

MAR 21 2002

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Registration Manager  
DREXEL CHEMICAL COMPANY  
P.O. Box 13327, 1700 Channel Avenue  
Memphis, TN 38113-0327

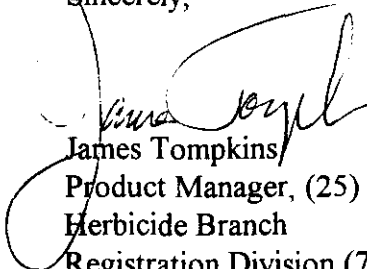
SUBJECT: Label Amendment  
Drexel Atrazine 80 Herbicide, EPA Reg. No. 19713-6  
Your Application Dated January 25, 2002

The above mentioned amendment submitted in connection with registration under Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable, provided you make the following label changes:

- Under the "Precautionary Statements" and the "Agricultural Use Requirements" change "Handlers who may be exposed to the concentrate through mixing, loading, application, or other tasks must wear chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride" to "Handlers who may be exposed to the concentrate through mixing, loading, application, or other tasks must wear chemical-resistant gloves such as polyethylene or polyvinyl chloride".

A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment. The amended labeling supersedes all previously accepted ones.

Sincerely,



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

Enclosure

CONCURRENCES

SYMBOL ▶	7505C							
SURNAME ▶	MINOR, E.							
DATE ▶	Mar 20, 2002							

# RESTRICTED USE PESTICIDE

(Ground and Surface Water Concerns)

For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

This product is a Restricted Use Herbicide due to ground and surface water concerns. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for atrazine to reach ground and surface water.

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

MAR 21 2002

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

19713-6



# Atrazine 80

Herbicide

For season-long weed control in Chemical fallow, Conifers, Corn, Fallowland, Guava, Lawns, Macadamia nuts, Sorghum, Sugarcane and Turf.

**ACTIVE INGREDIENTS:**

Atrazine .....	76.0%
Related Compounds: .....	4.0%
<b>OTHER INGREDIENTS:</b> .....	<b>20.0%</b>
<b>TOTAL:</b> .....	<b>100.0%</b>

## KEEP OUT OF REACH OF CHILDREN CAUTION

See FIRST AID Below

EPA Reg. No. 19713-6

EPA Est. No. 19713-MS-1

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

FIRST AID
<b>IF SWALLOWED:</b> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious or convulsing person.
<b>IF ON SKIN OR CLOTHING:</b> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes.
<b>IF IN EYES:</b> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Telecommunications Network at 1-800-858-7378.
<b>NOTE TO PHYSICIAN:</b> There is no specific antidote for atrazine. If this product is ingested, induce emesis or lavage stomach. The use of an aqueous slurry of activated charcoal may be considered.

### PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

**CAUTION:** Harmful if swallowed. Avoid breathing of dust. Do not take internally. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. (Continued)

### PRECAUTIONARY STATEMENTS (Cont.)

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

**Handlers who may be exposed to the dilute through application or other tasks must wear:** long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride and chemical-resistant footwear plus socks.

**Handlers who may be exposed to the concentrate through mixing, loading, application or other tasks must wear:** long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride, chemical-resistant footwear plus socks and protective eyewear. 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. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

Atrazine can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply atrazine to Sand and Loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

This pesticide is toxic to aquatic invertebrates. For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Run-off and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

This product may not be mixed/loaded or used within 50 feet of all wells including abandoned wells, drainage wells and sinkholes. This product may not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-foot buffer or set-back from runoff points must be planted to crop or seeded with grass or other suitable crop.

Manufactured By:

**Drexel Chemical Company**

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

SINCE 1972

6SP-0102+(a)

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**Note:** Add this statement to all container sizes of 50 pounds and higher. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**TILE-TERRACED FIELD CONTAINING STANDPIPES**

To ensure protection of surface water from runoff through standpipes and tile outlets in terraced fields, one of the following options may be used:

- 1) Do not apply this product within 66 feet of standpipes in tile-outletted terraced fields.
- 2) Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2 to 3 inches in the entire tile-outletted terraced field.
- 3) Apply this product to the entire tile-outletted terraced field under a no-till practice only when high crop residue management practices are used. High crop residue management practice is described as a crop management practice where little or no crop residue is removed from the field during or after crop harvest.

**GENERAL INFORMATION**

ATRAZINE 80 Herbicide will control most annual Broadleaf and Grass weeds in Corn, Sorghum, Sugarcane and certain other crops as specified on this label such as Barnyardgrass, Giant foxtail, Green foxtail, Lambsquarters, Large (Hairy) crabgrass, Morningglory, Mustard, Nightshade, Pigweed, Purslane, Ragweed, Velvetleaf, Wild oats, Witchgrass (*Panicum capillare*) and Yellow foxtail. This product may be applied before or after weeds emerge.

In each case where a range of rates is given, the lower rate should be used on Coarse textured soil and soils low in organic matter and the higher rate should be used on Fine textured soil and soils high in organic matter. Groundwater contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

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 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. Since this product acts mainly through root absorption, its effectiveness depends on rainfall or irrigation to move it into the root zone. Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control.

This product is non-flammable. Care should be taken to avoid using this product near adjacent desirable plants or in greenhouses or injury may occur. To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result.

**Note:** The Seller does not recommend the use of this product in combination with other herbicides or oils except as specifically described on the label or in literature published by the Seller.

**FAILURE TO FOLLOW ALL PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY OR ILLEGAL RESIDUES.**

**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 are 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 10 gallons of spray mixture per acre for all pre-plant incorporated, pre-plant surface, pre-emergence and post-emergence applications (with or without oil surfactant) with ground equipment.

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 the suction side of the 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 application, calculate the amount to be applied per acre as follows:

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

**Aerial Application:** Use aerial application only where broadcast applications are specified. Apply in a minimum of 1 gallon of water for each pound of this product applied per acre. For post-emergence treatments on Corn and Sorghum, apply recommended rate in a minimum of 2 gallons of water per acre. Avoid applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

**THIS PRODUCT IN WATER APPLICATIONS**

This product, a dry formulation, should be mixed with water and applied as a spray. Make a slurry by adding this product to water. Pour slurry into the spray tank during or after filling. Sufficient hydraulic (jet) or mechanical agitation must be provided during mixing and application to keep the material in suspension.

**THIS PRODUCT IN LIQUID FERTILIZER APPLICATIONS**

Nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier for pre-emergence and pre-plant applications of this product on Corn and Sorghum. Mixing should be accomplished as described under water applications. Check the compatibility of this product with liquid fertilizer and/or nitrogen solution as shown below before use. Do not apply in nitrogen solution or complete liquid fertilizer after Corn or Sorghum emerges, or crop injury may occur.

**Compatibility Test:** Since liquid fertilizers can vary, even within the same analysis, always check compatibility with herbicide(s) each time before use. Be especially careful when using complete suspension or fluid fertilizers as serious compatibility problems are more likely to occur. Commercial application equipment may improve compatibility in some instances.

The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredients.

**Check compatibility using this procedure:**

1. Add 1 pint of fertilizer to each of 2 one-quart jars with tight lids.
2. To one of the jars, add 0.25 teaspoon or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (0.25 teaspoon is equivalent to 2 pints per 100 gallons of spray). Shake or stir gently to mix.
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, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

**Dry Herbicides:** For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

**Liquid Herbicides:** For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.

4. After adding all ingredients, put lids on and tighten and invert each jar ten times to mix. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, gels, 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 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 addition, or
- b) Add one-half of the compatibility agent to the fertilizer and the other one-half of the emulsifiable concentrate or flowable herbicide before addition to the mixture. If incompatibility is still observed, do not use the mixture.

**THIS PRODUCT PLUS EMULSIFIABLE OIL OR OIL CONCENTRATE**

Adding emulsifiable oil (petroleum-derived, petroleum-derived oil concentrate or single or mixed crop-derived oil concentrate) to post-emergence water-based sprays in Corn and Sorghum may improve weed control. However, under certain conditions, the use of either type of oil may seriously injure the crop. To minimize this possibility, observe the following directions.

**Use one of the following properly emulsified:**

1. A suitable oil concentrate containing at least 1% but not more than 20% suitable emulsifier or surfactant blend.
2. Petroleum-derived oil containing at least 1% suitable emulsifier.

**Note:** In the event of a compatibility problem when mixing oil with this product and water, a compatibility agent such as Compex or Unite should be used. Any of the above oils contaminated with water or other materials can cause compatibility problems and/or crop injury.

**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 one-fourth full with clean water, nitrogen solution or complete liquid 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 the atrazine directly from bag into tank.
6. Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action.

7. Add emulsifiable oil, oil concentrate or tank mix herbicide(s) after this product is thoroughly suspended.
8. Finish filling tank.
9. Empty tank as completely as possible before refilling to prevent buildup of oil or emulsifiable concentrate residue. Maintain agitation to avoid separation of materials.
10. If an oil or 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.

**DIRECTIONS FOR USE  
RESTRICTED USE PESTICIDE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. 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, chemical-resistant gloves made of any waterproof material, chemical-resistant footwear plus socks and protective eyewear.

**ROTATIONAL CROPS (All Uses)**

1. Land treated with this product should not be planted to any crop except Corn or Sorghum until the following year or injury may occur.
2. If this product is applied after June 10, do not rotate with crops other than Corn or Sorghum the next year or injury may occur.
3. In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use this product to control weeds in Corn only when Corn is to follow Corn or a crop of untreated Corn or Sorghum is to precede other rotational crops.
4. In Western MN and Eastern parts of the Dakotas, NE and KS, Corn treated with this product should not be followed with Soybeans if the broadcast rate applied was more than 2.5 pounds per acre (or comparable rate in a band) or injury may occur.
5. Injury may occur to Soybeans planted in North Central IA and South Central MN the year following an application of this product on Canisteo, Harps, Stroden or other soils having a calcareous surface layer.
6. Do not plant Sugar beets, Tobacco, Vegetables (including Dry beans), Spring-seeded small grains or Small-seeded legumes and Grasses the year following application of this product or injury may occur.

**THIS PRODUCT APPLIED ALONE—CORN OR GRAIN SORGHUM  
Pre-plant Surface-Applied, Pre-plant Incorporated or Pre-emergence (or Post-emergence at 2.5 pounds per acre with Oil)**

Broadleaf or Grass Weeds Controlled	
Annual morningglory	Mustard
Barnyardgrass* (Watergrass)	Nightshade
Cocklebur**	Pigweed
Giant foxtail**	Purslane
Green foxtail*	Ragweed
Groundcherry	Sicklepod**
Jimsonweed	Velvetleaf* (Buttonweed)
Kochia	Wild oats
Lambsquarters	Witchgrass* ( <i>Panicum capillare</i> )
Large (Hairy) crabgrass**	Yellow foxtail

\*Partial control only on Medium and Fine textured soils.  
\*\*Partial control only.

**Post-emergence with Emulsifiable Oil or Oil Concentrate in Water (1.5 pounds per acre)**

Broadleaf Weeds Controlled	
Annual morningglory	Pigweed
Cocklebur	Ragweed
Jimsonweed	Smartweed
Lambsquarters	Velvetleaf* (Buttonweed)
Mustard	Wild buckwheat

\*Partial control only on Medium and Fine textured soils.

Where there are State/Local requirements regarding atrazine use (including lower maximum rates and/or set-backs) which are different from the label, the more restrictive/protective requirements must be followed.

Certain states may have established rate limitations within specific geographical areas. Consult your State Lead Pesticide Control Agency for additional information. It is a violation of this label to deviate from State regulations.

**CORN**

This product may be applied either before planting, at-planting or after planting as indicated below.

**PRE-PLANT SURFACE-APPLIED**

**Broadleaf and Grass Control:** Use on Medium and Fine textured soils with minimum-tillage or no-tillage systems only in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, WI and WY. Apply the recommended rate of this product shown in "TABLE 1" up to 30 days prior to planting. On Coarse textured soils, do not apply more than two weeks prior to planting.

If weeds are present at the time of treatment, apply in tank mix combination with a contact herbicide (for example, paraquat or glyphosate). Observe directions for use, precautions and restrictions on the label of the contact herbicide.

**Note:** To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting or weed control will be diminished.

**PRE-PLANT INCORPORATED**

**Broadleaf and Grass Weed Control:** Broadcast in the Spring after plowing at the rate indicated in "TABLE 1". Application may be made before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of this product. Best results have been obtained when this product is applied within two weeks prior to planting.

**PRE-EMERGENCE OR AT-PLANTING**

**Broadleaf and Grass Weed Control:** Apply during or shortly after planting prior to weed emergence at the rate indicated in "TABLE 1".

**POST-EMERGENCE**

**Broadleaf and Grass Weed Control:** Apply before weeds exceed 1.5 inches in height and before Corn exceeds 12 inches in height at rate recommended in "TABLE 1".

TABLE 1 For Control of Broadleaf and Grass Weeds* For All Soil Applications Prior to Crop Emergence
<b>On Highly Erodible Soils**</b> If conservation tillage is practiced leaving at least 30% of the soil covered with plant residue at-planting, apply 2.5 lbs. per acre as a broadcast spray. (If the soil coverage with plant residue is less than 30% at-planting, a maximum of 2 lbs. per acre may be applied.)
<b>On Soils Not Highly Erodible**</b> Apply 2.5 lbs. per acre as a broadcast spray.
*Broadleaf control (Eastern Co, Western KS, NE, NM, OK Panhandle, West TX and Eastern WY): On Sand, Loamy sand, Sandy loam, mild to strongly alkaline soil and all recently leveled soil, apply no more than 1.5 lbs. per acre, either pre-plant or pre-emergence. On other soils in these areas, use above rate for Broadleaf and Grass control. **As defined by the Soil Conservation Service (SCS).

**FOR POST-EMERGENCE APPLICATION**

If no atrazine was applied prior to Corn emergence, apply 2.5 pounds per acre broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds active ingredient (3.1 pounds of this product) per acre per calendar year.

Where there are State/Local requirements regarding atrazine use (including lower maximum rates and/or set-backs) which are different from the label, the more restrictive/protective requirements must be followed. Certain states may have established rate limitations within specific geographical areas. Consult your State Lead Pesticide Control Agency for additional information. It is a violation of this label to deviate from State use regulations.

**POST-EMERGENCE WITH EMULSIFIABLE OIL OR OIL CONCENTRATE IN WATER**—Add the following volume of one of the type oils indicated for aerial or ground application unless the oil label specifies otherwise:

Type of Oil	Ground Application per Acre	Aerial Application per Acre
Oil Concentrate (Crop or Petroleum-derived)	1 qt.	0.5 to 1 qt.
Petroleum-derived oil	1 gal.	2 qts.

**Note:** Crop-derived or petroleum-derived oil concentrates should contain at least 1%, but not more than 20% suitable emulsifier or surfactant blend. Petroleum-derived oils should contain at least 1% suitable emulsifier.

**Broadleaf and Grass Control:** For post-emergence control of those weeds listed under "PRE-PLANT INCORPORATED" and "PRE-EMERGENCE", broadcast 2.5 pounds per acre plus emulsifiable oil or oil concentrate after weed emergence, but before weeds reach 1.5 inches in height and before Corn exceeds 12 inches in height.

**Broadleaf Control:** For post-emergence control of those weeds listed under "POST-EMERGENCE WITH EMULSIFIABLE OIL OR OIL CONCENTRATE IN WATER", broadcast 1.5 pounds per acre plus emulsifiable oil or oil concentrate before Lambsquarters and Pigweed reach 6 inches in height and before all other weeds reach 4 inches in height. A cultivation may be necessary if all weeds are not controlled or if weeds regrow.

**USE PRECAUTIONS FOR APPLICATIONS OF THIS PRODUCT PLUS EMULSIFIABLE OIL IN WATER TO CORN**

1. Do not use oil in sprays of this product when Corn is under stress from prolonged cold, wet weather, poor fertility or other factors or when Corn is wet and succulent from recent rainfall, as crop injury may occur.
2. Do not use oils in sprays when treating inbred lines or any breeding stock as injury may occur.
3. Adding other insecticides, herbicides, liquid fertilizers or other materials is not recommended with this product and emulsifiable oil in water because they cause compatibility problems or crop injury.
4. Store and handle emulsifiable oil carefully. Oil contaminated with even a small amount of water may not emulsify properly when added to the tank.
5. Do not exceed 2.5 pounds active ingredient (3.1 pounds of this product) per acre per calendar year.
6. Post-emergence application to Corn must be made before Corn exceeds 12 inches in height.

**TANK MIXTURE WITH THIS PRODUCT FOR CORN**

This product may be mixed with these herbicides for control of certain Broadleaf and Grass weeds in Corn:

Atachlor	Metolachlor + simazine + glyphosate
Atachlor + glyphosate	Metolachlor + simazine + paraquat
Atachlor + paraquat	Paraquat
Butylate 6.7 E	Propachlor
Metolachlor	Simazine
Metolachlor + glyphosate	Simazine + glyphosate
Metolachlor + paraquat	Simazine + paraquat
Metolachlor + simazine	

Use tank mix directions appearing on the labels of the above herbicides when tank mixing with this product. Observe all precautions and limitations on labeling of products used in a particular tank mix. **Note:** When the labels of the above herbicides refer to Atrazine 80W, use equivalent rates of this product. One pound of 80W equals 0.9 pound of 90DF.

**THIS PRODUCT PLUS SIMAZINE 4L OR SIMAZINE 80W**

In addition to the weeds listed under "THIS PRODUCT APPLIED ALONE - CORN OR GRAIN SORGHUM - Pre-plant Surface - Applied, Pre-plant Incorporated or Pre-emergence", this combination also controls Carpetweed, Crabgrass and Fall panicum. Broadcast tank mix before planting, at-planting or after planting, but before crop and weeds emerge, at rates in "TABLE 2". Use the 1:1 ratio for control of most weeds. Use the 1:2 ratio for expected heavy infestations of Crabgrass and Fall panicum. Cultivate shallowly if weeds develop.

**PRE-PLANT SURFACE-APPLIED**

Use on Medium and Fine textured soils with minimum-tillage or no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, WI and WY.

Apply the recommended rate of this product and simazine shown in "TABLE 2" up to 30 days prior to planting. Applications made less than 30 days prior to planting may be as either a split or single treatment. On Coarse textured soils, do not apply more than 2 weeks prior to planting. Refer to the "THIS PRODUCT ALONE - PRE-PLANT SURFACE-APPLIED" section of the Corn label for additional details. If weeds are present at time of treatment, apply in a tank mix combination with a contact herbicide (for example, paraquat or glyphosate). Observe directions for use, precautions and restrictions on the label of the contact herbicide.

**Note:** To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting or weed control will be diminished.

**PRE-PLANT INCORPORATED:** Apply to the soil and incorporate in the Spring before, during or after final seedbed preparation. Avoid deep incorporation. For best results, apply within 2 weeks prior to planting.

**PRE-EMERGENCE:** Apply during or shortly after planting, but before crop and weeds emerge.

Soil Texture	Broadcast Rate per Acre					
	1:1 Ratio*			1:2 Ratio**		
	This Product	Simazine 80W	Simazine 4L	This Product	Simazine 80W	Simazine 4L
<b>COARSE:</b> Sand, Loamy sand, Sandy loam	1.25 lbs.	1.25 lbs.	2 pts.	0.83 lb.	1.67 lbs.	2.6 pts.
<b>MEDIUM:</b> Loam, Silt loam, Silt, Clay Loam, Sandy clay loam, Silty clay loam, Sandy clay, or Silty clay with low organic matter	1.5 lbs.	1.5 lbs.	2.4 pts.	1 lb.	2 lbs.	3.5 pts.
<b>FINE:</b> 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)	1.8 lbs.	1.8 lbs.	3 pts.	1.2 lbs.	2.4 lbs.	3.84 pts.

\*For control of most weeds  
\*\*For control of expected heavy infestations of Crabgrass and Fall panicum.

Refer to "CORN" sections of this label and to Simazine 4L or Simazine 80W label for further directions, limitations and precautions.

**THIS PRODUCT PLUS SIMAZINE 4L OR 80W PLUS PARAQUAT**

For kill of existing vegetation and residual Weed control where Corn will be planted directly into a cover crop, established sod or in previous crop residues, apply 1.25 to 2.5 pounds of this product plus 2 to 4 pints of Simazine 4L or 1.25 to 2.5 pounds of Simazine 80W plus 1 to 2 pints paraquat per sprayed acre prior to, during or after planting, but before crop emergence. Use the low rates of atrazine and simazine on Light soils and the higher rates on Heavy clay soils. Use 20 to 60 gallons of diluted spray per sprayed acre. Add Surf-Ac® 820 or another non-ionic surfactant at the rate of 8 fluid ounces per 100 gallons of diluted spray. Add the atrazine to the spray tank while agitating, then add the simazine, paraquat and Surf-Ac 820. Continue agitation during application. Use the 2 pints rate of paraquat if existing vegetation is 4 to 6 inches tall. This mixture will not control weeds taller than 6 inches. Refer to paraquat and simazine labels for further limitations and precautions.

**THIS PRODUCT PLUS SIMAZINE 4L OR 80W PLUS GLYPHOSATE**

When applied as recommended under the conditions described, this tank mixture controls many emerged weeds, and gives pre-emergence control of many Annual weeds when Corn will be planted directly into a cover crop, established or in previous crop residues. Apply this tank mixture in 20 to 60 gallons of water per acre immediately before, during or after planting, but before crop emergence. As density of stubble, crop residue or weeds increases, spray gallonage and rate should be increased within the recommended ranges to ensure complete coverage.

**Annual Weeds:** Apply atrazine and simazine to actively growing Grasses and Broadleaf weeds that are 6 inches tall at the rates given in "TABLE 3" plus 1 quart of glyphosate per acre. If the weeds are over 6 inches tall, increase the rate of glyphosate to 1.5 quarts.

**Perennial Weeds:** At normal application rates in minimum-tillage systems, Perennial weeds may not be at the proper stage of growth for control. See the "GENERAL INFORMATION" section of the glyphosate label for the proper stage of growth for Perennial weeds. Apply the atrazine and simazine at the rates given in "TABLE 3" plus 2 to 4 quarts of glyphosate per acre. This combination will provide top kill and reduce competition from many emerged Perennial grasses and Broadleaf weeds.

**Note:** Do not use this tank mix on Sand or Loamy sand soils. Do not exceed 4 quarts of glyphosate per acre in this tank mixture. Not recommended to control Bermudagrass or Johnsongrass in minimum-tillage systems.

Soil Texture	Broadcast Rate per Acre	
	This Product*	Simazine* 4L or 80W
<b>COARSE:</b> Sandy loam only	1.25 lbs.	2 pts. or 1.25 lbs.
<b>MEDIUM:</b> Loam, Silt loam, Silt, Sandy clay loam	1.25 to 1.8 lbs.	2 to 2.75 pts. or 1.25 to 1.75 lbs.
<b>FINE:</b> Silty clay, Loam, Clay loam, Sandy clay, Silty clay, Clay	1.5 to 2 lbs.	2.35 to 3.15 pts. or 1.25 to 2 lbs.

\*Use the higher rate of atrazine and simazine in the recommended ranges in soil with greater than 3% organic matter.

**FOR ALL SOIL APPLICATIONS PRIOR TO CROP EMERGENCE**

**On Highly Erodible Soils\*:** If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at-planting, apply 2.5 pounds per acre as a broadcast spray. If the soil coverage with plant residue is less than 30% at-planting, a maximum of 2 pounds per acre may be applied.

**On Soils Not Highly Erodible\*:** Apply 2.5 pounds per acre as a broadcast spray.

\*As defined by the Soil Conservation Service (SCS)

**USE PRECAUTIONS FOR ALL APPLICATIONS TO CORN**

1. To avoid crop injury and illegal residues do not apply more than 3.1 pounds per acre of this product to Corn in any one year.
2. For best control of Cocklebur and Velvetleaf, the application rate cannot be less than 2 pounds per acre of active ingredient, either alone or in tank mix combination.
3. Following harvest of a treated crop, plow (moldboard or disk-plow) and thoroughly till the soil in the Fall or Spring to minimize possible injury to rotational spring-seeded crops, regardless of the rate used.

**Note: For All Applications To Corn**—Do not graze treated areas or feed treated forage to livestock for 21 days following application or illegal residues may result.

For "POST-EMERGENCE APPLICATIONS PLUS EMULSIFIABLE OIL OR OIL CONCENTRATE", see additional precautions under that section of this label.

**SORGHUM AND SORGHUM-SUDAN HYBRIDS**

(Grain and Forage Types)

Apply before planting, at-planting or after planting. See "CORN" section for weeds controlled.

**PRE-PLANT SURFACE-APPLIED**

**Broadleaf and Grass Control:** Use on Medium and Fine textured soil with minimum-tillage or no-tillage systems only in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, WI and WY. Apply two-thirds the recommended rate of atrazine shown in "TABLE 4" for the soil texture as a split treatment 30 to 45 days prior to planting and the remainder at-planting. Applications made less than 30 days prior to planting may be as either a split or single treatment.

Under dry conditions, irrigation after application is recommended to move atrazine into the soil.

If weeds are present at time of treatment, apply in a tank mix combination with a contact herbicide (for example, paraquat or glyphosate). Observe directions for use, precautions and restrictions on the label of the contact herbicide.

**Note:** To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting or weed control will be diminished.

**PRE-PLANT INCORPORATED**

**Broadleaf and Grass Control:** Broadcast in Spring after plowing at rate in "TABLE 4". Apply before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation. For best results, apply within two weeks prior to planting.

TABLE 4 Pre-Plant Surface, Pre-Plant Incorporated and Pre-Emergence Applications*	
For Broadleaf and Grass Weed Control in Sorghum	
<b>On Highly Erodible Soils**</b>	If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at the time of planting, apply 2.5 lbs. per acre as a broadcast spray. If the soil coverage with plant residue is less than 30% at-planting, a maximum of 2 lbs. per acre may be applied.
<b>On Soils Not Highly Erodible**</b>	Apply 2.5 lbs. per acre as a broadcast spray.
*Do not apply pre-plant in AL, AR, FL, GA, LA, MS, NC, NM, OK, SC, TN or TX. Do not apply pre-emergence in NM, OK or TX, except in Northeast OK and the TX Gulf Coast.	
**As defined by the Soil Conservation Service (SCS)	

**FOR POST-EMERGENCE APPLICATION:** If no atrazine was applied prior to Sorghum emergence, apply 2.5 pounds per acre broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds active ingredient (3.1 pounds of this product) per acre per calendar year.

Where there are State/Local requirements regarding atrazine use (including lower maximum rates and/or set-backs) which are different from the label, the more restrictive/protective requirements must be followed. Certain states may have established rate limitations within specific geographical areas. Consult your State Lead Pesticide Control Agency for additional information. It is a violation of this label to deviate from State use regulations.

In case of planting failures, Sorghum can be replanted into soil previously treated with this product. Do not make a second broadcast application or injury may occur. If this product is applied in a band and Sorghum is replanted in the untreated row middles, this product may be applied in a band to the second planting.

**PRE-EMERGENCE BROADLEAF WEED CONTROL IN FURROW-IRRIGATED BEDDED SORGHUM**

(AZ and CA only): For pre-emergence control of Broadleaf weeds such as Groundcherry, Lambsquarters, Morningglory, Mustard, Pigweed and Purslane, broadcast 1 to 1.5 pounds per acre. Use the lower rate on Coarse textured soils and soils low in organic matter and use the high rate on Fine textured soils and soils high in organic matter. Make application after bed preparation, during or after planting, but before Sorghum and weeds have emerged and before the first furrow irrigation. Several irrigations should follow the application, making sure that all soil is thoroughly wet.

**USE PRECAUTIONS FOR PRE-EMERGENCE APPLICATIONS OF THIS PRODUCT TO FURROW-IRRIGATED BEDDED SORGHUM**

(AZ and CA): To avoid possible Sorghum injury, do not use on Sand or Loamy sand soils or on Sorghum planted in the furrow. Additionally, applications made to Sorghum growing on alkali soils or where cuts, fills or erosions have exposed calcareous or alkali subsoils, may result in crop injury. In case of crop failure, do not replant Sorghum for eight months following application. Corn may be planted immediately.

**POST-EMERGENCE**

**Broadleaf and Grass Weed Control:** Apply before weeds exceed 1.5 inches in height at the rate indicated in "TABLE 5". Application may be made to Sorghum reaching up to 12 inches in height.

TABLE 5 Post-Emergence Broadleaf and Grass Control in Sorghum		
Soil Texture	Minimum Height of Sorghum at Treatment	Broadcast Rate This Product
Sand or Loamy sand	DO NOT USE	
Sandy loam	See directions for Broadleaf and Weed Control below.	
Silt loam to Sandy clay loams	Completely emerged	2.5 to 3 lbs.
Olton and Pullman Clay soils	At least 6 inches high	
Silty clay loams and Heavier soils	Completely emerged	3.1 lbs.
If no atrazine was applied prior to Sorghum emergence, apply 2.5 pounds per acre broadcast apply. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds active ingredient (3.1 pounds of this product) per acre per calendar year.		

**POST-EMERGENCE BROADLEAF WEED CONTROL WITH THIS PRODUCT PLUS EMULSIFIABLE OIL OR OIL CONCENTRATE IN WATER**

Broadcast 1.5 pounds per acre for control of Broadleaf weeds such as Annual morningglory, Cocklebur, Lambsquarters, Mustard, Pigweed, Ragweed, Smartweed and Wild buckwheat. Application should be made before Lambsquarters and Pigweed reach 6 inches in height and before all other weeds reach 4 inches in height. In CO, Western KS, NM, OK, TX and desert regions of AZ and CA, apply when Sorghum is 6 to 12 inches in height, but before it reaches boot stage. In all other areas, apply after Sorghum reaches the three-leaf stage. Add emulsifiable oil at the rate of 1 gallon per acre for ground applications and 0.5 gallon per acre for aerial applications or add 1 quart per acre of oil concentrate for ground application. A cultivation may be necessary if all weeds are not controlled or if re-growth of weeds occurs. For the list of weeds controlled, see "THIS PRODUCT APPLIED ALONE - CORN OR GRAIN SORGHUM" - "POST-EMERGENCE WITH EMULSIFIABLE OIL OR OIL CONCENTRATE IN WATER".

**USE PRECAUTIONS FOR APPLICATION OF THIS PRODUCT PLUS EMULSIFIABLE OIL OR OIL CONCENTRATE IN WATER TO SORGHUM**— See "PRECAUTIONS FOR APPLICATIONS WITH EMULSIFIABLE OIL OR OIL CONCENTRATE IN WATER" in "CORN" section.

**POST-EMERGENCE BROADLEAF WEED CONTROL WITH THIS PRODUCT PLUS SURFACTANT (CO, Western KS, NM, OK, TX and Desert regions of AZ and CA only):** Broadcast 1.5 pounds of this product plus 0.75 to 1.5 pints of surfactant per acre after Sorghum reaches 6 inches in height, but before weeds reach 12 inches in height. Apply only on Sandy loams and Finer textured soils.

**USE PRECAUTIONS FOR ALL APPLICATIONS TO SORGHUM**

1. Heavy rains immediately following application tend to result in excessive concentrations of herbicide in seed furrow, resulting in possible crop injury. Applications to furrow-planted Sorghum should not be made until furrows are leveled (plow-in). Deep planter marks or seed furrows should also be leveled before application.
2. Application made to Sorghum growing under stress caused by minor element deficiency or to Sorghum growing on highly calcareous soils may result in crop injury.
3. Following harvest, plow (moldboard or disk-plow) and thoroughly till the soil in the Fall or Spring to minimize possible injury to Spring-seeded rotational crops, regardless of rate used.
4. Injury may occur if both this herbicide, pre-plant surface, pre-plant incorporated or pre-emergence and an at-planting systemic insecticide applied in-furrow are used.

- 5. Do not apply more than 2.5 pounds of active ingredient (3.1 pounds of this product) per acre per calendar year.
- 6. For all soil applications prior to crop emergence (except for pre-emergence use on bedded Sorghum in AZ and CA), do not apply to Coarse textured soils, i.e., Sand, Loamy sand, Sandy loam or to Medium and Fine textured soils having less than 1% organic matter or injury may occur.
- 7. For post-emergence applications, do not apply to Sand or Loamy sand or injury may occur.

For applications to furrow-irrigated bedded Sorghum in AZ and CA and for post-emergence applications plus emulsifiable oil, see additional precautions under these sections of this label.

**Note:** Do not graze or feed forage from treated areas for 21 days following application or illegal residues may result.

**TANK MIXTURES FOR GRAIN SORGHUM**

**THIS PRODUCT + METOLACHLOR on Grain Sorghum (Cyometrinil-Treated Seed):** This product + metolachlor tank mixture provides control of weeds listed on the Metolachlor label as "METOLACHLOR TANK MIXTURES FOR CORN - ADDITIONAL WEEDS CONTROLLED" and "SPECIAL INSTRUCTIONS" sections. Apply this product + metolachlor pre-plant incorporated or pre-emergence using the appropriate rates from "TABLE 6". Follow the use instructions and precautions on the metolachlor label.

TABLE 6 THIS PRODUCT + Metolachlor - Grain Sorghum*		
Broadcast Rates per Acre		
Soil Texture	Less than 1.5% Organic Matter THIS PRODUCT** + Metolachlor	1.5% Organic Matter or greater THIS PRODUCT + Metolachlor
COARSE: Sand, Loamy sand, Sandy loam	DO NOT USE	DO NOT USE
MEDIUM: Loam, Silt, Silt loam	DO NOT USE	1.5 lbs. + 1.5 pts.
FINE: Silty clay loam, Sandy clay loam, Silty clay, Sandy clay, Clay loam, Clay	1.5 lbs. + 1.5 pts.	1.75 to 2 lbs. + 1.75 to 2 pts.

\*Do not use in NM, OK or TX except in Northeast OK and the TX Gulf Coast areas. Do not apply pre-plant incorporated in AZ or the Imperial Valley of CA.  
 \*\*On highly erodible soils, as defined by the Soil Conservation Service (SCS), if conservation tillage is practiced, leaving at least 30% of soil covered with plant residues at-planting, apply 2.5 pounds per acre as a broadcast spray. If the soil coverage with plant residue is less than 30% at-planting, a maximum of 2 pounds per acre may be applied. On soils not highly erodible, apply 2.5 pounds per acre as a broadcast spray.

**Use Precautions:**

- 1. Applications of atrazine + metolachlor on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may cause Sorghum injury.
- 2. If Sorghum seed is not properly treated with cyometrinil, a treatment of atrazine plus metolachlor will severely injure the crop.
- 3. Under high soil moisture conditions prior to Sorghum emergence, injury may occur following the use of atrazine + metolachlor. The crop will normally outgrow this effect.
- 4. Do not use atrazine + metolachlor on Sorghum grown under dry mulch tillage or injury may occur.

**Rotational Crops:** Refer to the crop rotation instructions on the metolachlor label for metolachlor + atrazine tank mixtures on Corn.

**WINTER WEED CONTROL IN TEXAS**

For post-emergence control of Winter weeds only, such as Annual thistle, Henbit and Seedling dock on Fall-bedded land in the Gulf Coast and Blacklands of TX: Apply 1 to 1.25 pounds per acre post-emergence to the weeds in November or December to land that will be planted to Corn, Grain sorghum or Forage sorghum the following Spring. For best results add a suitable surfactant such as Surf-Ac 820 at the rate of 0.5% of the spray volume, an emulsifiable oil at the rate of 1% of the spray volume or an oil concentrate at the rate of 1 quart per acre.

Normal weed control programs may be used in the following Corn, Grain sorghum or Forage sorghum crop.

**Note:** Do not plant any crops except Corn, Forage sorghum or Grain sorghum the Spring following this treatment or illegal residues may result.

**CHEMICAL FALLOW--THIS PRODUCT ALONE**

**WHEAT-SORGHUM-FALLOW:** This treatment controls annual Broad-leaf and Grass weeds following Wheat harvest and in the following Sorghum crop when grown under minimum-tillage.

Apply 3.75 pounds to Wheat stubble immediately following Wheat harvest. If weeds are present, remove them with a sweep plow or other suitable implement after application or use an approved contact herbicide before or after application of this product. Plant Sorghum into Wheat stubble the following Spring with minimum disturbance of the soil. Use a surface planter or a planter leaving a shallow furrow. If weeds are present at-planting, remove them with a sweep plow or other suitable implement before planting.

For the list of weeds controlled, see "THIS PRODUCT APPLIED ALONE - CORN OR GRAIN SORGHUM" - "Pre-plant Surface-Applied, Pre-plant Incorporated, or Pre-emergence"

**Use Precautions:**

- 1. Use only on Silt loam or Finer textured soil.
- 2. Wheat-Sorghum-Fallow cropping sequence must be followed.
- 3. Do not apply following Sorghum harvest.

**Note:** To avoid illegal residues, do not graze or feed forage from treated area to livestock. To avoid illegal residues and crop injury, do not plant any crop other than those on this label within 18 months following treatment.

**WHEAT-CORN-FALLOW (KS, NE):** This product controls Cheatgrass (Downy brome, Chess), Kochia, Mustard, Pigweed, Russian thistle, Wild lettuce, Wild sunflower and Volunteer wheat during period after Wheat harvest. Weed control may extend into following Corn crop grown under minimum-tillage.

Follow directions for use, notes and precautions in the "Wheat-Sorghum-Fallow" section above, substituting Corn for references to Sorghum.

**WHEAT-FALLOW-WHEAT (CO, KS, MT, ND, NE, SD and WY):** For pre-emergence and control of Cheatgrass (Downy brome, Chess), Common lambsquarters, Field pennycress, Kochia, Mustard, Russian thistle, Wild lettuce and suppression of Volunteer wheat during fallow period of a Wheat-Fallow-Wheat rotation, broadcast 0.6 to 1.25 pounds per acre on all soils except those listed under "PRECAUTIONS". For control of Pigweed and Wild sunflower, use the higher rate. Apply to stubble ground. Treat only once during same fallow period.

**TANK MIXTURES FOR CHEMICAL FALLOW**

**WHEAT-SORGHUM-FALLOW OR WHEAT-CORN-FALLOW (KS, NE)**

**THIS PRODUCT PLUS PARAQUAT:** If weeds are present at application, a tank mix with paraquat may be used. Broadcast 3.75 pounds of this product plus 1 to 2 pints of paraquat in 20 to 60 gallons of water per acre by ground equipment. Add 0.5 to 1 pint of a non-ionic surfactant, such as Surf-Ac 820, per 100 gallons of spray mixture. Add this product to spray tank first and thoroughly mix with water. Then add paraquat followed by surfactant. Use the 2 pints rate of paraquat if weeds are 4 to 6 inches tall. This mixture will not control weeds taller than 6 inches. Apply to stubble ground. Treat only once during same fallow period. Refer to paraquat label for further directions, precautions and limitations.

If weeds are present at application and this product is used alone, use either an approved contact herbicide before or after treatment or tillage after treatment.

Use tillage to control weeds which escape during fallow period. Till before planting. For this product applied alone or in tank mixture with paraquat, plant at least 2 inches deep and 12 months or more after application.

**Precautions:**

- 1. Do not use on Sandy soil.
- 2. Do not treat eroded hillsides, caliche and rocky outcroppings or exposed calcareous subsoil.
- 3. Do not treat soils of the Rosebud and Canyon Series in Western NE and adjoining counties in CO and WY.
- 4. Do not treat soils with calcareous surface layers.
- 5. Avoid spray overlap.

**Note:** Do not graze treated areas within 6 months after application or illegal residues may result.

**AERIAL APPLICATION:** In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 feet using low drift nozzles at a maximum pressure of 40 psi and restrict application to periods when wind speed does not exceed 10 mph.

To assure that spray will not adversely affect adjacent sensitive non-target plants, apply this product alone by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

**ROADSIDES**

To control certain annual Weeds in established perennial Grasses along roadsides in CO, KS, MT, ND, NE, SD, and WY, including Cheatgrass (Downy brome, Chess), Common (Annual) broomweed, Little barley, Medusahead, Sagewort and Tumble mustard, broadcast 1.25 pounds per acre in a minimum of 10 gallons of water by ground equipment in the Fall before ground freezes or after thawing in the Spring, but before the established Grasses green-up and before weeds emerge. Examples of desirable established Grasses include Big bluestem, Bluegrama, Bromegrass, Buffalograss, Crested wheatgrass, Indiangrass, Little bluestem, Side-oats grama, Switchgrass and Western wheatgrass. Apply only once per year. Temporary discoloration or other form of injury to the desirable perennial Grasses may occur following application.

**Note:** To avoid illegal residues:

- 1. Do not cut or feed roadside Grass hay.
- 2. Do not allow livestock to graze treated areas.

**SUGARCANE**

For control of many Broadleaf and Grass weeds, such as Amaranths, Crabgrass, Fireweed, Flora's paintbrush, Foxtail, Junglerice, Wiregrass and similar plants, broadcast 2.5 to 5 lbs. per acre at time of planting or ratooning, but before the cane emerges.

Broadcast aerially in a minimum of 5 gallons of spray per acre, or broadcast or band by ground equipment in a minimum of 20 gallons per acre, unless indicated otherwise. One additional application may be made over the cane as it emerges and two additional applications

may be made interline after emergence, as a directed spray. Repeat treatments, where needed, may be applied broadcast, band or interline as suggested with the final application being prior to "close-in." Do not exceed the rate of herbicide suggested for any one crop of Sugarcane. Note: Where high rates of atrazine are used alone, apply in a minimum of 1 quart of water for each pound of this product applied per acre.

**AERIAL APPLICATION:** In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 feet using low drift nozzles at a maximum pressure of 40 psi and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive non-target plants, apply this product alone by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

**FLORIDA**

For control of emerged Pellitory weeds (Artillery weed), apply 0.5 to 0.75 pound per acre in 40 gallons of water per acre as a directed spray, by ground equipment prior to "close-in". Add 2 quarts of surfactant for each 50 gallons of spray and be sure Weed foliage is thoroughly covered.

For control of Alexandergrass, Large crabgrass, Pellitory weed (Artillery weed) and Spiny amaranth use one of the following methods at-planting or ratooning:

1. Apply 5 pounds per acre pre-emergence. Follow with one or two applications, as needed, post-emergence to Sugarcane and weeds, at 2.5 pounds per acre. Treat before weeds exceed 1.5 inches in height.
2. Apply 1 to 3 times, as needed, at 2.5 pounds per acre post-emergence to Sugarcane and weeds. Treat before weeds exceed 1.5 inches in height.

**LOUISIANA**

For control of annual Weeds during the Summer fallow period, apply 2.5 pounds per acre to weed-free beds immediately after bed formation. Follow normal weed control after planting.

**Precautions To Avoid Crop Injury:**

1. Do not apply more than 12.5 pounds per acre to any one crop of Sugarcane.
2. If making 2.5 pounds per acre application during Summer fallow period do not exceed 10 pounds per acre during remainder of the growing season or illegal residues may result.

**TEXAS**

Use this product for control of Barnyardgrass, Pigweed, Purslane and Sunflower in plant or ratoon Sugarcane.

Apply 5 pounds per acre of this product pre-emergence. Follow with one or two applications, as needed, at 3.75 pounds per acre post-emergence to Sugarcane and Weeds.

For best results, when weeds are emerged, add a non-ionic surfactant, such as Surf-Ac 820, at a concentration of 2 quarts per 100 gallons to the spray and apply before weeds exceed 1.5 inches in height.

**Use Precautions:**

1. Do not apply this product after "close-in".
2. Do not apply more than 12.5 pounds of this product to any one crop of cane.
3. Injury to Sugarcane may occur when under moisture stress, when soil is of low absorptive capacity or when land is first cropped to Sugarcane.

**CONIFERS**

For control of annual Broadleaf and Grass weeds prior to transplanting, after transplanting or in established Conifers (including Austrian pine, Bishop pine, Blue spruce, Douglas fir, Grand fir, Jeffrey pine, Knobcone pine, Loblolly pine [Shore pine], Monterey pine, Noble fir, Ponderosa pine, Scotch pine, Slash pine, Sitka spruce and White fir), broadcast 2.5 to 5 pounds in a minimum of 5 gallons of water per acre by air or 10 gallons by ground before weeds are 1.5 inches tall. Apply to established trees between Fall and early Spring while trees are dormant. For applications prior to transplanting, allow sufficient precipitation to activate atrazine before transplanting. In areas where Spring and Summer rainfall is inadequate to activate atrazine, apply during Fall prior to Spring transplanting.

For the list of weeds controlled, see "THIS PRODUCT - APPLIED ALONE - CORN OR GRAIN SORGHUM" - "Pre-plant Surface Applied, Pre-plant Incorporated or Pre-emergence".

**QUACKGRASS CONTROL:** Broadcast 5 pounds in a minimum of 5 gallons of water per acre by air or 10 gallons by ground between Fall and early Spring while trees are dormant and before Quackgrass is more than 1.5 inches tall.

**Use Precautions:**

Temporary injury to trees may occur following use of atrazine on Coarse textured soil. To avoid injury:

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

**AERIAL APPLICATION:** In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 feet above vegetation, using low drift nozzles at a maximum pressure of 40 psi and restrict application to periods when wind speed does not exceed 10

mph. To assure that spray will not adversely affect adjacent sensitive non-target plants, apply this product by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

**ST. AUGUSTINE GRASS, CENTIPEDEGRASS AND DORMANT BERMUDAGRASS**

This product controls Annual bluegrass, Florida betony, Spurweed and many other problem weeds in home lawn, ornamental and recreational turf and other non-crop areas such as highway right-of-ways and similar areas. This product may be applied with any pump-up or compressed air type sprayer or with a hose-on type sprayer. This product will control both emerged weeds and weeds from seeds. Rain or watering within 2 to 3 days of application may decrease the effectiveness on emerged weeds. However, for control of weeds from seeds, rainfall or watering is necessary within 7 to 10 days after treatment.

**Note:** Do not apply within the active root zone of Vegetables or desirable Ornamental plants such as Azaleas, Boxwoods, Camellias, etc. However, treatments with this product should not normally cause injury to medium or large shrubs or trees in the landscape. Do not plant any crop (Flower or Vegetable gardens) to treated areas for 18 months or injury may result.

**WEEDS CONTROLLED OR SUPPRESSED**

Annual bluegrass (*Poa annua*), Chickweed (Common and Mouseear), Crabgrass, Cransbill, Cudweed, Dichondra, Florida betony, Henbit, Knotweed, Lespedeza, Moneywort, Mustards, Narrowleaf vetch, Parsley-piert, Sandspur, Smutgrass, Spurge, Spurweed, Swinecrest, Woodsorrel and various annual Clovers.

**CONTROL OF ANNUAL WEEDS IN BERMUDAGRASS ON COUNTY ROAD RIGHT-OF-WAYS**

Apply 2.5 to 5 pounds of this product in 40 to 80 gallons of water per acre to control Annual bluegrass, Black nightshade, Cheat, Cocklebur, Common hop clover, Broomweed (Annual), Crabgrass, Downy brome, Japanese brome, Foxtails, Horseweed, Kochia, Lambsquarters, Little barley, Marestail, Mustard, Pigweed (Carelessweed), Poorjoe, Ragweed, Russian thistle, Smartweed, Smutgrass, Sunflower, Wild lettuce and Wild oats. Use the lower rates on Coarse textured soils having lower organic matter percentages and the higher rates on Fine textured soils having higher organic matter percentages. For control of Summer annual weeds, apply this product in the Spring before weeds emerge. To control Winter annual weeds, apply this product in the Fall before weeds emerge or in the early Spring before active growth resumes.

**Note:** Do not cut for hay or graze treated areas within 3 months following an application. Apply only once per year. Do not seed or transplant species which are sensitive to this product within 18 months after application. Do not use on right-of-ways where preservation of Wildflowers is desired. This product may cause injury to Wildflowers.

**TIMING OF APPLICATION**

The timing of applications to achieve maximum control may vary quite a bit with different weed species. The following application times are suggested for certain problem weeds.

**Spurweed:** The best control of Spurweed can be obtained by applying this product when Spurweed has emerged (December and January).

**Florida betony:** This weed emerges in the Fall so an application of this product in mid to late October followed with a second application in mid to late February would give best control.

**Dichondra, Moneywort:** The best control of these weeds can be obtained by applying this product in early April followed with a second application in July. Do not apply to growing Bermudagrass.

Applications for Florida betony or Spurweed generally will give control or suppression of the other weeds listed. However, as a general rule, this product will give the best control when applied to young, tender weeds or just prior to weed emergence.

**ST. AUGUSTINE AND CENTIPEDEGRASSES**

This product may be applied to established Centipedegrasses and St. Augustine grasses, during both the dormant and the growing season. Best results are usually obtained in the early Spring or dormant periods when weeds are small or have not emerged. Follow rates listed.

**DORMANT BERMUDAGRASS**

This product may be applied to Bermudagrass during the dormant season only. Applications to Bermudagrass during the growing season will cause injury. Follow rates below.

**RATE OF APPLICATION**

Determine the total area to be sprayed and base rate of application on the chart below. Avoid overlapping spray pattern while treating.

Area to be Treated	Amount of This Product
500 sq. ft.	1.5 tbsps.
1,000 sq. ft.	3 tbsps. (1.5 ozs.)
3,000 sq. ft.	5.6 tbsps. (2.8 ozs.)
5,450 sq. ft.	0.3 lb.
10,900 sq. ft. (0.25 acre)	0.6 lb.
1 acre	2.5 lbs.



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

\*In states other than FL. For use on Turfgrass for sod in FL, see "TURFGRASSES FOR SOD (FL ONLY)" section below.

**Bermudagrass, Centipedegrass, St. Augustine grass and Zoysiagrass:** 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 pre-emergence portion of the "THIS PRODUCT APPLIED ALONE—CORN OR GRAIN SORGHUM—Pre-plant Surface-Applied, or Pre-plant Incorporated, or Pre-emergence" 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 1.25 pounds per acre. Use 2.5 pounds per acre for control of the other weeds named above. Do not exceed 1.25 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 1.25 pounds per acre at least 30 days after the previous application, but not after April 15. However, do not make more than 2 applications of this product per year.

**Use 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.

**Note:** Do not graze or feed turf clippings to animals or illegal residues may result.

**TURFGRASSES FOR SOD (FL ONLY)**

**St. Augustine grass, Centipedegrass and Zoysiagrass:** Broadcast 2.5 to 5 pounds per acre according to soil texture to control those weeds listed under "THIS PRODUCT APPLIED ALONE—CORN OR GRAIN SORGHUM—Pre-plant Surface-Applied, or Pre-plant Incorporated, or Pre-emergence".

Muck or Peat	5 lbs.	OLD BEDS: Within 2 days after lifting sod.
		NEW BEDS: 3 to 4 days after sprigging or plugging.
Sandy soil	2.5 lbs.	OLD BEDS: Within 2 days after lifting sod.
		NEW BEDS: 7 to 10 days after sprigging or plugging.

If weeds regrow, apply an additional 2.5 pounds per acre on Muck or Peat or 1.25 lbs. per acre on Sandy soil.

**Use 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.

**MACADAMIA NUTS**

For pre-emergence control of many Broadleaf and Grass weeds, including Crabgrass, Fireweed, Flora's paintbrush, Foxtail, Spanishneedles and Wiregrass, broadcast 2.5 to 5 pounds per acre before harvest and before weeds emerge. Repeat as necessary. Do not spray when Nuts are on ground during harvest period. Do not apply by air.

**GUAVA**

Use only on established plantings which are at least 18 months old. Apply as a directed spray at 2.5 to 5 pounds per acre of this product in 20 to 50 gallons of spray mix pre-emergence or early post-emergence to weeds. When applying post-emergence, the use of a surfactant and greater spray volume (80 to 100 gallons of spray mix per acre) may enhance weed control.

This product controls many annual Broadleaf and Grass weeds, including Fireweed, Purslane, Scarlet pimpernel, Sowthistle and Spanishneedles.

**Notes To Avoid Illegal Residues:**

1. Do not allow spray to contact foliage or fruit.
2. Do not apply more frequently than at 4-month intervals.
3. Do not apply more than 10 pounds of this product per year.

**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 container tightly sealed when not in use. Do not allow bags to become wet or store in a damp, humid area. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Store in original container only. If the contents are leaking or material is spilled, follow these steps:

1. Collect and place in suitable containers for disposal.
2. Wash area with 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 an 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.

**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.