

# RESTRICTED USE PESTICIDE

Due to 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.

ATRAZINE GROUP **5** HERBICIDE

## Atrazine 90DF

A Water-Dispersible Granule For Weed Control In Corn, Sorghum And Other Crops

### ACTIVE INGREDIENTS

Atrazine (2-chloro-4-ethylamino-6-isopropylamino-s-triazine) ..... 88%  
Related Compounds ..... 2%

OTHER INGREDIENTS ..... 10%

TOTAL ..... 100%

KEEP OUT OF REACH OF CHILDREN

### CAUTION

#### 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 the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

##### IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- Call a poison control center or doctor for treatment advice.

##### IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for further 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 toll free 1-877-424-7452.

**NOTE TO PHYSICIANS:** 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.

Read Additional PRECAUTIONARY STATEMENTS.

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## **PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Harmful if swallowed, inhaled, or absorbed through skin. Do not breathe dust or spray mist. Avoid contact with eyes, skin or clothing.

### **Personal Protective Equipment (PPE):**

**Mixers/loaders, cleaners of equipment or spills, and other handlers exposed to the concentrate must wear:**

- Coveralls over long-sleeved shirt and long pants,
- Chemical-resistant gloves made of barrier laminate, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils or viton  $\geq$  14 mils,
- Chemical-resistant footwear plus socks,
- Chemical-resistant apron, and
- A minimum of a NIOSH-approved particulate filtering facepiece respirator with any R or P filter; OR a NIOSH-approved elastomeric particulate respirator with any R or P filter; OR a NIOSH-approved powered air purifying respirator with HE filters.

**Applicators using spray equipment mounted on their backs must wear:**

- Coveralls over long-sleeved shirt and long pants,
- Chemical-resistant footwear plus socks, and
- Chemical-resistant gloves made of barrier laminate, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils or viton  $\geq$  14 mils.

**All other applicators and all other handlers exposed to the dilute must wear:**

- Long sleeved shirt and long pants,
- Shoes plus socks, and
- Chemical-resistant gloves made of barrier laminate, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils or viton  $\geq$  14 mils.

**See engineering controls for additional requirements.**

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

### **ENGINEERING CONTROLS STATEMENT**

When applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### **USER SAFETY RECOMMENDATIONS**

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 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.

Product must not be mixed or loaded within 50 feet of intermittent streams or rivers, natural or impounded lakes and reservoirs. Product must not be applied within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft. of natural or impounded lakes and reservoirs. If this

product is applied to highly erodible land, the 66-foot buffer or setback from runoff points must be planted to crop or seeded with grass or other suitable crop.

Product may not be mixed/loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing or washing of this product into or from pesticide handling application equipment or containers within 50 feet 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 spill or equipment leaks, container or equipment rinse or washwater 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 that 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 a minimum of 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 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 or loading sites.

Additional state-imposed requirements regarding well-head setbacks and operational area containment must be observed.

**One of the following restrictions must be used in applying atrazine to tile-outletted terraced fields containing standpipes:**

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

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, 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 washwater.

**NON-TARGET ORGANISM ADVISORY:** This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

## **DIRECTIONS FOR USE**

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 registrant for a refund.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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.

## **ENDANGERED SPECIES**

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email [ESPP@epa.gov](mailto:ESPP@epa.gov). You must use the Bulletin valid for the month in which you will apply the product.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls,
- Chemical-resistant gloves made of barrier laminate, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils or viton  $\geq$  14 mils, 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 until sprays have dried.

### GENERAL INFORMATION

This herbicide controls many annual broadleaf and grass weeds in corn, sorghum, sugarcane and certain other crops specified on this label. This product may be applied before or after weeds emerge.

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, WE RECOMMEND THE USE OF THIS PRODUCT IN COMBINATION WITH OTHER REGISTERED HERBICIDES WHICH ARE NOT TRIAZINES. CONSULT WITH YOUR STATE AGRICULTURAL EXTENSION SERVICE FOR SPECIFIC RECOMMENDATIONS. See the **WEED RESISTANCE MANAGEMENT** section if this label for further information.

#### RESTRICTIONS:

- **Aerial Application is prohibited.**
- Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or higher set-backs) which are different from the label, the more restrictive/protective requirements apply.
- **Chemigation Prohibition:** Do not apply this product through any type of irrigation system.
- When tank-mixing or sequentially applying atrazine or products containing atrazine to corn or sorghum, do not exceed an application rate of 2.0 pounds active ingredient of atrazine per acre for any single application and the total pounds of atrazine applied (lbs ai/A) must not exceed 2.5 pounds active ingredient per acre per year.
- When tank-mixing or sequentially applying atrazine or products containing atrazine to crops other than corn or sorghum, the total pounds of atrazine applied (lbs ai/A) must not exceed the specific seasonal rate limits as noted in the use directions.
- Areas where sale, use, or distribution of this product is prohibited (but is not limited to) the states of Hawaii or Alaska, or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands).

- Use on Roadsides; Conservation Reserve Program (CRP) land; Conifers, including Christmas Tree plantings; Timber; Forestry; and Miscanthus and other perennial bioenergy crops is prohibited.
- Do not apply atrazine and propazine products to the same sorghum acre.
- Use of mechanically pressurized handguns for treatment to macadamia nuts, sweet corn and guava is prohibited.
- Users must only apply to fallow land in the following states according to the prescribed rotation pattern in the table below:

<b>Fallow Rotation Pattern</b>	<b>Fallow Use Authorized in these States only</b>
Wheat-Corn-Fallow	CO, KS, ND, NE, SD & WY
Wheat-Fallow-Wheat	CO, KS, ND, NE, SD & WY
Wheat-Sorghum-Fallow	AR, CO, GA, IL, KS, LA, MS, MO, NE, NM, NC, OK, SD & TX

### **WEED RESISTANCE MANAGEMENT**

For resistance management, Atrazine 90DF contains a Group 5 herbicide – atrazine. Any weed population may contain or develop plants naturally resistant to Atrazine 90DF and other Group 5 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of Atrazine 90DF or other Group 5 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include:
  - 1) Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - 2) A spreading patch of non-controlled plants of a particular weed species;
  - 3) Surviving plants mixed with controlled individuals of the same species.

If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.

- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist, certified crop advisors, and/or Winfield Solutions, LLC representative for pesticide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.
- For further information or to report suspected resistance, contact your Winfield Solutions, LLC representative.

## APPLICATION PROCEDURES

Aerial application is prohibited.

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 preplant, preemergence and postemergence applications (with or without oil or surfactant) with ground equipment. When an adjuvant is to be used with this product, Winfield Solutions, LLC recommends the use of a Council of Producers & Distributors of Agrotechnology certified adjuvant.

Use a pump with a capacity to (1) maintain 35-40 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 gallons 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 applications, calculate amount to be applied per acre as follows:

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

**Application in Water or Liquid Fertilizer:** Nitrogen solution or complete liquid fertilizer may replace all or part of the water as a carrier for preemergence or preplant ground application 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.

To determine the compatibility of ATRAZINE 90DF alone or in tank mixtures, with fluid fertilizer, pour the products into a small container of fluid fertilizer in the proportions shown below. For different spray volume or herbicide rate, make appropriate changes in the ingredients.

For each pound of ATRAZINE 90DF or other dry product to be applied per acre, add 1 level teaspoon or 5 milliliters of the product to one pint of fluid fertilizer (assuming a volume of 25 gallons per acre).

For each pint of a liquid or flowable product to be applied per acre, add 0.5 teaspoon or 2.5 milliliters of the product to one pint of fluid fertilizer (assuming a volume of 25 gallons per acre).

After thorough mixing, let stand 5 minutes. If the herbicide fertilizer combination remains mixed, or can be remixed readily, the mixture is compatible and can be sprayed. If it is not compatible, make a water slurry with the herbicide before adding fertilizer and use the mixture only if this test shows it is compatible. The addition of a compatibility agent, such as Combine®, may be useful.

**Application in Water Plus Emulsifiable Oil or Oil Concentrate:** Adding an emulsifiable oil or oil concentrate, such as Prime Oil® to postemergence water-based sprays on 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 a crop oil containing 1-2% suitable emulsifier, or a suitable crop oil concentrate containing not more than 20% emulsifier or surfactant blend. Emulsifiable oil and oil concentrates 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 ¼ full with clean water, nitrogen solution, or complete liquid fertilizer. (3) Start agitation. (4) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (5) Pour product directly from container into tank. Let it wet and settle into water. (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.

## **SPRAY DRIFT MANAGEMENT**

### **MANDATORY SPRAY DRIFT MANAGEMENT**

#### **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- User must maintain a 15 foot (4.6 m) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.
- Do not apply during temperature inversions.

#### **Boomless Ground Applications:**

- Applicators are required to use a coarse or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- User must maintain a 15 foot (4.6 m) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.
- Do not apply during temperature inversions.

### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### **Importance of Droplet Size**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size – Ground Boom**

- **Volume** - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- **Spray Nozzle** - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Boom Height – Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **Boomless Ground Applications**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### **Handheld Technology Applications**

Take precautions to minimize spray drift.

#### **Shielded Sprayers**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### **Temperature and Humidity**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### Temperature Inversions

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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.

### Wind

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## ATRAZINE 90DF applied alone--Corn or Grain Sorghum\*

### Preplant Surface-Applied, Preplant Incorporated or Preemergence (or Postemergence at 2.2 lbs./A Atrazine 90DF with oil):

#### Broadleaf and Grass Weeds Controlled:

Barnyardgrass	mustards
(watergrass)***	nightshade
cocklebur**	pigweed
giant foxtail**	purslane
green foxtail***	ragweed
groundcherry	velvetleaf
jimsonweed	(buttonweed)***
kochia	wild oats
lambsquarters	witch grass
large (hairy) crabgrass**	(Panicum capillare)***
annual morningglory	yellow foxtail***
sicklepod**	

### Postemergence with Emulsifiable Oil or Oil Concentrate in Water (at 1.3 lbs./A of Atrazine 90DF):

#### Broadleaf Weeds Controlled:

annual morningglory	pigweed
cocklebur	ragweed
jimsonweed	smartweed
lambsquarters	wild buckwheat
mustards	velvetleaf**

\* Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or greater setbacks) 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.

\*\* Partial control only

\*\*\* Partial control only on medium and fine-textured soils

## CORN

Use of mechanically pressurized handguns for treatment to sweet corn is prohibited.

**Preplant 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 ATRAZINE 90DF shown in Table 1 up to 45 days prior to planting. On coarse-textured soils, do not apply more than 2 weeks 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.

**Preplant Incorporated (Broadleaf and grass control):** Broadcast in spring after plowing at rate in Table 1. Apply before, during or after final seedbed preparation. Avoid deep incorporation. For best results, apply within two weeks prior to planting.

**Preemergence (Broadleaf and grass control):** Apply during or shortly after planting and before weed emergence at rate in Table 1.

**Postemergence (Broadleaf and grass control):** Apply before weeds EXCEED 1.5 inches in height at rate in Table 1. Postemergence application to corn must be made before corn exceeds 12 inches in height.

**Table 1: Broadleaf and Grass Weed Control in Corn\***  
**FOR ALL SOIL APPLICATIONS PRIOR TO CROP EMERGENCE**

On Highly Erodible Soils

If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at planting, apply 2.2 lbs./A of Atrazine 90DF (2 lbs. ai/A maximum) as a broadcast spray.

If the soil coverage with plant residue is less than 30% at planting, a maximum of 1.8 lbs./A of Atrazine 90DF (1.6 lbs. ai/A) may be applied.

On Soils Not Highly Erodible

Apply 2.2 lbs./A of Atrazine 90DF (2 lbs. ai/A maximum) as a broadcast spray.

**FOR POSTEMERGENCE APPLICATION**

Post-emergent applications to corn must be made before the crop reaches 12 inches in height. If no atrazine was applied prior to corn emergence, apply 2.2 lbs./A of Atrazine 90DF (2 lbs ai/A maximum) broadcast spray. If a postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 lbs. active ingredient (2.8 lbs. of this product) per acre per calendar year.

\*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 1.3 lbs./A of Atrazine 90DF, either preplant or preemergence. On the other soils in these areas, apply rate in Table 1 for broadleaf and grass control.

In case of planting failure, corn may be replanted. Do not make a second broadcast application, as injury may occur. If originally applied in a band and corn is replanted in untreated row middles, this product may be applied in a band to the second planting. However, the maximum application rate for corn is 2.8 lbs. per acre per calendar year.

**Postemergence with Emulsifiable Oil or Oil Concentrate in Water:** Add the following volume of one of the type oils indicated for ground application unless the oil label specifies otherwise.

Type Oil	Ground Application
Oil Concentrate (crop or Petroleum-derived)	1 quart/Acre
Petroleum-derived oil	1 gallon/Acre

**Broadleaf and Grass Control:** Apply 2.2 lbs./A of Atrazine 90DF after weed emergence, but before weeds reach 1.5 inches in height.

**Broadleaf Control:** Apply 1.3 lbs./A of Atrazine 90DF for control of many broadleaf weeds, including annual morningglory, cocklebur, lambsquarters, mustard, pigweed, ragweed, smartweed and wild buckwheat. Add 1 gal. of emulsifiable oil per acre for ground application. Apply before pigweed and lambsquarters 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.

**Precautions for Applications with Emulsifiable Oil or Oil Concentrate in Water:** (1) Do not apply when crop is under stress from prolonged cold, wet weather, poor fertility, or other factors, or when crop is wet and succulent from recent rainfall, as crop injury may occur. (2) Inbred lines or any breeding stock may be severely injured by applications with emulsifiable oil or oil concentrate. (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.

### TANK MIXTURES FOR CORN (1)

This product may be tank mixed with these herbicides for control of certain broadleaf and grass weeds in corn:

Accent®	Frontier®	Surpass®
Banvel®	Gramoxone® Extra/Cyclone®	Treflan®/Trifluralin
Basagran®	Lasso®/Partner®/Arena®	Tough®
Beacon®	Princep®/Simazine	
Broadstrike® + Dual®	Prowl®	
Bronco®	Pursuit® (2)	
Buctril®	Ramrod® Flowable	
Clarity®	Roundup®/Glyphos®	
Dual®	Sutan®	
Eradicane®	Sencor®	

- (1) Refer to tank mix directions appearing on the labels of the above herbicides when tank mixing with this product. Observe and follow all precautions and limitations stated on labeling of products used. Always follow the most restrictive of limitations and precautions listed.
- (2) Use only on IMI corn hybrids.

Note: When labels of the above herbicides refer to Atrazine 80W or Atrazine 4L, use equivalent rates of ATRAZINE 90DF. One lb. of 80W equals 0.89 lb. of ATRAZINE 90DF. One qt. of 4L equals 1.1 lb. of ATRAZINE 90DF.

**Princep 4L (4LC), Princep Caliber® 90, Simazine 4L or Simazine 90DF:** Use as tank mixture for control of many annual weeds, including carpetweed, crabgrass, fall panicum, foxtail, lambsquarters, morningglory, pigweed, ragweed and velvetleaf. Apply before planting, at planting, or after planting, but before crop and weeds emerge, at rates in Table 2. Use 1:1 ratio for control of above weeds. Use 1:2 ratio for expected heavy infestations of crabgrass and fall panicum. Apply in a minimum of 20 gal. of water per acre. Cultivate shallowly if weeds appear.

**Preplant:** Apply in spring during or after final seedbed preparation. Avoid deep incorporation. For best results, apply within two weeks prior to planting.

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

Refer to Corn sections of this label and to Princep Caliber 90, Princep 4L, Simazine 4L or Simazine 90DF label for further directions, limitations, and precautions.

**Table 2: Tank Mixtures with Simazine on Corn**

	BROADCAST RATE PER ACRE			
	1:1 Ratio*		1:2 Ratio**	
Soil Texture	This Product	Simazine 4L or 90DF	This Product	Simazine 4L or 90DF
Sand, loamy sand, sandy loam	1.1 lbs.	2 pts. or 1.11 lbs.	0.73 lb.	2.67 pts. or 1.48 lbs.
Loam, silt loam, silt, clay loam, sandy clay loam, silty clay loam, sandy clay, or silty clay with low organic matter	1.3 lbs.	2.4 pts. or 1.33 lbs.	0.88 lb.	3.2 pts. or 1.78 lbs.

	BROADCAST RATE PER ACRE			
	1:1 Ratio*		1:2 Ratio**	
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)	1.6 lbs.	3 pts. or 1.6 lbs.	1.07 lbs.	3.85 pts. or 2.13 lbs.

\*For control of above weeds.

\*\*For control of expected heavy infestations of crabgrass and fall panicum.

**Gramoxone Extra:** For control of existing vegetation and residual control where corn will be planted directly into a cover crop, established sod, or in previous crop residues, apply this product at rates shown in Table 1 and 1.5 - 3.5 pts. of Gramoxone Extra in 20-30 gal. of water per acre. Add 16 fl. oz. of a nonionic surfactant per 100 gal. of spray mixture. Add this product to spray tank, thoroughly mix with water, then add Gramoxone Extra and surfactant.

Refer to the Gramoxone Extra label for further directions, limitations, and precautions.

**Princep 80W, Princep 4L, or Simazine 90DF plus Gramoxone Extra:** Use as tank mixture with Princep, or Simazine, and Gramoxone Extra for killing of existing vegetation and residual weed control where corn will be planted directly into a cover crop, established sod, or in previous crop residues. Add this product and Princep, or Simazine, to water in spray tank, agitating until thoroughly mixed. Then add Gramoxone Extra and a nonionic surfactant, such as Activate Plus. Continue agitation during application. Apply 1.1 - 2.2 lbs. of this product plus 1.25 - 2.5 lbs. of Princep 80W (or 2 - 4 pts. of Princep 4L, or 1.1 - 2.2 lbs. of Simazine 90DF) plus a suitable amount of Gramoxone Extra in 20 - 60 gal. of water per sprayed acre before, during, or after planting, but before corn crop emerges. Refer to the Gramoxone Extra label for the appropriate rates to utilize in this tank mixture. Add 16 fl. oz. of a nonionic surfactant such as Activate Plus per 100 gal. diluted spray. Use low rates of this product and of Princep or Simazine on coarse soil and higher rates on fine-textured soil. Use 2 - 2.5 pts. of Gramoxone Extra if existing vegetation is 4-6 inches tall. This mixture will not control weeds higher than 6 inches.

Refer to further limitations and precautions on labels for this product, Princep or Simazine and Gramoxone Extra.

**Precautions for all applications to corn:** (1) The maximum application rate for corn is 2.8 lbs. per acre per calendar year. For all tank mixtures and sequential treatment of products containing atrazine, the total lbs. ai of atrazine applied cannot exceed 2.5 pounds active ingredient per year. (2) Following harvest, plow (moldboard or disk-plow) and thoroughly till soil in fall or spring to minimize possible injury to rotational spring-seeded crops, regardless of rate used.

**Note for all Applications to Corn:** For field corn, do not harvest for forage within 60 days of application. For sweet corn, do not harvest for forage within 45 days of application.

**ROTATIONAL CROPS:** (1) Do not rotate to any crop except corn or sorghum until the following year, or injury may occur. (2) If applied after June 10, do not rotate with crops other than corn or sorghum the next year, or crop 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 eastern parts of the Dakotas, KS, western MN, and NE, do not rotate to soybeans if the rate applied to corn or sorghum was more than 2.2 lbs./A of Atrazine 90DF or equivalent band application rate, or soybean injury may occur. (5) Injury may occur to soybeans planted in north-central and northwest IA, south-central and southwest MN, northeast NE, southeast SD, and other areas the year following application on soils having a calcareous surface layer. (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, or injury may occur.

## SORGHUM AND SORGHUM-SUDAN HYBRIDS (Grain and Forage Types)

Apply before planting, at planting, or after planting, as indicated in the directions below. See Corn section for weeds controlled. Do not apply atrazine and propazine products to the same sorghum acre.

**Preplant 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 ATRAZINE 90DF shown in Table 3 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 included atrazine, do not exceed the labeled rate for sorghum indicated in Table 3. Under dry conditions, irrigation after application is recommended to move ATRAZINE 90DF into the soil.

If weeds are present at time of treatment, apply in a tank mix combination with a contact herbicide (for example, Gramoxone Extra or Roundup). 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.

**Preplant Incorporated (Broadleaf and grass control):** Broadcast in spring after plowing at rate in Table 3. Apply before, during, or after final seedbed preparation. Avoid deep incorporation. For best results, apply within two weeks before planting.

**Preemergence (Broadleaf and grass control):** Apply at rate shown in Table 3 during or shortly after planting and before weed or crop emergence.

**Table 3: Broadleaf and Grass Weed Control in Sorghum\***  
**FOR ALL SOIL APPLICATIONS PRIOR TO CROP EMERGENCE**

On Highly Erodible Soils

If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at planting, apply 2.2 lbs./A of Atrazine 90DF (2 lbs. ai/A maximum) as a broadcast spray.

If the soil coverage with plant residue is less than 30% at planting, a maximum of 1.8 lbs./A of Atrazine 90DF (1.6 lbs ai/A) may be applied.

On Soils Not Highly Erodible

Apply 2.2 lbs./A of Atrazine 90DF (2 lbs ai/A maximum) as a broadcast spray.

FOR POSTEMERGENCE APPLICATION

Post-emergent applications to sorghum must be made before the crop reaches 12 inches in height. If no atrazine was applied prior to sorghum emergence, apply 2.2 lbs./A of Atrazine 90DF (2 lbs ai/A maximum) broadcast. If a postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 lbs. active ingredient (2.8 lbs. of this product) per acre per calendar year.

\*Do not apply preplant in AL, AR, FL, GA, LA, MS, NC, NM, OK, SC, TN, or TX. Do not apply preemergence in NM, OK, or TX, except in northeast OK, and the TX Gulf Coast.

In case of planting failure, sorghum or corn may be replanted. Do not make second broadcast application, as injury may occur. If originally applied in a band and sorghum or corn is replanted in untreated row middles, this product may be applied in a band to the second planting. However, the maximum application rate for sorghum or corn is 2.8 lbs. per acre per calendar year.

**Preemergence broadleaf weed control in furrow irrigated bedded sorghum (AZ and CA only):** For preemergence control of many broadleaf weeds, including groundcherry, lambsquarters, morningglory, mustard, pigweed and purslane, apply 0.9-1.3 lbs. per acre after bed preparation, during or after planting, but before sorghum and weeds emerge and before the first furrow irrigation. Follow with several regular irrigations making sure to thoroughly wet all soil.

**Precautions for Preemergence Application to Furrow Irrigated Bedded Sorghum in AZ and CA:** To avoid possible sorghum injury, do not use on sand or loamy sand soil or on sorghum planted in furrows. Applications to sorghum growing on alkali soils or where cuts, fills, or erosion have exposed calcareous or alkali subsoils may cause crop injury. In case of crop failure, do not replant sorghum for 8 months following application. Corn may be planted immediately.

**Postemergence (Broadleaf and grass control):** Apply at rate in Table 3 before weeds exceed 1.5 inches in height. Postemergence application to sorghum must be made before sorghum exceeds 12 inches in height.

**Postemergence Broadleaf Weed Control with Emulsifiable Oil or Oil Concentrate in Water:** Apply 1.3 lbs./A of Atrazine 90DF for control of many broadleaf weeds, including annual morningglory, cocklebur, lambsquarters, mustard, pigweed, ragweed, smartweed and wild buckwheat. Apply before pigweed and lambsquarters 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 6-12 inches in height. Do not apply after sorghum exceeds 12 inches in height. In all other areas, apply after sorghum reaches the 3-leaf stage, but before sorghum exceeds 12 inches in height. Add 1 gal. of emulsifiable oil per acre for ground application. Add 1 qt. of oil concentrate per acre for ground application. A cultivation may be necessary if all weeds are not controlled or if weeds regrow.

For a list of weeds controlled, see ATRAZINE 90DF Applied Alone--Corn or Grain Sorghum--Postemergence with Emulsifiable Oil or Oil Concentrate in Water.

**Precautions for Applications with Emulsifiable Oil or Oil Concentrate in Water:** See Precautions for Applications with Emulsifiable Oil or Oil Concentrate in Water in Corn section.

**Postemergence Broadleaf Weed Control with Surfactant (CO, western KS, NM, OK, TX, and desert regions of AZ and CA only):** Apply 1.3 lbs./A of Atrazine 90DF plus 0.75-1.5 pts. of surfactant after sorghum reaches 6 inches in height, but before weeds exceed 1.5 inches in height. Apply only on sandy loam and finer textured soil.

**Precautions for All Applications to Sorghum:** (1) Heavy rain immediately following application, tends to cause excessive concentrations of herbicide in seed furrow, resulting in possible crop injury. Do not apply to furrow-planted sorghum until furrows are leveled (plowed in). Level deep planter marks or seed furrows before application. (2) Application to sorghum growing under stress caused by minor element deficiency or to sorghum growing on highly calcareous soil may result in crop injury. (3) Following harvest, plow (moldboard or disk-plow) and thoroughly till soil in fall or spring to minimize possible injury to spring-seeded rotational crops, regardless of rate used. (4) Injury may occur if both this herbicide, preplant or preemergence, and an at-planting systemic insecticide applied in-furrow are used. (5) Do not apply more than 2.5 lbs. active ingredient (2.8 lbs. product) per acre per year. (6) For all tank mixtures and sequential treatment of products containing atrazine, do not exceed 2.0 lbs. a.i./A of atrazine as a pre or post application or 2.5 lbs. a.i./A as the total of pre plus post applications per calendar year. (7) For all soil application prior to crop emergence (except for preemergence use on bedded sorghum in AZ and CA), do not apply on coarse textured soils; i.e., sand, loamy sand, sandy loam or to medium and fine textured soils having less than 1% organic matter, or crop injury may occur. (8) For postemergent applications, do not apply to sand or loamy sand, as crop injury may occur.

Note: Do not harvest for forage within 60 days of a pre-emergence application and 45 days of a post-emergent application.

#### TANK MIXTURES FOR GRAIN SORGHUM (1)

Atrazine 90DF may be tank mixed with one or more of the following herbicides for control of broadleaf and grassy weeds in grain sorghum:

Banvel	Laddok®
Basagran	Lasso/Arena
Bronco (2)	Prowl
Buctril	Ramrod Flowable
Dual (2)	Roundup/Glyphos
Gramoxone Extra/Cyclone	Treflan/Trifluralin

- (1) Refer to tank mix directions appearing on the labels of the above herbicides when tank mixing with this product. Observe and follow all precautions and limitations stated on labels of products used. Always follow the most restrictive of limitation and precautions listed.
- (2) Use only on seed that has been treated with a "seed safener" approved for use with these products.

### WINTER WEED CONTROL IN TEXAS

For postemergence control of winter weeds only, such as henbit, seedling dock, and annual thistle on fall bedded land in the Gulf Coast and Blacklands of Texas. Apply 0.9-1.1 pounds per acre postemergence 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 Activate Plus, at the rate of 0.5% of the spray volume, an emulsifiable oil at the rate of 1.0% of the spray volume, or an oil concentrate at the rate of 1 quart per acre, such as Prime Oil.

Normal weed control programs may be used in the following corn, grain sorghum, or forage sorghum crops.

Note: Do not plant any crops except corn, grain sorghum or forage sorghum the spring following this treatment, or illegal residues may result.

### CHEMICAL FALLOW

Precautions: For soils in North and South Dakota with a pH of 7.5 or greater, do not apply more than 1.5 pounds active ingredient per acre for any application. Do not apply more than one application per year. For soils in North and South Dakota with a pH of less than 7.5, do not apply more than 2 pounds active ingredient per acre for any application. Do not apply more than one application per year. For all other locations, do not apply more than 2.25 pounds active ingredient per acre for any application. Do not apply more than one application per cycle.

#### ATRAZINE 90DF Alone

**Wheat-Sorghum-Fallow (For use only in AR, CO, GA, IL, KS, LA, MS, MO, NE, NM, NC, OK, SD & TX):** To control annual broadleaf and grass weeds following wheat harvest and in the following sorghum crop when grown under minimum tillage, broadcast 2.5 lbs./A of Atrazine 90DF to wheat stubble immediately following wheat harvest. If weeds are present at application, remove them with a sweep plow or other suitable implement after application, or use an approved contact herbicide before, after, or with the application of ATRAZINE 90DF. Plant sorghum into wheat stubble the following spring with minimum soil disturbance. 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, or an approved contact herbicide.

For the list of weeds controlled, see ATRAZINE 90DF Applied Alone--Corn or Grain Sorghum--Preplant Incorporated or Preemergence.

- Precautions: (1) Use only on silt loam or finer textured soil.  
 (2) Wheat-sorghum-fallow cropping sequence must be followed.  
 (3) Do not apply following sorghum harvest.

**Note:** Do not graze or feed forage from treated area to livestock. Do not plant any crop other than those listed on this label within 18 months following treatment.

**Wheat-Corn-Fallow (For use only in CO, KS, ND, NE, SD and WY):** This product controls cheatgrass (downy brome, chess), kochia, mustards, 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./A of Atrazine 90DF. For soils with a pH less than 7.5 in ND and SD, apply 1-2 lbs. a.i./A. Use the higher rate on finer textured soils and, where heavy weed infestations are expected, use the lower rate on coarse-textured soils and where light weed infestations are expected. 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.

**Wheat-Fallow-Wheat (For use only in CO, KS, NE, ND, SD, and WY):** For preemergence 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 wheat-fallow-wheat rotations, broadcast 0.5-1.1 lbs./A of Atrazine 90DF 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 (For use in KS, NE):**

Gramoxone Extra (or Cyclone): If weeds are present at application, a tank mix with Gramoxone Extra may be used. Broadcast 2.5 lbs. of this product plus 1.5-3.5 pts. of Gramoxone Extra in 20-60 gal. of water per acre by ground equipment. Add 1 pt. of a nonionic surfactant, such as Activate Plus, per 100 gal. of spray mixture. Add ATRAZINE 90DF to spray tank first and thoroughly mix with water. Then add Gramoxone Extra, followed by surfactant. Use 2.5 pts. of Gramoxone Extra if weeds are 4-6 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 Gramoxone Extra label for further directions, precautions, and limitations.

#### **Wheat-Fallow-Wheat (For use only in CO, KS, ND, NE, SD, and WY):**

Gramoxone Extra: If weeds are present at application, a tank mix with Gramoxone Extra may be used. Broadcast 0.5-1.1 lbs. of this product plus 1.5-3.5 pts. of Gramoxone Extra in 20-60 gal. of water per acre by ground equipment. Add 0.5-1 pt. of a nonionic surfactant, such as Activate Plus, per 100 gal. of spray mixture. Add ATRAZINE 90DF to spray tank first and thoroughly mix with water. Then add Gramoxone Extra, followed by surfactant. Use the 2.5 pt. rate of Gramoxone Extra if weeds are 4-6 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 Gramoxone Extra 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 Gramoxone Extra plant at least 2 inches deep and 12 months or more after application.

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

Note: Do not graze treated areas within 6 months after application.

## SUGARCANE

For control of many broadleaf and grass weeds, including amaranths, crabgrass, fireweed, Flora's paintbrush, foxtails, junglerice and wiregrass, broadcast 2.2-4.4 lb. per acre of ATRAZINE 90DF at time of planting or ratooning, but before sugarcane emerges. Broadcast or band by ground equipment in a minimum of 20 gal. per acre, unless indicated otherwise. One additional application may be made over the sugarcane as it emerges, and two additional applications may be made interline after emergence as directed sprays. Repeat treatments, where needed, may be applied broadcast, band, or interline as suggested with the final application being prior to "close-in." Do not exceed the rate of herbicide suggested for any one crop of sugarcane.

Note: Where high rates of ATRAZINE 90DF are used alone, apply in a minimum of 1 gal. of water for each 1 lb. of product applied per acre.

**Precautions:** Do not apply more than 4 pounds active ingredient per acre for any application. Do not apply more than 10 pounds active ingredient per acre per crop.

### Florida

For control of emerged pellitory weed: Apply 0.4-0.6 lb. per acre in at least 40 gal. of water as a directed spray by ground equipment prior to "close-in." Add 4 qts. of surfactant for each 100 gal. of spray. Thoroughly cover weed foliage.

For control of alexandergrass, large crabgrass, pellitory (artillery) weed, and spiny amaranth, use one of the following methods at planting or ratooning:

1. Apply 4.4 lbs./A of Atrazine 90DF preemergence. Follow with one or two applications, as needed, postemergence to sugarcane and weeds, at 2.2 lbs./A of product. Treat before weeds exceed 1.5 inches in height.

2. Apply 1-3 times, as needed, at 2.2 lbs./A of Atrazine 90DF postemergence 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 2.2 lbs./A of Atrazine 90DF to weed-free beds immediately after bed formation. Follow normal weed control program after planting.

**Precautions:** To avoid crop injury, (1) Do not apply more than 11 lbs./A of Atrazine 90DF to any one crop of sugarcane, (2) If making a 2.2 lbs./A Atrazine 90DF application during the summer fallow period, do not exceed 8.8 lbs./A of product during the remainder of the growing season, or illegal residues may result.

### Texas

Use ATRAZINE 90DF for control of barnyardgrass, pigweed, purslane and sunflower, in plant or ratoon sugarcane. Apply 4.4 lbs./A of Atrazine 90DF preemergence. Follow with one or two applications, as needed, at 3.3 lbs./A of product postemergence to sugarcane and weeds.

For best results when weeds are emerged, add a nonionic surfactant, like Activate Plus, at a concentration of 2 qts./100 gal. to the spray and apply before weeds exceed 1.5 inches in height.

**Precautions:** (1) Injury to sugarcane may occur when under moisture stress, when soil is of low absorptive capacity, or when land is first cropped to sugarcane. (2) Do not apply after "close-in." (3) Do not apply more than 11 lbs./A of Atrazine 90DF to any one crop of sugarcane, as crop injury may result.

## TURFGRASSES FOR SOD (FLORIDA ONLY)

St. Augustine, Centipedegrass and Zoysia Grass

Broadcast 2.2-4.4 lbs. per acre according to soil texture to control those weeds listed under ATRAZINE 90DF Applied Alone--Corn or Grain Sorghum--Preplant Surface-Applied, Preplant Incorporated or Preemergence.

Muck or Peat	4.4 lbs.	Old beds: Within 2 days after lifting sod.
		New beds: 3-4 days after sprigging or plugging.
Sandy Soil	2.2 lbs.	Old beds: Within 2 days after lifting sod.
		New beds: 7-10 days after sprigging or plugging.

If weeds regrow, apply an additional 2.2 lbs. per acre on muck or peat, or 1.1 lb. per acre on sandy soil.

**Precautions:** (1) Do not apply within 30 days prior to cutting or lifting. (2) Do not apply in combination with surfactants or other spray additives, or injury may occur. (3) Use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases. (4) On newly sprigged turfgrass, temporary slowing of growth may follow application. (5) For muck or peat soils, do not apply more than 4 pounds active ingredient per acre for any application. Do not apply more than 6 pounds active ingredient per year. (6) For sandy soils, do not apply more than 2 pounds active ingredient per acre for any application. Do not apply more than 3 pounds active ingredient per year.

## TURFGRASS FOR FAIRWAYS, LAWNS, SOD PRODUCTION\*, AND RESIDENTIAL SITES (including homes, daycare facilities, schools, playgrounds, parks, recreational areas and sports fields)

\*In states other than Florida. For use on turfgrass for sod in Florida, see "Turfgrasses for Sod (Florida Only)" section above.

Bermudagrass Centipedegrass, St. Augustinegrass and Zoysia Grass

Apply ATRAZINE 90DF 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. ATRAZINE 90DF will control annual bluegrass even if it is emerged at time of treatment. For control of summer annual weeds listed in the preemergence portion of the ATRAZINE 90DF Applied Alone-Corn or Grain Sorghum section of this label, also apply ATRAZINE 90DF 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. Applications made by backpack spray equipment to landscape turf are restricted to spot treatment only.

**Turfgrass for Fairways and Sod Production (states other than Florida):** Where annual bluegrass is the major weed, use 1.1 lbs. of Atrazine 90DF per acre (0.4 oz. per 1,000 sq. ft.). Use 2.2 lbs./A of Atrazine 90DF (0.8 oz. per 1,000 sq. ft.) for control of the other weeds named above. Do not exceed 1.1 lbs./A of product per treatment on newly sprigged turfgrass or on hybrid bermudagrass such as Tiflawn, Tifway, and Ormond. For continued summer annual weed control, apply another 1.1 lbs./A of Atrazine 90DF at least 30 days after the previous application, but not after April 15. However, do not make more than two applications of this product per year.

**Turfgrass for residential sites (including homes, daycare facilities, schools, playgrounds, parks, recreational areas and sports fields):** Use 1.1 lbs. of Atrazine 90DF per acre (0.4 oz. per 1,000 sq. ft.). For continued summer annual weed control, apply another 1.1 lbs./A of Atrazine 90DF at least 30 days after the previous application, but not after April 15. However, do not make more than two applications of this product per year. Do not exceed 1.1 lbs./A of Atrazine 90DF (1.0 lbs./A a.i.) in a single application.

Precautions: On newly sprigged turfgrass and hybrid bermudagrass, temporary slowing of growth and yellowing may occur following application. To avoid turf injury: (1) Use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases. (2) Do not use on golf greens. (3) Do not use north of NC (except may be used in Virginia 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) For sandy soils, do not apply more than 1 pound active ingredient per acre for any application. Do not apply more than 2 pounds active ingredient per year. (6) Do not apply over the rooting area of trees or ornamentals not listed on this label. (7) Do not overseed with desirable turfgrass within 4 months before or 6 months after treatment. (8) Do not apply this product to newly seeded bermudagrass until it has been overwintered and has a well-developed rhizome system. Do not exceed 2.2 lbs. product/A within 12 months of seeding bermudagrass.

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

### MACADAMIA NUTS

For preemergence control of many broadleaf and grass weeds, including crabgrass, foxtail, wiregrass, Flora's paintbrush, spanishneedles, and fireweed, broadcast 2.2-4.4 lbs. per acre before harvest and before weeds emerge. Repeat as necessary. Do not spray when nuts are on ground during harvest period. Do not apply by mechanically pressurized handguns.

**Note:** Do not apply more than 4 lbs active ingredient per acre for any application. Do not apply more than 8 pounds active ingredient per year.

### GUAVA

Use only on established plantings which are at least 18 months old. Apply as a directed spray at 2.2 - 4.4 lbs./A of Atrazine 90DF in 20-50 gallons of spray mix preemergence or early postemergence to weeds. When applying postemergence, the use of a surfactant and greater spray volume (80-100 gals. of spray mix per acre) may enhance weed control. This product controls many annual broadleaf and grass weeds, including fireweed, purslane, scarlet pimpernel, spanishneedles and sowthistle. Do not apply by mechanically pressurized handguns.

**Notes:** To avoid illegal residues, (1) Do not allow spray to contact foliage or fruit. (2) Do not apply more frequently than at 4 month intervals. (3) Do not apply more than 4 lbs active ingredient per acre for any application. Do not apply more than 8 lbs. active ingredient per year.

## **STORAGE AND DISPOSAL**

### **DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL.**

**PESTICIDE STORAGE:** Store in a dry location away from children, animals, foods, feeds, seeds, or other agricultural chemicals. Handle in accordance with information given under PRECAUTIONARY STATEMENTS. In the event of spillage, scrape up spillage. If spillage is not suitable for use, dispose of in accordance with information given under DISPOSAL. Repackage and relabel useable product in a sound container.

**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:** Nonrefillable Container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**In case of fire or other emergency, report at once by toll-free telephone to CHEMTREC 1-800-424-9300.**

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