

19713-6

08/25/2004

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

AUG 25 2004

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Ms. Luz Chan  
Drexel Chemical Company  
1700 Channel Avenue  
PO Box 13327  
Memphis, TN 38113-0327

Dear Ms. Chan:

Subject: Atrazine 80  
EPA Registration Number 19713-6  
Application dated July 12, 2004  
Amended label per Atrazine MOA

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable, provided you make the following changes before you release the product for shipment.

- 1) Under the Environmental Hazards section, change the subheading "Tiled Fields Containing Standpipes" to "Tile-Outletted Fields Containing Standpipes."
- 2) Add the statement "When tank-mixing or sequentially applying atrazine or products containing atrazine to crops other than corn or sorghum, the total pounds of atrazine (lbs a.i./A) must not exceed the specific seasonal rate limits as noted in the use directions" to the section DIRECTIONS FOR USE.
- 3) Remove "(3.1 lbs of this product [1 pak per 8 acres])" from the statements "When tank-mixing or sequentially applying atrazine or products containing atrazine to corn or sorghum, the total pounds of atrazine applied must not exceed 2.5 pounds (3.1 lbs of this product [1 pak per 8 acres]) per acre per year." You would not be able to put 3.1 lbs of your product PLUS any amount tank mixed without exceeding the use restrictions.
- 4) Under the use directions for GUAVA, change the statement "Do not apply more than 10 pounds [1 pak per 2.5 acres] per year" to "Do not apply more than 8 pounds active ingredient per year."
- 5) Under the use directions for MACADAMIA NUTS, add the following restriction, "Do not apply more than 4 pounds active ingredient per acre for any application."
- 6) Under the use precautions and restrictions for sod, change the statement "Do not apply 6 lbs a.i. (7.5 lbs of this product [3 paks per 10 acres]) per year" to "Do not apply more than 6 lbs a.i. (7.5 lbs of this product [3 paks per 10 acres]) per year."

7) Add the following restriction to the use precautions and restrictions section for Conservation Reserve Program Uses: "Do not make more than one application per year."

8) Add the statement "Do not apply more than 1.0 pounds active ingredient per acre for any application." in the rights-of-way use section.

9) Add "for any application" to "Do not apply more than 1 pound a.i./A" to the use precautions and restrictions for Roadsides.

10) Add "10 pounds active ingredient" to the statement "Do not apply more than \_\_\_\_\_ (12.5 pounds of this product [1 pak per 2 acres]) per acre per year" under the use precautions and restrictions for SUGARCANE.

11) Under the section FOR POST-EMERGENCE APPLICATION, change the statement "If no atrazine was applied prior to Corn emergence, apply a maximum of 2.5 pounds per acre...." to "If no atrazine was applied prior to Corn emergence, apply a maximum of 2 pounds *active ingredient* per acre....", and remove the [1 pak per 10 acres] statement. Also, in the same section, 3.1 pounds of this product is listed equal to [1 pak per 10 acres]. This is incorrect. 1 pak per 10 acres is equal to 2.5 lbs this product, or 2.0 lbs active ingredient. Change to [1 pak per 8 acres].

12) Tables 1 and 4 detailing Control of Broadleaf and Grass weeds for all soil applications prior to crop emergence for both CORN and SORGHUM has INCORRECT rates. Also, the exact language is repeated under table 3. Remove all this language and replace with the following language taken from the IRED:

"Apply a maximum of 2.0 lb a.i./A as a single preemergence application on soils that are not highly erodible or on highly erodible soils if at least 30% of the soil is covered with plant residues; or Apply a maximum of 1.6 lb a.i./A as a single preemergence application on highly erodible soils if < 30% of the surface is covered with plant residues; or 2.0 lb a.i./A if only applied postemergence."

**OR**

insert "of this product" after each rate, and also state the rate in a.i./A. For example, "If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues-at-planting, apply a maximum of 2.5 pounds OF THIS PRODUCT (2 pounds a.i./A)....."

13) Under the section FOR POST-EMERGENCE APPLICATION (Broadleaf and grass control) for sorghum, change the statement from "If no atrazine was applied prior to Sorghum emergence, apply a maximum of 2.5 pounds per acre [1 pak per 10 acres] broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds (3.1 pounds of this product [1 pak per 8 acres]."

to

"If no atrazine was applied prior to Sorghum emergence, apply a maximum of **2 lbs a.i per acre [2.5 pounds per acre OF THIS PRODUCT** [1 pak per 10 acres]] broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds **a.i. per acre per calendar year** [3.1 pounds of this product [1 pak per 8 acres]."

14) Throughout the **ENTIRE** label, please define the rates "X pounds per acre" more clearly by stating either "X pounds *active ingredient* per acre" or "X pounds *of this product* per acre"

15) On table 5, the rates listed for sorghum are 2.5 to 3.1 pounds of this product, which equals 2 to 2.5 pounds active ingredient. All rates above 2.0 lbs active ingredient exceed the maximum single application rate. Reduce the rates accordingly.

16) State under the ingredient statement how many pounds active ingredient is in each water soluble package. For example "One water-soluble package contains 25lbs product(20 lbs active ingredient).

17) On #5 under Use Precautions For Applications Of This Product Plus Emulsifiable Oil or Oil Concentrate In Water To Corn, and under the section **USE PRECAUTIONS AND RESTRICTIONS FOR ALL APPLICATIONS TO SORGHUM**, add the statement "Do not exceed 2.0 pounds active ingredient (2.5 pounds of this product) per acre per application"

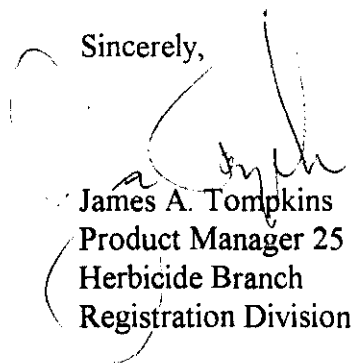
18) Under the sections **CHEMICAL FALLOW-THIS PRODUCT ALONE** and **TANK MIXTURES FOR CHEMICAL FALLOW**, the rate listed (3.75 pounds of this product (i.e. 3 lbs active ingredient) is over the maximum allowed rate of 2.25 lbs active ingredient per year for any application. Reduce this rate accordingly.

19) Under the tank mix directions for corn for "This product plus simazine 4L or 80W plus glyphosate," further clarify the product glyphosate by adding what % active ingredient or the product registration number you are referring to when you state how many quarts of glyphosate to apply.

Submit three (3) copies of final printed labeling incorporating the above changes before you release the products for shipment. Amended labeling will supercede all previously accepted ones. A stamped copy of labeling is enclosed for your records.

If you have any questions, please contact Hope Johnson at 703-305-5410.

Sincerely,



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

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# RESTRICTED USE PESTICIDE

(Ground and Surface Water Concerns)

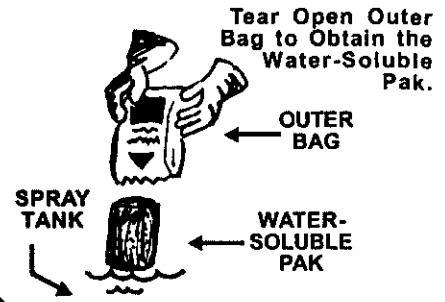
For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.  
This product is a Restricted Use Herbicide due to ground and surface water concerns. Users must read and follow all precautionary 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

AUG 25 2004

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 .....	78.5%
Related Compounds: .....	1.5%
OTHER INGREDIENTS: .....	20.0%
TOTAL: .....	100.0%

## KEEP OUT OF REACH OF CHILDREN CAUTION

See FIRST AID Below

EPA Reg. No. 19713-6  
EPA Est. No. 19713-MS-1

Net Contents: 25 lbs.  
Water-Soluble Package

### FIRST AID

#### IF SWALLOWED:

- 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.

#### IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.

#### IF IN EYES:

- 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 Information Center at 1-800-858-7378.

**NOTE TO PHYSICIAN:** 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 polyethylene or polyvinyl chloride. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

**Applicators using spray equipment mounted on their backs must wear:** Coveralls over long-sleeved shirt and long pants, chemical-resistant gloves such as polyethylene or polyvinyl chloride and chemical-resistant footwear plus socks.

**Mixers, loaders, applicators, flaggers, and other handlers must wear:** Long-sleeved shirt and long pants, chemical-resistant gloves such as polyethylene or polyvinyl chloride, shoes plus socks, and chemical-resistant apron when mixing/loading, cleaning up spills, cleaning equipment, or otherwise exposed to the concentrate.

See engineering controls for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

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.

### ENGINEERING CONTROLS

Water-soluble packets when used correctly qualify as a closed mixing/loading system under the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240(d)(4)].

**Mixers and loaders using water-soluble packets must:** Wear the personal protective equipment required on this labeling for mixers and loaders, and be provided and have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown, chemical-resistant footwear.

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)].

Pilots must wear the PPE required on this labeling for applicators, however, they need not wear chemical-resistant gloves when using an enclosed cockpit.

Flaggers supporting aerial applications must use an enclosed cab that meets the definition on the WPS for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection.

When applicators use enclosed cabs in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Manufactured By:

**Drexel Chemical Company**

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

SINCE 1972

### 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 product must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product must 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. This product must not be mixed/loaded or used within 50 feet of all wells including abandoned wells, drainage wells and sinkholes. Operations that involve mixing, loading, rinsing or washing of this product into or from pesticide handling or application equipment or containers within 50 ft. of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading sites. Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed. This pesticide is toxic to aquatic invertebrates. 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 apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

### TILED FIELDS 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 fields.
- 2) Apply this product to the entire tile-outletted field and immediately incorporate it to a depth of 2 to 3 inches in the entire tile-outletted field.
- 3) Apply this product to the entire tile-outletted 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 and 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. 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. 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 moisture 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-corrosive to equipment and metal surfaces, has low electrical conductivity and is non-flammable. 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 THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY OR ILLEGAL RESIDUES.**

Do not apply this product through any type of irrigation system.

### SPRAY DRIFT MANAGEMENT

Avoiding spray at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed three-fourths the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed. The applicator should be familiar with and take into account the information covered in the **Aerial Drift Reduction Advisory Information** section below.

### Aerial Drift Reduction Advisory Information Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity, and Temperature Inversions**).

### Controlling Droplet Size

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

### Boom Length

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

### Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

### Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc).

### Wind

Drift potential is lowest between speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.

**Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

### Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions**

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas**

This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive area).

**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:

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

**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. Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

**THIS PRODUCT IN WATER OR 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. 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. Drop the unopened pack of this product directly into the 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 WATER-SOLUBLE BAGS**

Paks containing this product are water-soluble. Do not allow pak to become wet prior to adding to the spray tank. Do not handle paks with wet hands. To prepare the spray mixture, drop the required number of unopened paks into spray tank while filling with the appropriate amount of water. Operate the agitator while mixing. Depending on the water temperature and the degree of agitation, the paks should be completely dissolved in approximately 5 minutes from the time they are added to the water. Use the specified dosage of this product in the amount of water necessary to give complete coverage. Determine the total amount to be added to the spray tank based on the rates in the "CROP" section.

**Note:** Products containing boron and/or fertilizers will prevent the water-soluble packet from dissolving. Boron and/or fertilizer products must only be added after packet(s) have completely dissolved.

**DIRECTIONS FOR USE  
RESTRICTED USE PESTICIDE**

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

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through [www.atrazine-watershed.info](http://www.atrazine-watershed.info), or 1-866-365-3014. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Drexel Chemical Company for a refund.

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. Do not apply this product through any type of irrigation system. 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. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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, and shoes plus socks.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses. Do not enter, or allow others to enter, treated areas until sprays have dried.

**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 only when Corn or Sorghum is to follow Corn or Sorghum or when 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 to Soybeans may occur.
5. Injury may occur to Soybeans planted the year following an application of this product on 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 [1 pak per 10 acres] 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 [3 paks per 50 acres])**

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 45 days prior to planting. If an unsatisfactory length of weed control results from adverse environmental conditions following early treatment, a follow-up application of an appropriately labeled herbicide may be used. If the follow-up treatment includes atrazine, do not exceed the labeled rate for Corn indicated in "TABLE 1". 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. Avoid deep incorporation of this product. For best results, apply 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 a maximum of 2.5 pounds per acre [1 pak per 10 acres] as a single broadcast spray. If the soil coverage with plant residue is less than 30% at-planting, a maximum of 2 pounds per acre [1 pak per 12.5 acres] may be applied.
<b>On Soils Not Highly Erodible**</b>	Apply a maximum of 2.5 pounds per acre [1 pak per 10 acres] as a single broadcast spray.
*Broadleaf control (Eastern Co, Western KS, Western 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 pounds per acre [3 paks per 50 acres], 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 a maximum of 2.5 pounds per acre [1 pak per 10 acres] broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds (3.1 pounds of this product [1 pak per 10 acres]) 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 [1 pak per 10 acres] 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 [3 paks per 50 acres] 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 OR OIL CONCENTRATE 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 because they may cause compatibility problems or crop injury.
4. Store and handle emulsifiable oil and oil concentrate 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 [1 pak per 8 acres]) 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:

Alachlor	Metolachlor + simazine + glyphosate
Alachlor + glyphosate	Metolachlor + simazine + paraquat
Alachlor + 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. When tank-mixing or sequentially applying atrazine or products containing atrazine to Corn the total pounds of atrazine applied (lbs. a.i./A) must not exceed 2.5 pounds (3.1 lbs. of this product [1 pak per 8 acres]) per acre per year.

**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 45 days prior to planting. 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.

TABLE 2 Tank Mixes with Simazine 4L or 80W on Corn						
Soil Texture	Broadcast Rate per Acre					
	1:1 Ratio*			1:2 Ratio**		
	This Product	Simazine 80W †	Simazine 4L	This Product	Simazine 80W †	Simazine 4L
COARSE: Sand, Loamy sand, Sandy loam	1.25 lbs. [1 pak per 20 acres]	1.25 lbs.	2 pts.	0.83 lb. [1 pak per 1.2 acres]	1.67 lbs.	2.6 pts.
MEDIUM: Loam, Silt loam, Silt, Clay loam, Sandy clay loam, Silty clay loam, Sandy clay, or Silty clay with low organic matter	1.5 lbs. [3 paks per 50 acres]	1.5 lbs.	2.4 pts.	1 lb. [1 pak per 25 acres]	2 lbs.	3.5 pts.
FINE: 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. [4 paks per 55.5 acres]	1.8 lbs.	3 pts.	1.2 lbs. [3 paks per 62.5 acres]	2.4 lbs.	3.84 pts.

\*For control of most weeds.  
 \*\*For control of expected heavy infestations of Crabgrass and Fall panicum.  
 † When using Simazine 90DF, use equivalent rates. One pound of Simazine 80W equals 0.9 pound of Simazine 90DF.

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 [1 pak per 10 to 20 acres] plus 2 to 4 pints of Simazine 4L or 1.25 to 2.5 pounds of Simazine 80W or 1.1 to 2.2 pounds of Simazine 90DF plus a suitable amount of 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 this product to the spray tank while agitating, then add the simazine, paraquat and Surf-Ac 820. Continue agitation during application. Use the higher 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.



**TABLE 3**  
**This Product Plus Simazine 4L or 80W**  
**for Mixture with Glyphosate**

Soil Texture	Broadcast Rate per Acre	
	This Product*	Simazine* 4L or 80W
COARSE: Sandy loam only	1.25 lbs. [1 pak 20 acres]	2 pts. or 1.25 lbs.
MEDIUM: Loam, Silt loam, Silt, Sandy clay loam	1.25 to 1.8 lbs. [4 paks 55.5 to 80 acres]	2 to 2.75 pts. or 1.25 to 1.75 lbs.
FINE: Silty clay, Loam, Clay loam, Sandy clay, Silty clay, Clay	1.5 to 2 lbs. [3 paks 37.5 to 50 acres]	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 a maximum of 2.5 pounds per acre [1 pak per 10 acres] as a single broadcast spray. If the soil coverage with plant residue is less than 30% at-planting, a maximum of 2 pounds per acre [1 pak per 12.5 acres] may be applied.

**On Soils Not Highly Erodible\*:** Apply a maximum of 2.5 pounds per acre [1 pak per 10 acres] as a single broadcast spray.

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

**USE PRECAUTIONS AND RESTRICTIONS FOR ALL APPLICATIONS TO CORN**

- To avoid crop injury and illegal residues, do not apply more than 3.1 pounds per acre of this product [1 pak per 8 acres] to Corn in any one year.
- When tank-mixing or sequentially applying atrazine or products containing atrazine to Corn the total pounds of atrazine applied (lbs. a.i./A) must not exceed 2.5 pounds (3.1 lbs. of this product [1 pak per 8 acres]) per acre per year.
- For best control of Cocklebur and Velvetleaf, the application rate cannot be less than 2 pounds per acre of active ingredient (2.5 lbs. of this product [1 pak per 10 acres]), either alone or in tank mix combination.
- 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.
- For Field corn do not harvest for forage within 60 days of application. For Sweet corn, do not harvest forage within 45 days of application.

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 the recommended rate of this product shown in "TABLE 4" up to 45 days prior to planting. If an unsatisfactory length of weed control results from adverse environmental conditions following early treatment, a follow-up application of an appropriately labeled herbicide may be used. If the follow-up treatment includes atrazine, do not exceed the labeled rate for Corn indicated in "TABLE 1".

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.

**PRE-EMERGENCE OR AT-PLANTING (Broadleaf and grass control):** Apply during or shortly after planting, but prior to weed or crop emergence at rate shown in "TABLE 4".

**TABLE 4**  
**Pre-Plant Surface, Pre-Plant Incorporated**  
**and Pre-Emergence or At-Planting Applications\***

**For Broadleaf and Grass Weed Control in Sorghum**

**On Highly Erodible Soils\*\***  
If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at the time of planting, apply a maximum of 2.5 pounds per acre [1 pak per 10 acres] as a single broadcast spray. If the soil coverage with plant residue is less than 30% at-planting, a maximum of 2 pounds per acre [1 pak per 12.5 acres] may be applied.

**On Soils Not Highly Erodible\*\***  
Apply a maximum of 2.5 pounds per acre [1 pak per 10 acres] as a single 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, and Blackland areas.  
\*\*As defined by the Soil Conservation Service (SCS)

**FOR POST-EMERGENCE APPLICATION (Broadleaf and grass control):** Apply before weeds exceed 1.5 inches in height and before Sorghum exceeds 12 inches in height. If no atrazine was applied prior to Sorghum emergence, apply a maximum of 2.5 pounds per acre [1 pak per 10 acres] broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds (3.1 pounds of this product [1 pak per 8 acres]) 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 or Corn 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 or Corn is replanted in the untreated row middles, this product may be applied in a band to the second planting, provided the maximum application rate of 2.5 pounds active ingredient (3.1 lbs. of this product [1 pak per 8 acres]) per acre per calendar year is not exceeded.

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

(AZ and CA only): For pre-emergence control of many Broadleaf weeds, broadcast 1 to 1.5 pounds per acre [3 paks per 50 to 75 acres]. Make application after bed preparation, during or after planting, but before Sorghum and weeds have emerged and before the first furrow irrigation. Several regular 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. [3 paks per 25 to 30 acres]
Olton and Pullman Clay soils	At least 6 inches high	
Silty clay loams and Heavier soils	Completely emerged	3.1 lbs. [1 pak per 8 acres]

If no atrazine was applied prior to Sorghum emergence, apply 2.5 pounds per acre [1 pak per 10 acres] 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 [1 pak per 8 acres]) 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 [3 paks per 50 acres] for control of many Broadleaf weeds. 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 but before it exceeds 12 inches in height. 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 regrowth 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 [3 paks per 50 acres] plus 0.75 to 1.5 pints of surfactant per acre after Sorghum reaches 6 inches in height, but before weeds reach 1.5 inches in height. Apply only on Sandy loams and Finer textured soils.

**USE PRECAUTIONS AND RESTRICTIONS FOR ALL APPLICATIONS TO SORGHUM**

1. Heavy rains immediately following application tend to cause 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 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 [1 pak per 8 acres]) 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.
8. Do not harvest for forage within 60 days of a pre-emergence application and 45 days of a post-emergent application.

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.

**TANK MIXTURES FOR GRAIN SORGHUM**

**THIS PRODUCT + METOLACHLOR on Grain Sorghum (Cyometrinll-Treated Seed):** This product + metolachlor tank mixture provides control of weeds listed on the Metolachlor label and this label. Use instructions, precautions and limitations on the metolachlor label. When tank-mixing or sequentially applying atrazine or products containing atrazine to Corn or Sorghum, the total pounds of atrazine applied (lbs. a.i./A) must not exceed 2.5 pounds (3.1 lbs. of this product [1 pak per 8 acres]) per acre per year.

**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 [1 pak per 20 to 25 acres] 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.

**USE PRECAUTION AND RESTRICTION**

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 Broadleaf and Grass weeds following Wheat harvest and in the following Sorghum crop when grown under minimum-tillage.

Apply 3.75 pounds[3 paks per 20 acres] 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 AND RESTRICTIONS**

1. Use only on Silt loam or Fine-textured soil or crop injury may result.
2. Wheat-Sorghum-Fallow cropping sequence must be followed.
3. Do not apply following Sorghum harvest.
4. Only one application is allowed per season for all chemical fallow applications.
5. To avoid illegal residues, do not graze or feed forage from treated areas to livestock.
6. 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 (CO, KS, ND, NE, SD, WY):** 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.

On soils in ND and SD with a pH greater than 7.5, do not exceed 1.5 lbs. a.i. per acre (1.9 lbs. of this product/A [3 paks per 39.5 acres]) for any application. For soils with a pH less than 7.5 in ND and SD, apply 1 to 2 lbs a.i. (1.25 to 2.5 lbs. of this product [1 pak per 10 to 20 acres]) per acre. Use the higher rate on fine-textured soils, and where heavy weed infestations are expected, use the lower rate on coarse-textured soils and where light weed infestations are expected. Do not apply more than 2 pounds a.i. (2.5 lbs. of this product [1 pak per 10 acres]) per acre for any application. For all other locations, do not apply more than 2.25 pounds a.i. (2.8 lbs. of this product [1 pak per 9 acres]) per acre for any application. In the event grasses are present the following Spring, use a grass herbicide registered for use on Corn.

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

Make only one application per year.

**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 [1 pak per 20 to 41.6 acres] 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 [3 paks per 20 acres] plus a suitable amount 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 higher 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.

**WHEAT-FALLOW-WHEAT (CO, KS, ND, NE, SD, WY)**

**THIS PRODUCT PLUS PARAQUAT:** If weeds are present at application, a tank mix with paraquat may be used. Broadcast 0.6 to 1.25 lbs. of this product [1 pak per 20 to 41.6 acres] plus a suitable amount of paraquat in 20 to 60 gallons of water per acre by ground equipment. Add 0.5 to 1 pt. 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 higher rate of paraquat specified on the label 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.

**USE PRECAUTIONS AND RESTRICTIONS**

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.
6. Do not graze treated areas within 6 months after application or illegal residues may result.
7. Only one application is allowed per season for all chemical fallow applications.

**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 [1 pak per 20 acres] 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, Blue-grama, 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.

**USE PRECAUTIONS AND RESTRICTIONS — To avoid illegal residues:**

1. Do not cut or feed roadside Grass hay.
2. Do not allow livestock to graze treated areas.
3. Do not apply more than 1 pound a.i./A (1.25 lbs./A [1 pak per 20 acres]). Make only one application per year.

**SUGARCANE**

For control of many Broadleaf and Grass weeds, such as Amaranths, Crabgrass, Fireweed, Flora's paintbrush, Foxtail, Junglerice and Wiregrass, broadcast 2.5 to 5 lbs. per acre [1 pak per 5 to 10 acres] 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 this product are used, 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.

**USE PRECAUTIONS AND RESTRICTIONS FOR ALL STATES AND USES**

1. Do not apply this product after "close-in".
2. Do not apply more than 4 lbs. a.i. (5 lbs. of this product [1 pak per 5 acres]) per acre for any application. Do not apply more than 12.5 pounds of this product per acre [1 pak per 2 acres] per year.
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.

For specific weed problems, the following may be used. Other rate and application timings may be used for other weed spectrums and cultural practices, provided they are within the above "GENERAL USE DIRECTIONS FOR ALL STATES" and are consistent with the "USE PRECAUTIONS FOR ALL STATES AND USES."

**FLORIDA**

For control of emerged Pellitory weeds (Artillery weed), apply 0.5 to 0.75 pound per acre [1 pak per 100 to 150 acres] 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 [1 pak per 5 acres] pre-emergence. Follow with one or two applications, as needed, post-emergence to Sugarcane and weeds, at 2.5 pounds per acre [1 pak per 2 acres]. Treat before weeds exceed 1.5 inches in height.
2. Apply 1 to 3 times, as needed, at 2.5 pounds per acre [1 pak per 10 acres] 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 [1 pak per 10 acres] to weed-free beds immediately after bed formation. Follow normal weed control after planting.

**Use Precautions and Restrictions:**

1. Do not apply more than 12.5 pounds per acre [1 pak per 2 acres] to any one crop of Sugarcane.
2. If making 2.5 pounds per acre [1 pak per 10 acres] application during Summer fallow period, do not exceed 10 pounds per acre [1 pak per 2.5 acres] 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 [1 pak per 5 acres] pre-emergence. Follow with one or two applications, as needed, at 3.75 pounds per acre [3 paks per 20 acres] 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.

**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, Lodgepole pine [Shore pine], Monterey pine, Noble fir, Ponderosa pine, Scotch pine, Slash pine, Sitka spruce and White fir), broadcast 2.5 to 5 pounds [1 pak per 5 to 10 acres] 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 new transplants, apply during or soon after transplanting. 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 [1 pak per 5 acres] 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 AND RESTRICTIONS**

1. In areas West of the Rocky Mountains (except the Great Basin), grazing may begin 7 months after a Fall application or 3 months after a Winter or Spring application.
2. To prevent illegal residues, do not graze treated areas of the Great Basin, or areas East of the Rocky Mountains.
3. Temporary injury to trees may occur following use of atrazine on Coarse textured soil. To avoid injury do not apply to seed beds.
4. Apply only once per year.
5. Do not apply more than 4 pounds a.i. (5 lbs. of this product [1 pak per 5 acres]) per year.
6. Do not apply more than 4 pounds a.i. (5 lbs. of this product [1 pak per 5 acres]) per acre for any application.

**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.

For weed control in rights-of way, do not apply more than 1.25 pounds of this product per acre per year. Do not apply more than one application per year.

**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 RIGHTS-OF-WAY**

Apply up to 1.25 pounds of this product [1 pak per 20 acres] 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), Poojoe, Ragweed, Russian thistle, Smartweed, Smutgrass, Sunflower, Wild lettuce and Wild oats. 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.

**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:** Apply this product when this weed emerges in the Fall.

**Dichondra, Moneywort:** This product will give best control when applied to young, tender weeds or just prior to weed emergence. Do not apply to growing Bermudagrass.

Applications for Florida betony or Spurweed generally will give control or suppression of the other weeds listed.

**USE PRECAUTIONS AND RESTRICTIONS**

1. Do not cut for hay or graze treated areas within 3 months following an application.
2. For weed control in rights-of way, do not apply more than 1.25 pounds of this product per acre per year. Do not apply more than one application per year.
3. Apply only once per year.
4. Do not seed or transplant species which are sensitive to this product within 18 months after application.
5. Do not use on rights-of-way where preservation of Wildflowers is desired. This product may cause injury to Wildflowers.

**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
10 acres	2.5 lbs. [1 pak]

**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 (0.45 fl. oz. per 1000 sq. ft.).

Where Annual bluegrass is the major weed, use 1.25 pounds per acre [1 pak per 20 acres]. Use 2.5 pounds per acre [1 pak per 10 acres] for control of the other weeds named above. Do not exceed 1.25 pounds per acre [1 pak per 20 acres] 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 [1 pak per 20 acres] 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 AND RESTRICTIONS**

On newly sprigged Turfgrass and hybrid Bermudagrass, temporary slowing of growth and yellowing may occur following application.

1. For Turfgrass at residential sites including homes, day care facilities, schools, playgrounds, parks, recreational areas and sports fields, do not apply more than 1.0 pound a.i. (1.25 lbs. of this product [1 pak per 20 acres]) per acre for any application. Do not apply more than 2.0 pounds a.i. (2.5 lbs. of this product [1 pak per 10 acres]) per acre per year.
2. Do not graze or feed turf clippings to animals or illegal residues may result.

**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 2.5 lbs. of product per acre [1 pak per 10 acres] within 12 months of seeding Bermudagrass.

**TURFGRASSES FOR SOD (FL ONLY)**

**St. Augustine grass, Centipedegrass and Zoysiagrass:** Broadcast 2.5 to 5 pounds per acre [1 pak per 5 to 10 acres] 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 [1 pak per 10 acres] on Muck or Peat or 1.25 lbs. [1 pak per 20 acres] per acre on Sandy soil.

**USE PRECAUTIONS AND RESTRICTIONS**

1. For Muck or Peat soils, do not apply more than 4 lbs. a.i. (5 lbs. of this product [1 pak per 5 acres]) per acre for any application. Do not apply 6 lbs. a.i. (7.5 lbs. of this product [3 paks per 10 acres]) per year. For Sandy soil, do not apply more than 2 lbs. a.i. (2.5 lbs. of this product [1 pak per 10 acres]) per acre for any application. Do not apply more than 3 pounds a.i. (3.8 lbs. of this product [1 pak per 6.5 acres]) per year.
2. Do not apply within 30 days prior to cutting or lifting.
3. Do not apply in combination with surfactants or other spray additives.
4. Use only on Turfgrass reasonably free of infestations of insects, nematodes and diseases.
5. 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 [1 pak per 5 to 10 acres] before harvest and before weeds emerge. Repeat as necessary. Do not apply more than 8 pounds a.i. (10 lbs. of this product [1 pak per 2.5 acres]) per year. Do not spray when Nuts are on ground during harvest period. Do not apply by air.

**QUAVA**

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 [1 pak per 5 to 10 acres] 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.

**USE PRECAUTIONS AND RESTRICTIONS**

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 4 lbs. a.i. (5 pounds of this product [1 pak per 5 acres]) per acre for any application.
4. Do not apply more than 10 pounds [1 pak per 2.5 acres] per year.

**CONSERVATION RESERVE PROGRAM (CRP)  
(NE, OK, OR AND TX)**

For control or suppression of the following weeds: Annual ragweeds, Barnyardgrass, Black nightshade, Cheat, Cocklebur, Downy brome, Fall panicum, Field pennycress, Giant foxtail, Yellow foxtail, Japanese brome, Kentucky bluegrass, Kochia, Lambsquarters, Little barley, Marehail, Pigweed, Prickly lettuce, Smooth brome, and Sunflower, refer to the directions, notes and precautions below:

**Pure stands of newly seeded Big bluestem, Switchgrass and Eastern gramagrass**

Use only on Loam, Silt loam, Silty clay loam, Clay loam and Silty clay soils with at least 1% organic matter.

**Establishment:** Broadcast 2.5 lbs./A [1 pak per 10 acres] pre-plant incorporated or pre-emergence at time of seeding and prior to emergence of weeds. Prepare a good firm seedbed. Plant 0.5 inch deep with a grassland drill (preferred method) or a conventional drill. If a conventional drill is used on prepared seedbeds, remove all tension from the disk openers. For best results, cultipack or roll after planting.

**Renovation of existing stands of Big bluestem and Switchgrass planted on CRP acres**

Broadcast 1.25 to 2.5 lbs./A [1 pak per 10 to 20 acres] to existing stands of Big bluestem and Switchgrass prior to the emergence of weeds. Use the low rate on soils containing from 1 to 2% organic matter. Use the high rate on soils with 2% or more organic matter.

**Renovation of existing stands of the following perennial range grasses planted on CRP acres**

Blue grama, Indiangrass, Little bluestem, Sand lovegrass, Sideoats grama, and Western wheatgrass.

Broadcast 0.65 to 1.25 lbs./A [1 pak per 20 to 38.5 acres] in the Spring prior to weed emergence, or in the Fall before the ground freezes and prior to weed emergence after these species have been established for at least one growing season for control or partial control of the weeds listed above. Use the low rate for weeds controlled or suppressed easily. Use the higher rate on other weeds claimed in an early section of this label.

**Aerial Application:** Make applications at a maximum height of 10 ft. above vegetation. Use low-drift nozzles at a maximum pressure of 40 psi. Restrict application to periods when wind speed does not exceed 10 mph to control drift. To assure that drift will not adversely affect adjacent sensitive nontarget plants, apply this product by aircraft at a minimum upwind distance of 400 ft. from sensitive plants. Use 3 to 5 gals./A total water volume; use the higher water volume when a dense, heavy ground cover is present.

**USE PRECAUTIONS AND RESTRICTIONS**

1. Do not cut or feed grass hay to livestock.
2. Do not graze treated areas.
3. Do not use seeds for bird food.
4. Do not dump or spill product or dispose of containers within reach of livestock.
5. Follow all applicable restrictions for the Conservation Reserve Program.
6. Do not apply more than 2 lbs. a.i. (2.5 lbs. of this product [1 pak per 10 acres]) per acre for any application.
7. To avoid crop injury, make only one application per year.

Slight discoloration of desirable grasses may occur following treatment. Injury may be enhanced when used on neutral or alkaline soils.

**SEVERE DROUGHT CONDITIONS**

Do not graze forage or cut forage for hay. Under severe drought conditions, the Conservation Reserve Program allows grazing and making of hay from CRP acres, as so specified by the local ASCS (Agricultural Stabilization & Conservation Service) office. This label does not allow grazing or making of hay from CRP acres that have been treated with atrazine under any circumstance.

**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.

**WATER-SOLUBLE PAKS:** Carefully open outer bag. Never open the water-soluble pouch.

**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—CONDITIONS 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.