

PM 25

68119-5

2-9-99

10428



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (H7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg.  
Number:

68119-5

Date of Issuance:

FEB 9 1999

## NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration

Term of Issuance:

Conditional

Name of Pesticide Product:

Wilfarm Atrazine 90DF

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

WILFARM L.L.C.  
c/o Alice Walker  
811 Country Club Drive  
Senatobia, MS 38668

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the following label changes:

a. Revise the EPA Registration Number to read, "EPA Reg. No. 68119-5."

b. Add the following to the label the statement regarding the "tile-Terraced fields containing standpipes".

c. Under the "Directions For Use" the word "precaution" as a subheading has been used. Please change to "use precaution"

(continued on page 2)

Signature of Approving Official:

Jim Tompkins, PM-25  
Herbicide Branch  
Registration Division, (7505C)

Date:

FEB 9 1999

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3. Submit one (1) copy of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

) Enclosure

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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.

# ATRAZINE 90DF

*For season-long weed control in corn, sorghum, and certain other crops*

### ACTIVE INGREDIENTS:

|   |               |
|---|---------------|
| Atrazine: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine ..... | 85.5%         |
| Related Compounds .....   | 4.5%          |
| INERT INGREDIENTS:.....   | 10.0%         |
| <b>TOTAL</b>  | <b>100.0%</b> |

EPA Reg. No. 68119-

EPA Est. No. 70989-MO-1

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

### STATEMENT OF PRACTICAL TREATMENT

**IF SWALLOWED:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching the back of throat with finger, or if available, by administering syrup of ipecac. If person is unconscious, do not give anything by mouth and do not induce vomiting.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

**IF IN EYES:** Flush eyes with plenty of water. Call a physician if irritation persists.

**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.

See additional precautionary statements and directions for use below.

Manufactured for:  
**WILFARM L.L.C.**  
5401 North Oak Trafficway  
Gladstone, MO 64118-4627

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

**FEB 9 1999**

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

**68119-5**

Net Contents

\_\_\_\_ Lbs.

(\_\_\_\_ Kgs.)

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

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)**

**Applicators and other handlers (other than mixers and loaders) must wear:**

- Long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear plus socks

**Mixers and loaders must wear:**

- Long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENGINEERING CONTROL STATEMENTS**

When handlers use closed systems, enclosed cabs, or aircraft 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 immediately if pesticide gets inside. Then wash thoroughly and put on 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 ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) 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 ground water.

This 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 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. States may have in effect additional requirements regarding well-head setbacks and operational area containment.

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

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 washwaters.

#### **DIRECTIONS FOR USE**

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 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 intervals. 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. 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 Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Waterproof gloves
- Chemical-resistant footwear 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 treated areas without protective clothing until sprays have dried.

**STORAGE AND DISPOSAL****Pesticide Storage and Disposal**

Store in a dry place. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. 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. Dispose of empty bag in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

### 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, 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. If weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control.

This product is noncorrosive to equipment and metal surfaces, nonflammable, and has low electrical conductivity.

Avoid using 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.

Where the use directions give a range of rates, use the lower rate on coarse-textured soil and soil low in organic matter; use the higher rate on fine-textured soil and soil high in organic matter.

Do not apply this product in combination with other herbicides or oils, except as specifically described on the label.

### 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 gals. of spray mixture/A

for all preplant incorporated, preplant surface, preemergence, and postemergence applications (with or without oil or surfactant) with ground equipment.

Use a pump with capacity to:

1. Maintain 35-40 psi at nozzles.
2. Provide sufficient agitation in tank to keep mixture in suspension.
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 gals./minute/100 gal. 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:

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

**Aerial Application:** Use aerial application only where broadcast applications are specified. Apply in a minimum of 1 gal. of water for each 1 lb. of Atrazine 90DF applied per acre. For postemergence treatments on corn and sorghum, apply recommended rate in a minimum of 2 gals. 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.

**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, preplant incorporated, or preplant surface 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.

**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 gal./A. For other spray volumes, make appropriate changes in the ingredients. Check compatibility using this procedure:

1. Add 1 pt. of fertilizer to each of two 1-qt. jars with tight lids.
2. To one of the jars, add 1/4 tsp. or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (1/4 tsp. in 1 pt. is equivalent to 2 pts. per 100 gals. 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 herbicide for this test follows:  
Dry herbicides - For each pound to be applied per acre, add 1.5 level tsp. to each jar.  
Liquid herbicides - For each pint to be applied per acre add 0.5 tsp. (2.5 ml.) to each jar.
4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, gels, heavy oil 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 remixed 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 1/2 of the compatibility agent to the fertilizer and the other 1/2 to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If compatibility is still observed, do not use the mixture.

**Applications in Water plus Emulsifiable Oil or Oil Concentrate:** Adding emulsifiable oil (petroleum-derived, petroleum-derived oil concentrate, or single or mixed crop derived oil concentrate) to postemergence 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 1/4 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 bag into tank.
6. Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action.
7. Add emulsifiable oil, oil concentrate, or tank mix herbicide(s) after this product is thoroughly suspended.
8. Finish filling tank.
9. Empty tank as completely as possible before refilling to prevent buildup of oil or emulsifiable concentrate residue. Maintain agitation to avoid separation of materials.
10. If an oil or emulsifiable concentrate film starts to build up in tank, drain it and clean with strong detergent solution or solvent.
11. Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent.

#### ROTATIONAL CROP - ALL USES

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 or equivalent band application rate, or soybean injury may occur.
5. Injury may occur to soybean planted 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.

#### ATRAZINE 90DF APPLIED ALONE—CORN OR GRAIN SORGHUM\*

Preplant Surface-Applied, Preplant Incorporated, or Preemergence (or Postemergence at 2.2 lbs./A with Oil)

##### Broadleaf and Grass Weeds Controlled

|                               |              |            |
|-------------------------------|--------------|------------|
| barnyardgrass (watergrass)*** | cocklebur**  | nightshade |
| giant foxtail**               | groundcherry | pigweed    |
| green foxtail***              | jimsonweed   | purslane   |
| large (hairy) crabgrass**     | kochia       | ragweed    |

|                                   |                     |                            |
|-----------------------------------|---------------------|----------------------------|
| wild oats                         | lambsquarters       | sicklepod**                |
| witchgrass (Panicum capillare)*** | annual morningglory | velvetleaf (buttonweed)*** |
| yellow foxtail***                 | mustards            |                            |

**Postemergence with Emulsifiable Oil or Oil Concentrate in Water  
(at 1.3 lbs./A)**

**Broadleaf Weeds Controlled**

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

\*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

**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. 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 2 weeks prior to planting.

If weeds are present at the time of treatment, apply in 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 1. Apply to the soil and incorporate before, during, or after final seedbed preparation. Avoid deep incorporation. For best results, apply within two weeks prior to planting.

**Preemergence or At-Planting (Broadleaf and Grass Control):** Apply during or shortly after planting before weed emergence, at rate in Table 1.

**Postemergence (Broadleaf and Grass Control):** Apply before weeds exceed 1.5 inches in height and before corn exceeds 12 inches in height at rates recommended in Table 1.

**TABLE 1 - BROADLEAF AND GRASS CONTROL IN CORN\***

**For All Soil Applications Prior To Crop Emergence:**

- **On Highly Erodible Soils (as defined by SCS)**

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

If the soil coverage with plant residue is less than 30% at planting, a maximum of 1.8 lbs./A may be applied.

- **On Soils That Are Not Highly Erodible**

Apply 2.2 lbs./A as a broadcast spray.

**For Postemergence Application:**

If no atrazine was applied prior to corn emergence, apply a maximum of 2.2 lbs./A 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.

\*Broadleaf control (eastern CO, western KS, western NE, NM, OK Panhandle, west TX, and eastern WY): On sand, loamy sand, mild to strongly alkaline soil, and all recently leveled soil, apply no more than 1.3 lbs./A, either preplant surface, preplant incorporated, or preemergence. On other soils in these areas, apply rate in Table 1 for broadleaf and grass control.

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

**Postemergence 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 Oil                                    | Ground Application | Aerial Application |
|---|--------------------|--------------------|
| Oil concentrate (Crop or Petroleum-derived) | 1 qt./A            | 1/2-1 qt./A        |
| Petroleum-derived oil                       | 1 gal./A           | 2 qts./A           |

Note: Crop-derived or petroleum-derived oil concentrates should contain at least 1%, but no more than 20% suitable emulsifier or surfactant blend. Petroleum-derived oil should contain at least 1% suitable emulsifier.

**Broadleaf and Grass Control:** For postemergence control of those weeds listed under Preplant Incorporated and Preemergence, broadcast 2.2 lbs./A 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 postemergence control of those weeds listed under Postemergence with emulsifiable oil or oil concentrate in water, broadcast 1.3 lbs./A plus emulsifiable oil or oil concentrate 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. Inbred lines or any breeding stock may be severely injured by applications with emulsifiable oil or oil concentrate.
2. Adding other insecticides, herbicides, liquid fertilizers or other materials is not recommended because they may cause compatibility problems or crop injury.
3. 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.
4. To avoid crop injury, 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.
5. Do not exceed 2.5 lbs. active ingredient (or 2.8 lbs. of this product) per acre per calendar year.
6. Postemergence application to corn must be made before corn exceeds 12 inches in height.

### TANK MIXTURES FOR CORN

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

|                                  |                                     |
|----------------------------------|-------------------------------------|
| Dual® (metolachlor)              | Lasso or Lasso EC + Roundup         |
| Dual + Gramoxone Extra           | Lasso or Lasso EC + Gramoxone Extra |
| Dual + Roundup (glyphosate)      | Gramoxone Extra                     |
| Dual + Princep®                  | Princep                             |
| Dual + Princep + Gramoxone Extra | Princep + Gramoxone Extra           |
| Dual + Princep + Roundup         | Princep + Roundup                   |
| Bexton® or Ramrod® (propachlor)  | Roundup                             |
| Lasso® or Lasso EC (alachlor)    | Sutan+®                             |

Use tank mix directions appearing on the labels of the above herbicides when tank mixing with this product. Observe all precautions and limitations on labeling of products used in a particular tank mix.

Note: When the labels of the above herbicides refer to Atrazine 80W, use equivalent rates of Atrazine 90DF. One pound of 80W equals 0.9 lbs. of 90DF.

**Princep 80W, Princep 4L, or Princep Caliber 90®:** In addition to the weeds listed under Atrazine 90DF Applied Alone—Corn or Grain Sorghum—Preplant Surface-Applied, Preplant Incorporated, or Preemergence, this combination also controls crabgrass, fall panicum, and carpetweed.

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.

**Preplant Surface-Applied:** 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 Atrazine 90DF and Princep shown in Table 2 up to 45 days prior to planting. Refer to the Atrazine 90DF alone section for information if weeds should develop following early treatment. On coarse-textured soils, do not apply more than 2 weeks prior to planting. Refer to the Atrazine 90DF Applied Alone—Preplant 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, 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:** Apply to the soil and incorporate in the spring before, 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 80W, Princep Caliber 90, or Princep 4L labels for further directions, limitations, and precautions.

Table 2. Tank Mixtures with Princep on Corn

| Soil Texture   | Broadcast Rate Per Acre |                          |               |                          |
|--|-------------------------|--------------------------|---------------|--------------------------|
|  | 1:1 Ratio*              |                          | 1:2 Ratio**   |                          |
|  | Atrazine 90DF           | Princep 80W <sup>1</sup> | Atrazine 90DF | Princep 80W <sup>1</sup> |
| Sand, loamy sand, sandy loam   | 1.1 lbs.                | 1.25 lbs.                | 0.73 lbs.     | 1.67 lbs.                |
| Loam, silt loam, clay loam, sandy clay loam, silty clay loam, sandy clay, or silty clay with low organic matter  | 1.3 lbs.                | 1.5 lbs.                 | 0.88 lbs.     | 2 lbs.                   |
| Loam, silt loam, 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.                | 1.8 lbs.                 | 1.07 lbs.     | 2.4 lbs.                 |

\*For control of most weeds.

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

<sup>1</sup>When using Princep Caliber 90 or Princep 4L, use equivalent rates. One lb. of Princep 80W equals 0.9 lbs. of Princep Caliber 90 or 1.6 pts. of Princep 4L.

**Princep 80W, Princep 4L, or Princep Caliber 90 plus Roundup:** Use as tank mixture for preemergence and postemergence control of certain broadleaf and grass weeds where corn will be planted directly into a cover crop, established sod, or in previous crop residues. Refer to Roundup label for all directions, weeds controlled, precautions, and limitations.

**Princep 80W, Princep 4L, or Princep Caliber 90 plus Gramoxone Extra:** Use as tank mixture with Princep and Gramoxone Extra to kill existing vegetation and for 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 to water in spray tank, agitating until thoroughly mixed. Then add Gramoxone Extra and a nonionic surfactant, such as X-77®. Continue agitation during application. Broadcast 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 Princep Caliber 90) plus a suitable amount of Gramoxone Extra in 20-60 gals. of water per sprayed acre. Refer to the Gramoxone Extra label for the appropriate rates to utilize in this tank mixture. Apply before, during, or after planting, but before corn emerges. Add 0.5 pt. of a nonionic surfactant, such as X-77, per 100 gals. of spray mixture. Use the higher rate of Gramoxone Extra specified on the label if existing vegetation is 4-6 inches tall. This mixture will not control weeds taller than 6 inches.

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

**Precautions: for all applications to corn:**

1. To avoid crop injury and illegal residues, do not apply more than 2.8 lbs./A of this product per year.
2. For best control of velvetleaf and cocklebur, the application rate cannot be less than 2 lbs./A active ingredient, either alone or in tank mix combinations.
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.

Note: for all applications to corn, do not graze or feed forage from treated areas for 21 days following application, or illegal residues may result.

**SORGHUM AND SORGHUM-SUDAN HYBRIDS  
(GRAIN AND FORAGE TYPES)**

**Preplant 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 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 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 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 shown in Table 3. 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.

**Preemergence 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 3.

**Postemergence (Broadleaf and Grass Control):** Apply at rate shown in Table 3 before weeds exceed 1.5 inches height and before sorghum exceeds 12 inches in height.



TABLE 3 - BROADLEAF AND GRASS WEED CONTROL IN SORGHUM <sup>1,2</sup>**For All Soil Applications Prior To Crop Emergence:**

- **On Highly Erodible Soils (as defined by SCS)**  
If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at planting, apply a maximum of 2.2 lbs./A as a broadcast spray.  
If the soil coverage with plant residue is less than 30% at planting, a maximum of 1.8 lbs./A may be applied.
- **On Soils Not Highly Erodible**  
Apply 2.2 lbs./A as a broadcast spray.

**For Postemergence Application:**

If no atrazine was applied prior to sorghum emergence, apply a maximum of 2.2 lbs./A 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.

<sup>1</sup>Do not apply preplant surface or preplant incorporated 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 and Blacklands areas.

<sup>2</sup>Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or greater 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 failure, sorghum or corn may be replanted. Do not make a second broadcast application or 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 provided the maximum application rate of 2.5 lbs. ai/A atrazine per calendar year is not exceeded.

**Preemergence Broadleaf Weed Control in Furrow Irrigated Bedded Sorghum (AZ and CA only):** For preemergence control of many broadleaf weeds, broadcast 0.9-1.3 lbs./A 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 (AZ and CA only):** To avoid possible sorghum injury, do not use on sand or loamy sand soil or on sorghum planted in furrows. Application 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 Weed Control with Emulsifiable Oil or Oil Concentrate in Water:** Broadcast 1.3 lbs./A for control of many broadleaf weeds. 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, but before it reaches the boot stage. In all other areas, apply after sorghum reaches 3-leaf stage but before it exceeds 12 inches in height. Add 1 gallon of emulsifiable oil/A for ground applications and 0.5 gal./A for aerial applications, or add 1 qt. of oil concentrate for ground application. A cultivation may be necessary if all weeds are not controlled or if regrowth of weeds occur.

For the list of the 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):** Broadcast 1.3 lbs./A plus 0.75 to 1.5 pts. of surfactant after sorghum reaches 6 inches in height, but before weeds reach 1.5 inches in height. Apply only on sandy loam and finer textured soils.

**Precautions: For all applications to sorghum:**

1. Heavy rains 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 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, preplant surface, preplant incorporated, 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. of this product) per acre per calendar year.
6. For all soil applications prior to crop emergence (except for preemergence 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 postemergence applications, do not apply to sand or loamy sand, or injury may occur.

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

### **Tank Mixtures For Grain Sorghum**

**Dual 8E:** Use as a tank mixture with Dual 8E for control of those weeds listed on the Dual 8E label, as well as on this label. Use this tank mixture only on sorghum seed treated with Concep®. Refer to the Dual 8E label for all directions, precautions and limitations.

### **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 lbs./A 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 X-77, at the rate of 0.5% of the spray volume, or an emulsifiable oil at the rate of 1.0% of the spray volume, or an oil concentrate at the rate of 1 qt./A.

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

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

### **ATRAZINE 90DF—CHEMICAL FALLOW**

**Wheat-Sorghum-Fallow:** To control annual broadleaf and grass weeds following wheat harvest and in the following sorghum crop, when grown under minimum tillage, broadcast 3.3 lbs./A 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 or after 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.

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

#### **Precautions:**

1. Use only on silt loam or finer textured soil, or crop injury may result.
2. Wheat-sorghum-fallow cropping sequence must be followed.
3. Do not apply following sorghum harvest.

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

**Wheat-Corn-Fallow: (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 the period after wheat harvest. Weed control may extend into the 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 lb. a.i./A Atrazine 90DF. For soils with a pH less than 7.5 in ND and SD, apply 1-2 lb. 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 in 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 where references to sorghum.

**Wheat-Fallow-Wheat (CO, KS, ND, NE, 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 a wheat-fallow-wheat rotation, broadcast 0.5-1.1 lbs./A on all soils except those listed under Precautions. For control of pigweed and wild sunflower, use only the higher rate. Apply to stubble ground. Treat only once during the same fallow period.

### TANK MIXTURES FOR CHEMICAL FALLOW

#### **Wheat-Sorghum-Fallow or Wheat-Corn-Fallow (KS, NE)**

**Gramoxone Extra:** If weeds are present at application, a tank mix with Gramoxone Extra may be used. Broadcast 3.3 lbs. of Atrazine 90SDF plus a suitable amount of Gramoxone Extra in 20-60 gals. of water per acre by ground equipment. Refer to the Gramoxone Extra label for the appropriate rates to utilize in this tank mixture. Add 0.5-1 pint of nonionic surfactant, such as X-77, per 100 gals. of spray mixture. Add Atrazine 90DF to the spray tank first and thoroughly mix with water. Then add Gramoxone Extra, followed by surfactant. Use the higher rate of Gramoxone Extra specified on label 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 the same fallow period. Refer to Gramoxone Extra label for further directions, precautions and limitations.

#### **Wheat-Fallow-Wheat (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 Atrazine 90DF plus a suitable amount of Gramoxone Extra in 20-60 gals. of water/A by ground equipment. Add 0.5 to 1 pint of a nonionic surfactant, such as X-77, per 100 gals. of spray mixture. Add Atrazine 90DF to the spray tank first and thoroughly mix with water. Then add Gramoxone Extra, followed by surfactant. Use the higher rate of

Gramoxone Extra specified on label 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 the 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: To avoid crop injury:**

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

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

**Aerial Application:** In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft., 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 nontarget plants, apply Atrazine 90DF alone by aircraft at a minimum upwind distance of 400 ft. 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 1.1 lbs./A in a minimum of 10 gals. of water by ground equipment in the fall before ground freezes, or after thawing in the spring, but before the established grasses greenup and before weeds emerge. Examples of desirable established grasses include big bluestem, bluegrama, bromegrass, buffalograss, crested wheatgrass, indiangrass, little bluestem, side-oats grama, switchgrass, and western wheatgrass. Apply only once per year. Temporary discoloration or other form of injury to the desirable perennial grasses may occur following application.

Note: To avoid illegal residues,

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

**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, maretail, pigweed, prickly lettuce, smooth brome, and sunflower, refer to directions, notes, and precautions below.

**Pure stands of newly seeded big bluestem, switchgrass and eastern gamagrass.**

Use only on loam, silt loam, silty clay loam, clay loam, and silty clay soils with at least 1% organic matter.

**Establishment:** Broadcast 2.2 lbs./A of Atrazine 90DF preplant incorporated or preemergence at time of seeding and prior to emergence of weeds. Prepare a good firm seedbed. Plant 1/2 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 1.1-2.2 lbs./A to existing stands of big bluestem and switchgrass prior to the emergence of weeds. Use the low rate on soils containing from 1-2% 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 0.6-1.1 lbs./A 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 rates for weeds controlled or suppressed easily. Use the higher rate on other weeds claimed in an earlier 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 Atrazine 90DF by aircraft at a minimum upwind distance of 400 ft. from sensitive plants. Use 3-5 gals./A total water volume; use the higher water volume when a dense, heavy ground cover is present.

**Note:**

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 the reach of livestock.
5. Follow all applicable restrictions for the Conservation Reserve Program.

**Precautions:** 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 for grazing or making of hay from CRP acres that have been treated with atrazine under any circumstances.

### SUGARCANE

For control of many broadleaf weeds and grass weeds, including amaranths, crabgrass, fireweed, Flora's paintbrush, foxtails, junglerice and wiregrass, broadcast 2.2-4.4 lbs./A of Atrazine 90DF at time of planting or ratooning, but before sugarcane emerges. For aerial application, broadcast in a minimum of 5 gals. of spray per acre, or broadcast or band by ground equipment in a minimum of 20 gals./A, 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 made 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, apply in a minimum of 1 gal. of water for each 1 lb. of Atrazine 90DF 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 ft. using low drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speeds do not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply Atrazine 90DF alone by aircraft at a minimum upwind distance of 400 ft. from sensitive plants.

### Florida

For control of emerged pellitory weed: Apply 0.4-0.6 lbs./A in at least 40 gallons of water as a directed spray, by ground equipment, prior to close-in. Add 4 quarts of surfactant for each 100 gals. 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 preemergence. Follow with 1 or 2 applications as needed, postemergence to sugarcane and weeds at 2.2 lbs./ A. Treat before weeds exceed 1.5 inches in height.
2. Apply 1-3 times, as needed, at 2.2 lbs./ A 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 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 to any one crop of sugarcane.
2. If making 2.2 lbs./ A applications during the summer fallow period, do not exceed 8.8 lbs./ A 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 1 or 2 applications as needed at 3.3 lbs./ A postemergence to sugarcane and weeds.

For best results, when weeds are emerged, add a nonionic surfactant at a concentration of 2 qts./100 gals. 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 to any one crop of sugarcane, or crop injury may result.

**TURFGRASS FOR SOD  
(Florida Only)**

**St. Augustinegrass, Centipedegrass, and Zoysiagrass**

Broadcast 2.2-4.4 lbs./ A according to soil texture to control those weeds listed under for 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.<br>New Beds: Within 3-4 days after sprigging or plugging.  |
| Sandy Soil   | 2.2 lbs. | Old Beds: Within 2 days after lifting sod.<br>New Beds: Within 7-10 days after sprigging or plugging. |



If weeds regrow, apply an additional 2.2 lbs./A on muck or peat, or 1.1 lbs./A on sandy soil.

**Precautions: To avoid crop injury:**

1. Do not apply within 30 days prior to cutting or lifting.
2. Do not apply in combination with surfactants or other spray additives.
3. Use only on turfgrass reasonably free of infestations of insects, nematodes and diseases.
4. On newly sprigged turfgrass, temporary slowing of growth may follow applications.

**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 (Florida only)" section.

**Bermudagrass, Centipedegrass, St. Augustinegrass and Zoysiagrass**

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 the time of treatment. For control of summer annual weeds listed in the preemergence section 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 gals. of water per acre or 1 gal. per 1,000 sq. ft.

Where annual bluegrass is the major weed, use 1.1 lbs. of Atrazine 90DF (0.4 fl. oz. per 1,000 sq. ft.). Use 2.2 lbs./A (0.8 fl. oz. per 1,000 sq. ft.) for control of the other weeds named above. Do not exceed 1.1 lbs./A 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 at least 30 days after previous application, but not after April 15. However, do not make more than two applications of this product per year.

**Precautions:** On newly sprigged turfgrass and hybrid bermudagrass, temporary slowing of growth and yellowing may occur following application. To avoid turf injury,

1. Use only on turfgrass reasonably free of infestations of insects, nematodes and diseases.
2. Do not use on golf greens.
3. Do not use north of NC (except may be used in VA Coastal Plains) or west of the high rainfall areas of eastern OK and eastern TX.
4. Do not use on muck or alkaline soils.
5. Do not apply over the rooting area of trees or ornamentals not listed on this label.
6. Do not overseed with desirable turfgrass within 4 months before or 6 months after treatment.

7. Do not apply this product to newly seeded Bermudagrass until it has overwintered and has a well-developed rhizome system. Do not exceed 2.2 lbs. product per acre 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 firewood, broadcast 2.2-4.4 lbs./A before harvest and before weeds emerge. Repeat as necessary. Do not spray when nuts are on the ground or during the harvest period. Do not apply by air.

### GUAVA

- Use only on established plantings which are at least 18 months old. Apply as a directed spray, at 2.2-4.4 lbs./A of Atrazine 90DF in 20-50 gals. 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 sowthistles.

Note: 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 8.8 lbs. of Atrazine 90DF per year.

### CONIFERS

- For control of annual broadleaf and grass weeds prior to transplanting, after transplanting, or in established conifers (including Douglas fir, grand fir, noble fir, white fir, Austrian pine, bishop pine, Jeffrey pine, knobcone pine, loblolly pine, lodgepole pine (shore pine), monterey pine, ponderosa pine, Scotch pine, slash pine, blue spruce and Sitka spruce): Broadcast 2.2-4.4 lbs. in a minimum of 5 gals. of water per acre by air or 10 gals. 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 90DF before transplanting. In areas where spring and summer rainfall is inadequate to activate Atrazine 90DF, apply during fall prior to spring transplanting.

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

**Quackgrass Control:** Broadcast 4.4 lbs. in a minimum of 5 gals. of water per acre by air or 10 gals. by ground, between fall and early spring while trees are dormant and before quackgrass is more than 1.5 inches in height.

**Precautions:**

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 90DF on coarse textured soil.
4. To avoid crop injury, do not apply to seedbeds.
5. Also apply only once per year.

**Aerial Application:** In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft. above vegetation, using low drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed do not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply Atrazine 90DF by aircraft at a minimum upwind distance of 400 ft. from sensitive plants.

## CONDITIONS OF SALE AND WARRANTY

**Conditions of Sale:** This product is sold subject to, and buyer and user are deemed to have accepted the terms contained in, the Conditions of Sale and Warranty, Directions for Use, and Precautionary Statements, which may be varied only by agreement in writing by a duly authorized representative of WILFARM L.L.C.

**Inherent Risks:** The directions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of WILFARM L.L.C. or the seller. All such risks shall be assumed by the buyer.

**Warranty Limitations:** WILFARM L.L.C. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks referred to above. WILFARM L.L.C. makes no other expressed or implied warranty of fitness or merchantability or any other expressed or implied warranty.

**Limitation of Liability:** In no case shall WILFARM L.L.C. or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product. No claim of any kind shall be greater in amount than the purchase price of the product in respect of which such damages are claimed.

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