

19713-252

06/14/2000

ACCEPTED

JUN 14 2000

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 19713-252

Drexel

# Simazine 90DF

Herbicide

For weed control in certain crops and ornamental plantings.

## ACTIVE INGREDIENT:

Simazine: 2-chloro-4,6-

bis (ethylamino)-s-triazine ..... 90.0%

OTHER INGREDIENTS: ..... 10.0%

TOTAL: ..... 100.0%

Simazine 90DF is a water dispersible granule.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

See FIRST AID Below

EPA Reg. No. 19713-252

EPA Est. No. 19713-MS-1

Net Contents: \_\_\_\_\_

### FIRST AID

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

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

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

**CAUTION:** Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing dust or spray mist. Avoid contact with eyes, skin or clothing.

**First Aid:** In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, shoes plus socks and 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

**Users should:** 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### ENVIRONMENTAL HAZARDS

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. This product 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 ground water 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 Loamy 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.

### DIRECTIONS FOR USE

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

Failure to follow the "DIRECTIONS FOR USE" and "PRECAUTIONS" on this label may result in crop injury, poor weed control and/or illegal residues.

Do not apply this product through any type of irrigation system. 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 (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 12 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, shoes plus socks and waterproof gloves.

### GENERAL INFORMATION

**IMPORTANT:** Read the entire "DIRECTIONS FOR USE" and the "CONDITIONS OF SALE AND WARRANTY" before using this product. Apply this herbicide before weeds emerge or after removal of weed growth. This product controls a wide variety of annual Broadleaf and Grass weeds when used at selective rates in agricultural crops and ornamental plantings. Where a range of application rates is given, use the low rate on Coarser textured soil and soil lower in organic matter; use the high rate on Finer textured soil and soil higher in organic matter. To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result. Since this product enters weeds mainly through their roots, moisture is needed to move it into the root zone. Very dry soil conditions and lack of rainfall following application may necessitate shallow cultivation. This product is non-corrosive to equipment, non-flammable and has low electrical conductivity.

Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported which cannot be effectively controlled by this and related herbicides. Where this is known or suspected and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of this product in registered combinations or in sequence with other registered herbicides which are not triazines. If only resistant biotypes are expected to be present, use a registered non-triazine herbicide. Consult with your State Agricultural Extension Service for specific recommendations.

Manufactured By:

**Drexel Chemical Company**

P.O. BOX 13327, MEMPHIS, TN 38113-0327

SINCE 1972

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Annual Weeds Controlled		
Alyssum	Fireweed	Common purslane
Annual bluegrass	Fivehook bassia	Ragweed
Annual morningglory	Flora's paintbrush	Rattail fescue
Annual ryegrass	Florida pusley	Russian thistle
Barnyardgrass	Foxtails	Shepherdspurse
(Watergrass)	Goosegrass	Signalgrass
Burclover	Groundsel	( <i>Bracharia spp.</i> )
Carelessweed	Henbit	Silver hairgrass
Carpetweed	Junglerice	Smartweed
Common chickweed	Knawel	Spanishneedles
Crabgrass	(German moss)	Speedwell
( <i>Digitaria spp.</i> )	Common lambsquarter	Tansymustard
Downy brome	Nightshade	Wild mustard
(Cheatgrass)	pepperweed	Wild oats
Fall panicum	Pigweed	Witchgrass
Fiddleneck	Pineappleweed	Yellowflower
Filaree	Prickly lettuce	pepperweed

#### APPLICATION PROCEDURES

**Ground Application:** Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and the same size. Calibrate sprayer before use and recalibrate at the start of each season and when changing carriers. Unless otherwise specified, use a minimum of 20 gallons of spray mixture per acre.

Use a pump with capacity to 1) maintain 35 to 40 psi at nozzles, 2) provide sufficient agitation in tank to keep mixture in suspension, and 3) to provide a minimum of 20% bypass at all times. Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product. The pump should provide a minimum of 10 gallons per minute per 100 gallon tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on suction side of pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

For band applications, calculate amount to be applied per acre as follows:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

**Aerial Application:** Use aerial application only where specified in the use directions. Apply in a minimum of 1 gallon of water for each 1 to 1 pound 8 ounces of herbicide applied per acre. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Avoid application to animals or humans.

**MIXING PROCEDURES (All Uses):** 1) Be sure sprayer is clean and not contaminated with any other materials or crop injury or sprayer clogging may result. 2) Fill tank  $\frac{1}{4}$  full with clean water, nitrogen solution or complete fluid fertilizer. 3) Start agitation. 4) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. 5) Pour product directly from bag into tank. 6) Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. 7) Add tank mix herbicide(s) after this product is thoroughly suspended. 8) Finish filling tank. Maintain agitation to avoid separation of materials. 9) Empty tank as completely as possible before refilling to prevent buildup of emulsifiable concentrate residue from possible tank mix herbicides. 10) If an emulsifiable concentrate film starts to build up in tank, drain it and clean with strong detergent solution or solvent. 11) Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent.

**COMPATIBILITY TEST:** To determine the tank mix compatibility of this product with liquid fertilizer, crop oil, spreaders or recommended pesticides, use this test method. Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray in Alfalfa and Corn. Since liquid fertilizers can vary, even within the same analysis, check compatibility each time before use. Be especially careful when using complete suspension or fluid fertilizers as serious compatibility problems are more apt to occur.

Commercial application equipment may improve compatibility in some instances. Check compatibility using the following procedure:

1. Add 1 pint of fertilizer to each of 2 one-quart glass jars with tight lids.
2. To one of the jars add 4 teaspoons of a compatibility agent approved for this use (4 teaspoons is equivalent to 2 pints per 100 gallons spray). Cap and shake until mixed.
3. To both jars add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next and emulsifiable concentrates last. After each addition cap and shake until thoroughly mixed.

The appropriate amount of herbicides for this test follows (assuming a spray volume of 25 gallons per acre):

<b>Dry Herbicides:</b>	For each pound per acre, add 1½ teaspoons to each jar. Fluff up wettable powder products before measuring.
<b>Liquid Herbicides:</b>	For each pint per acre, add ½ teaspoon to each jar.

For a spray volume other than 25 gallons per acre, change the teaspoons added to each jar as follows:

$$\frac{25 \text{ gallons} \times \text{number teaspoons given above}}{\text{desired gallons spray volume per acre}} \times \text{teaspoons to add to each jar}$$

4. After adding all ingredients, put lids on and tighten. Shake jars vigorously one minute. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, grease, gels, medium to heavy oily film on the jar or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be re-mixed readily, the mixture probably can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) slurry the dry herbicide(s) in water before additions, or (b) add ½ of the compatibility agent to the fertilizer and the other ½ to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If still incompatible, do not use the materials mixed in the same spray tank.

#### ROTATIONAL CROPS AND PERENNIAL CROP REPLANTING

To avoid crop injury, observe the following precautions:

1. If rotating treated land the year following application, plant only Corn, unless otherwise stated in this label.
2. If replanting perennial crops or if rotating land to crops other than Corn, do not apply this product in the year preceding planting of these crops.

#### FRUIT AND NUT CROPS

Apply the spray to the orchard or vineyard floor avoiding contact with fruit, foliage or stems. Recommended rates are based on broadcast treatment. For band applications or spot applications around Fruit or Nut trees, reduce the broadcast rate of this product and water per acre in proportion to the area actually sprayed.

**PRECAUTIONS (All Fruit and Nut Crops):** To avoid crop injury 1) Apply only to orchards or groves where trees have been established 12 months or more unless specified differently. 2) Make only one application per year, except as noted otherwise. 3) Do not use on Gravelly, Sand or Loamy sand soil. 4) Immediately following application, limit overhead sprinkler irrigation to ½ inch.

#### ALMONDS, NECTARINES, PEACHES (CA Only)

Apply 1.1 to 2.2 pounds per treated acre in a 2 to 4 feet band on each side of the tree row. Apply before weeds emerge in late Fall or early Winter. Weeds controlled by 1.1 pounds include Burclover, Common chickweed, Shepherdspurse and Wild mustard. Apply only once per year.

**PRECAUTIONS (To avoid crop injury):** 1) Do not treat trees established in the grove less than 3 years. 2) Do not treat the Mission (TX) variety of Almonds. 3) Do not apply to Almond trees propagated on Plum rootstocks. 4) Do not replant Almonds or Peaches in treated soil for 12 months after treatment. 5) Do not apply on soil with less than 1% organic matter. 6) Do not treat areas where water will accumulate.

#### APPLES, PEARS, SOUR CHERRIES

Apply 2.2 to 4.4 pounds per acre.

#### AVOCADOS (CA and FL Only)

Apply 2.2 to 4.4 pounds per acre after final preparation of grove.

#### BLUEBERRIES AND CANEBERRIES (Blackberries, Boysenberries, Loganberries, Raspberries)

Apply 2.2 to 4.4 pounds per acre in the Spring or apply a split application of 25 pounds per acre in the Spring plus 2.2 pounds per acre in the Fall. Apply in a minimum of 40 gallons of water per acre.

On plantings less than 6 months old, use ½ the above rate. To control Quackgrass, apply 4.4 pounds per acre in the Fall or split the application applying 2.2 pounds per acre in the Fall plus 2.2 pounds per acre in the Spring, when Quackgrass is actively growing.

**Note:** Do not apply when fruit is present or illegal residues may result.

#### CRANBERRIES

**MA:** Apply up to 4.4 pounds per acre before Spring growth begins or in the Fall after harvest.

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

#### FILBERTS

Apply 2.2 to 4.4 pounds per acre in the Fall or apply a split application of 2.2 pounds per acre in the Fall plus 2.2 pounds per acre in the Spring.

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

**Note:** Do not apply when Nuts are on the ground during the harvest period or illegal residues may result.

#### GRAPES

Apply 2.2 to 5.3 pounds per acre any time between harvest and early Spring.

**PRECAUTION:** Do not use in Vineyards established less than three years or crop injury may occur.

## GRAPEFRUIT, LEMONS, ORANGES

**AZ (Lemons and Oranges only):** Apply a split application of 1.75 pounds per acre in the Spring plus 1.75 pounds in the Fall.

**CA (Grapefruit, Lemons, Oranges):** Apply 2.2 to 4.4 pounds per acre in a single application; or apply 2.2 pounds per acre in the Fall and 2.2 pounds per acre in the Spring.

**PRECAUTION:** Do not use in the Imperial, Coachella or Palo Verde valleys or crop injury may occur.

**FL (Grapefruit and Oranges only)—Ridge Areas:** Apply only once per year. For control of weeds listed under "GENERAL INFORMATION", apply 7.1 to 10.6 pounds per acre in the Spring; to also control Milkweed vine, use 8.9 to 10.6 pounds 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.

**FL (Grapefruit and Oranges only)—Bedded Areas:** Apply 3.5 pounds per acre in bedded areas to control Balsamapple vine and other weeds. Apply prior to periods of major weed seed germination in soil where moisture conditions are good. Apply only once per year.

**TX (Grapefruit and Oranges only):** Apply 4.4 to 5.3 pounds per acre. **PRECAUTIONS (All areas to avoid crop injury):** 1) Do not use in nurseries. 2) Do not apply to bedded Grapefruit, Lemons or Oranges [except for FL Grapefruit and Oranges]. 3) Do not apply to trees under stress from freeze damage for one year after the freeze.

## MACADAMIA NUTS

Apply 2.2 to 4.4 pounds in 50 gallons of water per acre before harvest and just prior to weed emergence. Repeat application as necessary.

**Note:** Do not apply when Nuts are on the ground during the harvest period, as illegal residues may result.

## OLIVES

Apply 2.2 to 4.4 pounds per acre following grove preparation in the Fall. Repeat annually in mid-Winter.

## PEACHES, PLUMS, SWEET CHERRIES

Apply 1.75 to 4.4 pounds per acre. Apply in late Fall to early Spring prior to weed emergence.

**PRECAUTIONS (To avoid crop injury):** 1) Peaches: Use only in AR, LA, MO, OK, TX and states East of the Mississippi River. For CA, see specific directions in the section "Almonds and Peaches [CA Only]". 2) Plums and Sweet Cherries: Use only in MO and states East of the Mississippi River, except TN.

## PECANS

Apply 2.2 to 4.4 pounds per acre before weeds emerge in the Spring. **PRECAUTIONS (To avoid crop injury):** 1) Do not use West of the Pecos River in TX or in AZ, CA or NM. 2) Do not make applications to transplanted trees that have been established less than two years in the grove.

**Note:** Do not apply when Nuts are on the ground or illegal residues may result. Do not allow animals to graze treated areas.

## STRAWBERRIES (OR and WA)

For control of Chickweed, Groundsel, Mustard and Shepherds-purse, apply broadcast 1.1 pounds per acre. In fields where overhead irrigation is used to activate this product, apply after harvest at time of bed renovation. In fields where overhead irrigation is not available, apply during early October through November.

**PRECAUTIONS (To avoid crop injury):** 1) Make only one application per growing season. 2) Do not apply within 4 months after transplanting.

## WALNUTS

Apply 2.2 to 4.4 pounds per acre. Leveling and furrowing operations after application will lessen effectiveness of weed control.

**Note:** Do not apply when Nuts are on the ground or illegal residues may result.

**TANK MIXTURE WITH AMETRIN 80W FOR GRAPEFRUIT AND ORANGES:** Use on Grapefruit and Oranges in FL and TX for control of weeds listed in the following directions and under "GENERAL INFORMATION". Apply the rates given below in a minimum of 40 gallons of water per acre thoroughly covering existing vegetation, but avoiding contact with Citrus fruit, foliage or stems. Apply when weeds have resumed active growth in the Spring, but before they exceed 4 inches in height (except as noted for vines). Observe all precautions and limitations on the labeling of this product and Ametryn 80W.

**FL (Ridge Area):** Apply 4.4 pounds of this product plus 5 pounds of Ametryn 80W per acre; controls Milkweed vine when applied either pre-emergence or on vines up to 24 inches tall.

**FL (Bedded Areas):** Apply 3.5 pounds of this product plus 6 pounds of Ametryn 80W per acre; controls Balsamapple when applied either pre-emergence or on vines up to 12 inches tall.

**TX:** Apply 3.5 to 4.4 pounds of this product plus 2 to 3 pounds of Ametryn 80W per acre plus 2 quarts non-ionic surfactant per 100 gallons of spray mixture (add surfactant to spray tank last); controls Buffalograss, Marinevine (Ivy treevine), Texas panicum, Sandbur and Sunflower and gives top-kill of Johnsongrass. Use 4.4 pounds of this product per acre for longer residual control; use 3 pounds of Ametryn 80W per acre for control of heavy weed growth and for top-kill of Johnsongrass; use the higher rate of both products for control of Marinevine.

**PRECAUTIONS (All areas to avoid injury):** 1) Do not use in nurseries or around trees that have been established in the grove less than two years, except in FL. 2) Do not use in nurseries or where trees are under stress from freeze damage for one year after the freeze. 3) Apply only once per year.

**Note (All Areas):** Do not apply within 30 days before harvest or illegal residues may result. Do not graze treated areas.

**TANK MIXTURE WITH BROMACIL 80W FOR GRAPEFRUIT AND ORANGES (FL Only):** Use on Grapefruit and Oranges in FL for control of Balsamapple, Black nightshade, Carpetweed, Crabgrass, Cudweed, Dayweed, Florida pusley, Horsetweed, Pigweed, Poorjoe, Ragweed, Rattlebox, Spanishneedles and Sandbur; and for partial control of Bermudagrass, Bahiagrass, Pangolagrass, Paragrass and Torpedograss. Apply 3.5 to 7.1 pounds of this product plus 3 to 4 pounds of Bromacil 80W per acre beneath trees in a minimum of 40 gallons of water per acre before or soon after weed growth begins. Use the lower rates for light weed infestations or all applications in bedded Citrus areas. Use the higher rates for heavy weed infestations only in ridge grown Citrus areas. Temporary yellowing of Citrus leaves may occur following treatment.

**PRECAUTIONS (To avoid crop injury):** 1) Do not use in nurseries or where trees are under stress from freeze damage for one year after the freeze. 2) Do not use on soil with less than 1% organic matter or on poorly drained soil. 3) Do not treat trees planted in irrigation furrows. 4) Do not treat diseased trees such as those with foot rot. 5) Do not use in groves interplanted with other trees or desirable plants, nor in home Grapefruit or Orange plantings or in areas where roots of other valuable plants or trees may extend. 6) Treated areas may be planted to Citrus trees one year after application. 7) Do not rotate to other crops within two years after application.

**Note:** Apply only once per year and avoid contact with foliage and fruit with spray or mist or illegal residues may result.

**TANK MIXTURE WITH GRAMOXONE® EXTRA:** This tank mix is effective in the following Fruit and Nut crops for kill of existing vegetation and for residual control of the annual Broadleaf and Grass weeds claimed for this product applied alone. This combination is also effective for top-kill and suppression of perennial weeds.

### Use this tank mix on these crops:

Almonds (CA Only)	Grapefruit (CA, FL & TX Only)	Oranges*
Apples	Grapes	Peaches*
Avocados (CA & FL Only)	Lemons (AZ & CA Only)	Pears
Cherries (Sour & Sweet*)	Macadamia nuts	Pecans
Filberts	Olives	Plums*
		Walnuts

**SPECIFIC DIRECTIONS:** Apply the rate given under the appropriate crop on this label plus 1½ to 2½ qts. of Gramoxone Extra\* in 50 to 200 gals. (30 to 50 gals. for Pecans) of water per acre to the orchard floor avoiding contact with fruit, foliage or stems. Add a non-ionic surfactant at ½ pt. per 100 gals. of spray. Apply when weeds are succulent and new growth is 1 to 6 inches tall. For mature woody weeds or difficult to control perennial weeds, retreat or spot treat with Gramoxone Extra if regrowth occurs.

Add this product to the spray tank first (refer to "MIXING PROCEDURES" section of this label), then add Gramoxone Extra and add the surfactant last. Provide constant agitation during mixing and application to keep the mixture in suspension.

Refer to the labels of both products for further directions, specific weeds controlled and precautions and limitations on each crop.

\*Based on a product containing 1½ lbs. of Gramoxone Extra per gal.

\*In Avocados in FL, this tank mix also controls Balsamapple vine, Rattail amaranth and at a higher rate of each herbicide it suppresses Coral vine.

\*Limited to MO and states East of the Mississippi River, except TN.

\*In Grapefruit and Oranges in FL, apply 3.5 lbs. of this product per acre in bedded areas and 7.1 to 10.6 lbs. per acre in ridge areas.

\*Limited to AR, CA, LA, MO, OK, TX and states East of the Mississippi River. As appropriate, refer to the sections: "Almonds, Peaches and Nectarines (CA Only)" or "Peaches, Plums and Sweet cherries" for the rate of this product and other information.

**PRECAUTIONS (To avoid crop injury):** 1) Apply the tank mix only once per year. 2) Use a shield for young trees or vines.

## TANK MIXTURE WITH ROUNDUP®

This tank mixture is effective in Grape vineyards and in the following bearing or non-bearing tree crops for control of existing vegetation and for residual control of the annual Broadleaf and Grass weeds claimed for this product applied alone. This combination is also effective for partial control of perennial weeds contacted by the spray mixture during application.

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Use this tank mix on these crops:		
Almonds** (CA Only)	Filberts** Grapefruit* (CA, FL <sup>2</sup> & TX)	Oranges* (AZ, CA, FL <sup>2</sup> & TX)
Apples*	Grapes*	Peaches** <sup>3</sup>
Avocados* (CA & FL Only)	Lemons*	Pears*
Cherries (Sour & Sweet <sup>1</sup> )	Macadamia nuts**	Plums* <sup>1</sup>
		Walnuts**

**SPECIFIC DIRECTIONS:** Use the appropriate rate given elsewhere on this label for this product applied alone to the crop being treated. Add to the spray tank 1 to 5 qts. of Roundup per acre depending on weeds present and their growth stage. Also add an agriculturally approved non-ionic surfactant at 0.5% by volume of spray solution. Apply the mixture in 10 to 40 gals. of water per acre as a post-emergence spray and to the weed at the appropriate weed growth stage given on the Roundup label. Add this product to the spray tank first, then add Roundup. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to "APPLICATION PROCEDURES" section of this label for further directions. Refer to labels of both herbicides for further directions, specific weeds controlled, precautions and limitations on each crop.

\*Allow a minimum of 14 days between last application and harvest.  
 \*\*Allow a minimum of 21 days between last application and harvest of these crops.  
<sup>1</sup>Plums and Sweet cherries: Limited to MO and states East of the Mississippi River, except TN.  
<sup>2</sup>In Grapefruit and Oranges in FL, apply 3.5 lbs. of this product per acre in bedded areas and 7.1 to 10.6 lbs. per acre in ridge areas.  
<sup>3</sup>Limited to AR, CA, LA, MO, OK, TX and states East of the Mississippi River. For CA, see specific directions in the section "Almonds and Peaches (CA Only)".

**PRECAUTIONS** (To avoid crop injury): 1) Take extreme care to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of trees or vines. 2) Observe precautions on both this product and Roundup labels for each crop involved.

#### TANK MIXTURE WITH SURFLAN\*

Use this tank mix in the following crops for pre-emergence control of all weeds claimed on both labels:			
Almonds	Cherries	Lemons	Pecans
Apples	Filberts	Oranges	Plums
Avocados	Grapefruit	Peaches	Walnuts
Caneberries	Grapes	Pears	(English)

**SPECIFIC DIRECTIONS:** Apply the rate given for this product under the appropriate crop on this label plus 2.67 to 5.33 lbs. of Surflan 75W or 2 to 4 qts. of Surflan A.S. in 20 to 40 gals. of water per acre. Refer to the Surflan 75W or Surflan A.S. label for complete tank mix directions.

Observe all precautions and limitations on the this label and Surflan labels.

#### FIELD AND FORAGE CROPS

**CORN**—Nitrogen solutions or complete fluid fertilizers may replace all or part of the water as a carrier in the spray. Determine the physical compatibility of this product with fertilizer before use. Refer to the "GENERAL INFORMATION" section of this label for a compatibility test. Do not apply after Corn has emerged as there is danger of liquid fertilizers causing crop injury.

**PRE-EMERGENCE:** Apply before weeds and Corn emerge. Use the appropriate rate in the table below.

**PRE-PLANT:** Apply in the Spring after plowing at the appropriate rate in the table below. Apply before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation. Best results will be obtained when this product is applied within 2 weeks before planting. Under dry weather conditions, pre-plant applications may give better weed control. If weeds develop, particularly under relatively dry conditions, a shallow cultivation will generally result in better weed control.

Soil Texture	Broadcast* Rate Per Acre
Coarse textured soil: Sand, Silt and Loam that is low in organic matter	2.2 lbs.
Medium textured soil: Soil containing a moderate amount of Clay and organic matter	2.6 lbs.
Fine textured soil: Loam that is high in organic matter and Clay (including dark prairie soils of Corn Belt)	3.3 lbs.
Organic soil: Peat, Muck and high-organic Clay	4.4 lbs.

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

**To control Quackgrass:** Apply 3.3 to 4.4 pounds per acre in the Fall. Plow two to three weeks later, or if erosion is a problem, delay plowing until Spring.

**PRECAUTIONS:** 1) Do not apply more than 4.4 pounds per acre to Corn per year. 2) Do not rotate to any crop except Corn until the following year or injury may occur. 3) After harvest, plow and thor-

oughly till the soil in Fall or Spring to minimize possible injury to Spring-seeded rotational crops, regardless of the rate used. 4) If more than 3.3 pounds is used per acre (or equivalent rate in a band), a crop of untreated Corn should precede the next rotational crop. 5) Do not apply pre-plant incorporated in Corn in High Plains and Intermountain areas of the West (including Central and Western KS, Western NE, Western OK and the Panhandle of TX) where rainfall is sparse and erratic or where irrigation is required. 6) In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use this product to control weeds in Corn only when Corn is to follow Corn or when a crop of untreated Corn is to precede another rotational crop. 7) In western MN and Eastern parts of the Dakotas, NE and KS, do not plant Soybeans following Corn treated with this product if more than 2.2 pounds per acre (or equivalent rate in a band) was applied or injury may occur. 8) Injury may occur to Soybeans planted in North-Central and Northwest IA, South-Central and Southwest MN, Northeast NE, Southeast SD and other areas the year following application on soils having a calcareous surface layer. 9) Do not plant Sugar beets, Tobacco, Vegetables (including Dry beans), Spring-seeded small grains or Small-seeded legumes and Grasses the year after an application or injury may occur.

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

#### TANK MIXTURES ON CORN

**ATRAZINE:** Use this product in a pre-plant or pre-emergence tank mixture with Atrazine 90DF, Atrazine 80W or Atrazine 4L for control of many annual weeds, including Carpetweed, Crabgrass, Fall panicum, Foxtail, Lambsquarters, Morningglory, Pigweed, Ragweed and Velvetleaf. Apply at the rates given below. Use the 1:1 ratio for most weeds and the 2:1 ratio for expected heavy infestations of Crabgrass and Fall panicum.

Soil Texture	BROADCAST RATE PER ACRE			
	1:1 Ratio		2:1 Ratio	
	This Product	Atrazine* 80W	This Product	Atrazine* 80W
Sand, Loamy sand, Sandy loam	1.10 lbs.	1.25 lbs.	1.50 lbs.	0.83 lbs.
Loam, Silt loam, Silt, Clay loam, Sandy clay loam, Silty clay loam, Sandy clay or Silty clay with low organic matter	1.33 lbs.	1.50 lbs.	1.80 lbs.	1.00 lb.
Loam, Silt loam, Silt, Clay loam, Sandy clay loam, Silty clay loam, Sandy clay or Silty clay with medium to high organic matter and Clay (including dark prairie soils of the Corn Belt)	1.60 lbs.	1.80 lbs.	2.10 lbs.	1.20 lbs.

\*When using Atrazine 4L or 90DF, use equivalent rates.  
 One lb. of Atrazine 80W equals 0.8 qt. of Atrazine 4L or 0.9 lb. of Atrazine 90DF. Refer to the Atrazine label for complete directions and use 0.9 lb. of this product for each lb. of Simazine 80W. Also refer to the Atrazine label and the Corn section of this label for precautions and limitations.

**ERADICANE\*** Use in a pre-plant incorporated tank mixture for control of all weeds claimed on both this product and Eradicane labels including partial control (suppression) of Shattercane (Wild cane). Fluid fertilizer may replace all or part of the water in the spray. Check the physical compatibility of mixture with fertilizer before use. Refer to the "GENERAL INFORMATION" section of this label for a compatibility test procedure. Use a minimum of 20 gallons of spray volume per acre. Refer to the Eradicane label for incorporation directions. Use the higher rate of this product on Fine-textured soil and where heavy Broadleaf infestations are expected. Use the higher rate of Eradicane for heavy Bermudagrass and Nutsedge infestations. For partial control (suppression) of Shattercane, broadcast and incorporate immediately before planting 1.1 to 2.2 pounds of this product plus 7.33 pints of Eradicane 6.7E (or 8 pints Eradicane Extra) per acre. For control of the other weeds claimed on both labels, broadcast and incorporate 1.1 to 3.3 pounds of this product plus 4.75 to 7.33 pints of Eradicane 6.7E (or 5.33 to 8 pints of Eradicane Extra) per acre. Observe all precautions and limitations on this product and Eradicane labels.

**GRAMOXONE\* EXTRA:** Use in a tank mixture where Corn will be planted directly in a cover crop, established sod or previous crop residues. This combination controls existing vegetation and provides residual control of the annual Broadleaf and Grass weeds listed under "GENERAL INFORMATION".

Add this product to the spray tank, mix thoroughly with water and then add Gramoxone Extra and a non-ionic surfactant. Provide constant agitation during mixing and application to keep the mixture in suspension. Apply 2.2 to 3.3 pounds of this product plus 1.5 to 2.5 pints of Gramoxone Extra in 20 to 60 gallons of water per acre as a broadcast spray either before or after planting but before Corn emerges. Add a non-ionic surfactant at the rate of 0.5 pint per 100 gallons of spray volume. For further information, see general information, caution and warning statements, precautions and notes on this product label and the Gramoxone Extra labels.

**SUTAN\* +:** Use in a pre-plant incorporated tank mixture for control of all weeds claimed on both this product and Sutan+ labels including partial control (suppression) of Shattercane (Wild cane). Fluid fertilizer may replace all or part of the water in the spray. Check the physical compatibility of mixture with fertilizer before use. Refer to the "GENERAL INFORMATION" section of this label for a compatibility test procedure. Use a minimum of 20 gallons of spray volume per acre. Refer to the Sutan+ label for incorporation directions. Use the higher rate of this product on Fine textured soil and where heavy Broadleaf infestations are expected. For partial control (suppression) of Shattercane, broadcast and incorporate immediately before planting, 1 pound 1.6 ounces to 2.2 pounds of this product plus 7.33 pints of Sutan+ 6.7E per acre. For control of the other weeds claimed on both labels, broadcast and incorporate 1.1 to 3.3 pounds of this product plus 4.75 pints of Sutan+ 6.7E per acre. Observe all precautions and limitations on this product and Sutan+ labels.

**NURSERIES, CHRISTMAS TREE PLANTINGS, SHELTERBELT NURSERIES** (See List Below): Apply 2.2 to 3.4 pounds in at least 25 gallons of water per acre in Fall or Spring.

**PRECAUTION** (To avoid plant injury): Do not apply for at least one year after transplanting.

**CHRISTMAS TREE PLANTINGS AND SHELTERBELTS** (See List Below): Remove weed growth before application. Apply 2.2 to 4.4 pounds in at least 25 gallons of water per acre after transplanting. Use the same rate for annual maintenance applications.

**For Quackgrass control:** Apply 4.4 pounds per acre in the Fall or apply a split application of 2.2 pounds per acre in the Fall plus 2.2 pounds per acre in early Spring, after Quackgrass begins growth.

**PRECAUTIONS** (To avoid tree injury): 1) Do not use on seedbeds or cutting beds. 2) In CA, OR and WA do not apply to Christmas trees or shelterbelts sooner than one year after transplanting. In other areas, do not apply to Christmas trees or shelterbelt transplants less than three years of age. 3) Do not use until soil is firmly settled around roots. 4) Do not apply more than once a year, except as directed for Quackgrass control.

Apply these species of trees and shrubs, as recommended above:		
Conifers		
Arborvitae	Juniper	Red pine (Norway pine)
Austrian pine	Knobcone pine*	Red spruce
Balsam fir	Lodgepole pine	Scotch pine
Bishop pine*	(Shore pine)	White cedar
Blue spruce	Monterey pine*	White fir
Douglas fir	Mugho pine	White pine
Fraser fir	Norway spruce	White spruce
Hemlock	Red cedar	Yew ( <i>Taxus spp.</i> )
Deciduous Trees and Woody Ornamentals		
American elm	Dogwood	Palm*
Barberry	Eucalyptus	(2.2 lbs. per acre)
Bottle brush*	Holly ( <i>Ilex spp.</i> )	<i>Pieris spp.</i>
Boxelder	(max. 3.5 lbs. per acre)	(max. 3.8 lbs. per acre)
Bush honeysuckle	Honey locust	Red oak
Caragana	Oleander*	Russian olive
Carob*	Oregon grape	Siberian elm
Cotoneaster	( <i>Mahonia spp.</i> )	

\*For CA Only.

**SURFLAN\* TANK MIX:** On Christmas tree plantings, use this tank mix for pre-emergence control of weeds listed on this label and the Surflan 75W (or Surflan A.S.) label. Use on field grown Conifer species listed on the labels for each herbicide plus Alpine Fir, Black Spruce, Colorado Blue Spruce, Coulter Pine, Engelmann Spruce, Giant Redwood, Grand Fir and Veitchi Fir. Broadcast the mixture as a directed spray to the soil surface or as an overtop spray using 2.2 to 4.4 pounds of this product and 2.67 to 5.33 pounds of Surflan 75W (or 2 to 4 quarts of Surflan A.S.) Apply in sufficient water per acre to uniformly treat the area. Follow overtop sprays with sprinkler irrigation to move the herbicide from leaf surfaces to the soil. Remove weed growth before application. Mix weed residues, prunings or trash into the soil, or remove them before treatment. Soil should be in good health and free of clods at time of application. Shallow cultivation (1 to 2 inches) after treatment will not reduce weed control. Observe all precautions and limitations on this product and Surflan labels.

**METOLACHLOR 8E TANK MIX:** On field and liner<sup>2</sup> grown Woody ornamentals, use this tank mix for pre-emergence control of Barnyardgrass, Crowfootgrass, Fall panicum, Galinsoga, Giant foxtail, Goosegrass, Green foxtail, Lambsquarters, Large crabgrass, Purslane, Ragweed, Redroot pigweed, Smartweed, Smooth crabgrass, Venice mallow, Yellow foxtail, Yellow nutsedge and other weeds listed on the Metolachlor 8E alone label. Control should last about 60 days. Apply 0.9 to 1.1 pounds of this product plus 2 to 3 pints of Metolachlor 8E in a minimum of 15 gallons of water per acre.

\*Based on a product containing 1.5 pounds of Gramoxone Extra per gallon.

<sup>2</sup>Plants transplanted normally in rows in a nursery or similar area for further growth prior to transplanting to final growing place.

<sup>3</sup>In states other than FL. For use on Turfgrass for sod in FL, see "Turfgrasses for Sod (FL Only)" section above.

For band applications use a proportional amount of herbicide. Direct the spray toward the base of established Ornamentals or Ornamentals transplanted at least 10 days. Apply before weeds emerge or after removing existing weeds. Use the higher rates on Fine textured soil and where Broadleaf weeds are expected to form a significant part of the infestation. Use the lower rates on Coarse textured soil and where light infestations of Broadleaf weeds are expected.

#### Apply post-transplant to the following field and liner grown Ornamentals:

Arborvitae ( <i>Thuja spp.</i> )	Japanese Andromeda ( <i>Pieris spp.</i> )	Maple whips ( <i>Acer spp.</i> )
Aucuba ( <i>Aucuba spp.</i> )	Juniper ( <i>Juniperus spp.</i> )	Osmanthus ( <i>Osmanthus spp.</i> )
Cotoneaster ( <i>Cotoneaster spp.</i> )	Andorra, Creeping, Shore, Bar Harbor, Blue Rug	Red oak ( <i>Quercus spp.</i> )
Crabapple ( <i>Malus spp.</i> )	Leucothoe ( <i>Leucothoe spp.</i> )	Rhododendron ( <i>Rhododendron spp.</i> )
Holly ( <i>Ilex spp.</i> )	Liriope ( <i>Liriope spp.</i> )	Weigela ( <i>Weigela spp.</i> )
Boxleaf Japanese, Japanese	Silver sunproof	Yew ( <i>Taxus spp.</i> )
		Dwarf Japanese

Note: Length of weed control may be reduced when continuous wet soil conditions follow herbicide application.

**PRECAUTIONS** (To avoid plant injury): 1) Do not use on seedbeds or on unrooted cuttings. 2) Do not use in greenhouses or other enclosed areas.

#### TURFGRASSES FOR SOD (FL ONLY)

Centipedegrass, St. Augustine grass and Zoysia Grass: Apply 2.2 to 4.4 pounds per acre, according to soil texture as indicated below:

Apply 2.2 to 4.4 lbs. per acre, according to soil texture as indicated:			
Muck or Peat	4.4 lbs.	Old Beds	Within 2 days after lifting of sod.
		New Beds	3 to 4 days after sprigging or plugging.
Sandy Soil	2.2 lbs.	Old Beds	Within 2 days after lifting of sod.
		New Beds	7 to 10 days after sprigging or plugging.

If weeds regrow, apply an additional 2.2 pounds on Muck or Peat, or 1.1 pounds on Sandy soil.

**PRECAUTIONS:** (To avoid crop injury): 1) Do not apply within 30 days prior to cutting or lifting. 2) Do not apply in combination with surfactants or other spray additives. 3) Use only on Turfgrass reasonably free of infestations of insects, nematodes and diseases. 4) On newly sprigged Turfgrass, temporary slowing of growth may follow application.

#### TURFGRASS FOR FAIRWAYS, LAWNS, SOD PRODUCTION<sup>1</sup> AND SIMILAR AREAS

**Bermudagrass, Centipedegrass, St. Augustine grass, and Zoysia Grass:** Apply this product after October 1 before emergence of Winter annual weeds for control of Annual bluegrass, Burclover, Carpet burweed, Chickweed, Corn speedwell, Henbit, Hop clover and Spurweed. This product will control Annual bluegrass even if it is emerged at time of treatment. For control of Summer annual weeds listed in the "GENERAL INFORMATION" section of this label, also apply this product in late Winter before the weeds emerge. Apply in a minimum of 15 gallons of water per acre or 1 gallon per 1,000 square feet. Where Annual bluegrass is the major weed, use 1.1 pounds of this product per acre (0.4 ounce per 1,000 square feet). Use 2.2 pounds per acre (0.8 ounce per 1,000 square feet) for control of the other weeds named above.

Do not exceed 1.1 pounds per acre per treatment on newly sprigged Turfgrass or on hybrid Bermudagrass such as Tiflawn, Tifway and Ormond. For continued Summer annual weed control, apply another 1.1 pounds per acre at least 30 days after the previous application, but not after April 15. However, do not make more than two applications of this product per year.

**PRECAUTIONS** (On newly sprigged Turfgrass and hybrid Bermudagrass, temporary slowing of growth and yellowing may occur following application. To avoid turf injury): 1) Use only on Turfgrass reasonably free of infestations of insects, nematodes, and diseases. 2) Do not use on golf greens. 3) Do not use North of NC (except may be used in VA Coastal Plains) or West of the high rainfall areas of Eastern OK and Eastern TX. 4) Do not use on Muck or alkaline soils. 5) Do not apply over the rooting area of trees or ornamentals not listed on this label. 6) Do not overseed with desirable Turfgrass within 4 months before or 6 months after treatment. 7) Do not apply this product to newly seeded Bermudagrass until it has overwintered and has a well-developed rhizome system. Do not exceed 2.2 pounds of this product per acre within 12 months of seeding Bermudagrass.

**TANK MIXTURE WITH ROUNDUP:** This tank mixture will provide control of emerged annual weeds and residual control of weeds listed on the this label. The combination also will partially control emerged

Perennial weeds listed on the Roundup label. Add to the spray tank the appropriate rate of this product noted in the above section for "THIS PRODUCT ALONE".

Then add 1 to 5 quarts of Roundup per acre depending on weeds present and their growth stage. Also add an agriculturally approved non-ionic surfactant at 0.5% by volume of spray solution. Apply the mixture in 10 to 40 gallons of water per acre as a post-emergence spray at the appropriate weed growth stage given on the Roundup label. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to the "APPLICATION PROCEDURES" section of this label for further directions. Refer to the labels of both herbicides for specific non-crop sites, rates, weeds controlled and further directions, precautions and limitations.

#### WARRANTY—CONDITION OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests 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 the Manufacturer 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 the Seller and is accepted as such by the Buyer.

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool, dry area away from any heat or ignition source. Do not stack over 2 pallets high. Move bags carefully so as not to tear or puncture. Do not move containers from one area to another unless they are securely sealed. Keep containers tightly sealed when not in use. Do not allow bags to become wet or store 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 soap and water to remove remaining pesticide.
3. Follow washing with clean water rinse.
4. Do not allow runoff to enter sewer or contaminate water supplies.
5. Dispose of waste as indicated below.

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

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Then dispose of bag in a sanitary landfill or by incineration, or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke.