

9779-253

9/25/2014

1/22

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460



OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

September 25, 2014

Danielle Erding  
Winfield Solutions LLC  
P.O. Box 64589  
St. Paul, MN 55164

Subject: Label Notification per PRN 98-10 and 2001-05 –  
Add Resistance Management Language and Group Number  
Product Name: Atrazine 90DF  
EPA Registration Number: 9779-253  
Application Date: September 9, 2014

Dear Ms. Erding:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 and 2001-05 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and 2001-05 and finds that the action requested falls within the scope of PRN 98-10 and 2001-05.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, you may contact Maggie Rudick at 703-347-0257 or via email at [rudick.maggie@epa.gov](mailto:rudick.maggie@epa.gov).

Sincerely,

*Maggie Rudick  
for*

Kable Bo Davis, Product Manager 25  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs



United States  
Environmental Protection Agency

Washington, DC 20460

- Registration
- Amendment
- Other

OPP Identifier Number

**Application for Pesticide -Section I**

1. Company/Product Number 9779-253	2. EPA Product Manager Kable Bo Davis	3. Proposed Classification <input type="checkbox"/> None <input checked="" type="checkbox"/> Restricted
4. Company/Product (Name) Atrazine 90DF	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Winfield Solutions LLC, c/o Danielle Erding P.O. Box 64589 St. Paul, MN 55164-0589 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:  EPA Reg. No.:  Product Name:	

**Section I I**

- Amendment - Explain Below
- Resubmission in response to Agency letter dated \_\_\_\_\_
- Notification - Explain below
- Final printed labels in response to Agency letter dated June 11, 2009
- "Me Too" Application
- Other - explain below

**NOTIFICATION**  
**SEP 25 2014**

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II).  
Notification of Addition of Resistance Management Recommendations and MOA code to label, consistent with PR Notice 2001-5, and per PR Notice 98-10. I believe this notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under section 12 and 14 of FIFRA.

**Section I I I**

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
*Certification must be submitted.		If "Yes," Unit Package Wt.      No. Per Container	If "Yes," Package Wt.              No. Per Container

3. Location of Net Contents Information  
 Label       Container

4. Size(s) of Retail Container  
25 lb. plastic bags

5. Location of Label Directions  
 On Label  
 On Labeling accompanying product

6. Manner In Which Label Is Affixed To Product  
 Lithograph       Other ( self-adhesive booklet)  
 Paper Glued  
 Stenciled

**Section I V**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)

Name Danielle Erding	Title Registration Specialist	Telephone No. (Include Area Code) 651-375-7228
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**Certification**  
I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature  
*Danielle Erding*

3. Title  
Registration Specialist

4. Typed Name  
Danielle Erding

5. Date  
September 9, 2014

6. Date Application Received  
(Stamped)

P 651-375-7228 P.O. BOX 64589, MS 5705, ST PAUL MN 55164  
F 651-234-0291 SHIP TO 1080 COUNTY ROAD F WEST, MS 5705, SHOREVIEW MN 55126-2910

September 9, 2014

Mr. Kable Bo Davis, PM 25  
Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504C)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460-0001

Subject: EPA Reg. No. 9779-253, Atrazine 90DF  
Notification of Label Amendment  
Addition of Resistance Management Recommendation and MOA Code per PR Notice 2001-5

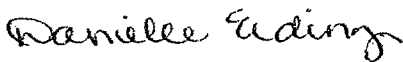
Dear Mr. Davis:

Enclosed are a Notification Application and five copies of amended labeling for the subject product. The labeling incorporates an herbicide resistance management recommendation and MOA code, consistent with the guidance provided in the Agency's PR Notice 2001-5.

Please note that one copy of the enclosed labeling has been highlighted (in yellow), to point out the revisions. No other label changes are being made at this time.

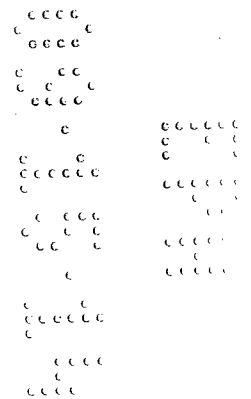
If there are questions concerning the enclosed, please do not hesitate to contact me.

Sincerely,



Danielle Erding  
Registration Specialist  
deerding@landolakes.com

Enclosures



4/22

# 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.

**NOTIFICATION**  
**SEP 25 2014**

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 to 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.

EPA Reg. No. 9779-253

EPA Est. No.

Distributed By  
Winfield Solutions, LLC  
P.O. Box 64589, St. Paul, MN 55164-0589

NET CONTENTS

1/0319/3 1/0909/4

**WINFIELD**

**AgriSOLUTIONS**  
TM

**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):**

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

**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 such as polyethylene or polyvinyl chloride, chemical-resistant footwear plus socks, and chemical-resistant apron plus a NIOSH-approved dust/mist filtering respirator with any N, R, P, or HE filter or a NIOSH-approved dust/mist filtering respirator with approval number prefix TC-21C.

**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 such as polyethylene or polyvinyl chloride.

**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, such as polyethylene or polyvinyl chloride.

Aerial application is prohibited.

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.

**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.

Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or higher setbacks) which are different from the label, the more restrictive/protective requirements apply.

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

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

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.

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 such as any waterproof material, and shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter until sprays have dried.

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.

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.

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.

RESISTANCE MANAGEMENT RECOMMENDATIONS

ATRAZINE 90DF is a Group 5 herbicide. Any weed population may contain or develop plants naturally resistant to ATRAZINE 90DF and other Group 5 herbicides. Weed species with acquired resistance to Group 5 may eventually dominate the weed population if Group 5 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by ATRAZINE 90DF or other Group 5 herbicides.

To delay herbicide resistance consider:

- Avoiding the consecutive use of ATRAZINE 90DF or other target site of action Group 5 herbicides that have a similar target site of action, on the same weed species.
- Using tank-mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors, and/or Winfield Solutions, LLC representative for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

APPLICATION PROCEDURES

Aerial application of dry flowable products that are not packaged in water soluble bags 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.

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**

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.

<p>Table 1: <u>Broadleaf and Grass Weed Control in Corn*</u></p> <p><u>FOR ALL SOIL APPLICATIONS PRIOR TO CROP EMERGENCE</u></p> <p><u>On Highly Erodible Soils</u></p> <p>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.</p> <p>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.</p> <p><u>On Soils Not Highly Erodible</u></p> <p>Apply 2.2 lbs./A of Atrazine 90DF (2 lbs. ai/A maximum) as a broadcast spray.</p> <p><u>FOR POSTEMERGENCE APPLICATION</u></p> <p>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</p>
--

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®  
Eradicane®

Sutan®  
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.
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.

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 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 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 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: 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, 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 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), 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  
Basagran

Laddok®  
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: 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 (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 (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 (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 (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.

#### 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. per acre in a minimum of 10 gallons of water by ground equipment in the fall before ground freezes, or after thawing in the spring, but before the established grasses green-up and before weeds emerge. Examples of desirable established grasses include big bluestem, bluegrama, bromegrass, buffalograss, crested wheat grass, 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.

Notes: To avoid illegal residues, (1) Do not cut or feed roadside grass hay. (2) Do not allow livestock to graze treated areas. Do not apply more than 1 pound active ingredient per acre for any application. Do not apply more than one application per year.

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

For control or suppression of the following weeds: annual ragweeds, barnyardgrass, black nightshade, cheat, cocklebur, downy brome, fall panicum, field pennycress, giant foxtail, yellow foxtail, Japanese brome, Kentucky bluegrass, kochia, lambsquarters, little barley, maretail, pigweed, pricklylettuce, smooth brome, and sunflower, refer to the directions, notes, and precautions below.

Pure stands of newly seeded big bluestem, switchgrass, and eastern gramagrass

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

Establishment: Broadcast 2.2 lbs. per acre 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. per acre 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: Bluegrama, Indiangrass, little bluestem, sand lovegrass, sideoats grama, and Western wheatgrass.

Broadcast 0.6 - 1.1 lbs. per acre 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 1 growing season for control or partial control of the weeds listed above. Use the low rate for weeds controlled or suppressed easily, use the higher rate on other weeds claimed in an earlier section of this label.

Notes: (1) Do not cut or feed grass hay to livestock. (2) Do not graze treated areas. (3) Do not use seeds for bird food. (4) Do not dump or spill product or dispose of containers within reach of livestock. (5) Follow all applicable restrictions for the Conservation Reserve Program.

Precautions: Do not make more than one application per year. Slight discoloration of desirable grasses may occur following treatment. Injury may be enhanced when used on neutral or alkaline soils. Do not apply more than 2 pounds active ingredient per acre for any application.

#### **SEVERE DROUGHT CONDITONS**

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

## 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.

Where annual bluegrass is the major weed, use 1.1 lbs. of Atrazine 90DF per acre (0.4 fl. oz. per 1,000 sq. ft.). Use 2.2 lbs./A of Atrazine 90DF (0.8 fl. 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.

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.

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.

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.

### 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, Jeffery 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 gal. of water per acre by air or 10-40 gal. by ground before weeds are 1.5 inches tall. Apply to established trees between fall and early spring while trees are dormant. For new transplants, apply during or soon after transplanting. For applications prior to transplanting, allow sufficient precipitation to activate atrazine before transplanting. In areas where spring and summer rainfall is inadequate to activate atrazine, apply during fall prior to spring transplanting.

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

Quackgrass control: Broadcast 4.4 lbs. in a minimum of 5 gal. of water per acre by air or 20-40 gal. by ground between fall and early spring while trees are dormant and before quackgrass is more than 1.5 inches tall.

Note: Temporary injury to trees may occur following the use of atrazine on coarse-textured soil.

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) Do not apply to seedbeds. (5) Apply only once per year. (6) Do not apply more than 4 lbs active ingredient per acre for any application. Do not apply more than 4 pounds active ingredient per year.

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