary to keep Simazine 80W in suspension during application.

To control annual broadleaf and grass weeds (such as barnyardgrass, cheat, crabgrass, lambsquarters, foxtail, ragweed, puncturevine and turkey mullen): Broadcast 6-12 1/2 lbs. per acre.

To control most annual and many perennial broadleaf and grass weeds (including quackgrass, bluegrass, redtop, burdock, Canada thistle, orchardgrass, purple top, smooth brome, dog fennel and plantain): Broadcast 12 1/2-25 lbs. per acre.

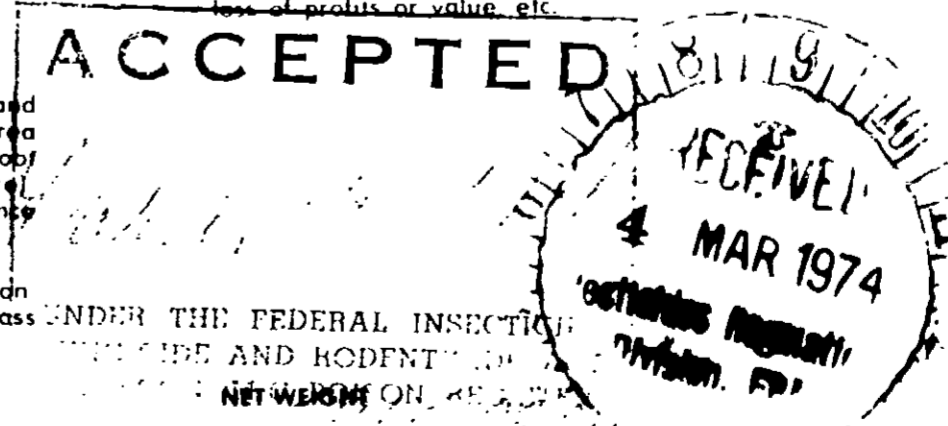
To control hard-to-kill perennial weeds (such as bull thistle and sow thistle): Broadcast 25-50 lbs. per acre.

For longer residual control in regions of high rainfall and a long growing season, broadcast 25-50 lbs. per acre.

For small areas, 4 1/2 oz. per 1,000 sq. ft. is equivalent to 12 1/2 lbs. per acre.

WARRANTY

WARRANTY AND LIMITATION OF DAMAGES. Helena Chemical Company warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use and Conditions of Sale, subject to the inherent risks referred to therein. Helena Chemical Company makes no other express or implied warranty, including any other express or implied warranty of FITNESS or of MERCHANTABILITY, and no agent of Helena Chemical Company is authorized to do so except in writing with a specific reference to this warranty. Any damages arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or value, etc.



REGION	WEEDS CONTROLLED	SOIL TYPE	RATE OF SIMAZINE 80W PER ACRE
Washington, Oregon, Nevada, Utah, Idaho, Montana, Wyoming, Colorado and the California counties of Modoc, Siskiyou and Del Norte	Downy brome grass, Cheatgrass, tansymustard, prickly lettuce, peppergrass, shieldscreed, seedling shepherdspurse	Sands and loamy sands, Sandy loam, Loam soils, Clay soils	DO NOT USE 1 lb 1 1/2 lbs 2 lbs
N. Dakota, S. Dakota, Minnesota, Wisconsin, Nebraska, Kansas, Iowa, Michigan and New York	Henbit, wild mustard, chickweed, knawel, German moss, alyssum, downy brome, cheat grass, wild oats, peppergrass, tansy, mustard, pigweed, speedwell and seedlings of yellow rocket, shepherdspurse, white cockle, tanweed, pennycress, dandelion, Russian thistle, Kochia	Sands and loamy sands, Sandy loam, Loam soils, Clay soils	DO NOT USE 1 lb 1 1/2 lbs 2 lbs
Illinois, Indiana, Ohio, Kentucky, Virginia, Pennsylvania, New Jersey, Delaware, Maryland, West Virginia, Vermont, Massachusetts, Connecticut, Maine, New Hampshire, Rhode Island, Missouri	Pigweed, common chickweed, mouse ear chickweed, speedwell, henbit, knawel, German moss, peppergrass, downy brome, alyssum, lambsquarters, wild oats and seedlings of shepherdspurse, tanweed, pennycress, yellow rocket, wintercress, Russian thistle, dandelion, Kochia, white cockle	Sands and loamy sands, Sandy loam, Loam soils, Clay soils	DO NOT USE 1 lb 1 1/2 lbs 2 lbs