

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

November 10, 2021

Bill Washburn Registration Manager Helena Agri-Enterprises, LLC 225 Schilling Blvd., Suite 300 Collierville, TN 38017

Subject: Registration Review Label Amendments for Atrazine Incorporating Mitigation Measures from the Interim Decision and the Technical Registrants' Commitments for the Endangered Species Act (ESA) Biological Evaluation *Product Name*: Atrazine 4L *EPA Registration Number*: 5905-470 *Application Date*: October 16, 2020 *Decision Number*: 566989

Dear Mr. Washburn:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Atrazine Interim Decision and with the technical registrants' commitments for the ESA Biological Evaluation. The Agency has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only

Page 2 of 2 EPA Reg. No. 5905-470 Decision No. 566989

distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Anna Romanovsky at <u>romanovsky.anna@epa.gov</u>.

Sincerely,

2 .

Linda Arrington, Branch Chief Risk Management and Implementation Branch 4 Pesticide Re-Evaluation Division Office of Pesticide Programs

Enclosure

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. 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 GROUP 5 HERBICIDE



For Season-long Weed Control in Corn and Sorghum For Weed Control in Certain Other Crops and Industrial Sites

ACTIVE INGREDIENTS:	
Atrazine (2-chloro-4-ethylamino)-6-(isopropylamino)-s-triazine	40.8 %
Related Compounds	2.2 %
INERT INGREDIENTS:	.57.0 <u>%</u>
TOTAL	100.00%
This product contains 4 lbs. of atrazine per gallon.	

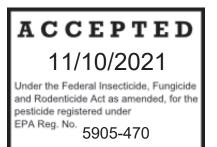
KEEP OUT OF REACH OF CHILDREN CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA REG. NO. 5905-470 NET CONTENTS: EPA EST. NO.: AD 070710



MANUFACTURED FOR HELENA AGRI-ENTERPRISES, LLC 225 SCHILLING BOULEVARD, SUITE 300 COLLIERVILLE, TENNESESEE 38017



	FIRST AID
IF IN EYES:	 Hold eyelid 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 immediately for treatment advice.
IF SWALLOWED:	 Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Have a person sip a glass of water if able to swallow. Do not give anything to an unconscious or convulsing person.
IF ON SKIN OR CLOTHING:	 Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor immediately for treatment advice.
IF INHALED:	 Move victim to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
	HOT LINE NUMBER
	ntainer or label with you when calling a poison control center or doctor or going for treatment. In case of mtrec at 1-800-424-9300.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Do not get in eyes, skin, or clothing. Harmful if swallowed, absorbed through skin, or inhaled. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Personal Protective Equipment (PPE)

Mixers, Loaders, Applicators, Flaggers and other handlers must wear:

- Protective eyewear
- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils or Viton® ≥14 mils
- Shoes plus socks

See Engineering Controls for additional requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, 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.

USER SAFETY RECOMMENDATIONS:

- 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.

Engineering Control Statements

User should:

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

ENVIRONMENTAL HAZARDS

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 water mark. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

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

Ground Water Advisory

Atrazine can travel (seep or leach) through soil and can enter ground water 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.

Atrazine has the potential to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory

The active ingredients in this product have the potential to contaminate surface water through ground spray drift. Under some conditions, the active ingredients may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly drained or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Sound erosion control practices will reduce this product's contribution to surface water contamination.

Mixing/Loading Instructions

Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates. Check valves or antisiphoning devices must be used on mixing equipment.

This product must not be mixed or loaded or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing to this product into or from pesticide handling or application equipment or containers within 50 ft. of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain, at a minimum, 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipments to the mixing/loading site.

This product must not be mixed or loaded within 50 ft. of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product must not be applied within 66 ft. of 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 ft. buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

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

Tile-Outletted Terraced Fields Containing Standpipes

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

- Do not apply within 66 ft. 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.

PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow to come in contact with oxidizing agents. Hazardous chemical reaction may occur.

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], or [1-866-365-3014]. If use of this product is prohibited in your watershed, you may also return this product to your point of purchase or contact Helena Agri-Enterprises, LLC for a refund.

RESTRICTIONS:

Not for use in the states of Hawaii or Alaska, or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands).

Use on roadsides; Conservation Reserve Program (CRP) land; conifers, including Christmas Tree plantings; timber; forestry; and, Miscanthus and other perennial bioenergy crops is prohibited.

Users must only apply to fallow land in the following states according to the prescribed rotation pattern in the table below:

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

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.

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

When tank-mixing or sequentially applying Atrazine or products containing Atrazine to corn or sorghum, do not exceed an application rate of 2.0 pounds active ingredient of Atrazine per acre for any single application, and the total pounds of Atrazine applied (lbs. a.i./A) must not exceed 2.5 pounds active ingredient 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 active ingredient/A) must not exceed the specific seasonal rate limits as noted in the use directions.

ENDANGERED SPECIES

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

AGRICULTURAL USE REQUIREMENTS

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

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

Protective eyewear Shoes plus socks Coveralls

Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, neoprene rubber ≥14 mils or Viton® ≥14 mils

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.

PRODUCT INFORMATION

This herbicide controls many annual broadleaf and grass weeds in corn, sorghum, sugarcane, and certain other crops specified on this label. It is also effective in industrial sites for control of most annual and many perennial broadleaf and grass weeds. 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 nonflammable.

Avoid using near adjacent desirable plants or in green houses, 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.

Note: Helena Agri-Enterprises, LLC does not recommend applications in combination with other herbicides or oils, except as specifically described on this label.

WEED RESISTANCE-MANAGEMENT

For resistance management, ATRAZINE 4L Herbicide contains atrazine (Group 5 herbicide). Any weed population may contain or develop plants naturally resistant to ATRAZINE 4L Herbicide and other Group 5 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

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

- Rotate the use of ATRAZINE 4L Herbicide or other Group 5 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to
 herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates;
 precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and
 other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weedmanagement recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Helena Agri-Enterprises, LLC representatives at 901-761-0050 or at www.helenaagri.com.

Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.

Fields should be scouted after application to verify that the treatment was effective.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your Helena Agri-Enterprises representative or call 901-761-0050. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

Plant into weed-free fields and keep fields as weed-free as possible.

To the extent possible, use a diversified approach toward weed management. Whenever possible incorporate multiple weed-control practices such as mechanical cultivation, biological management practices, and crop rotation.

Fields with difficult to control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.

To the extent possible do not allow weed escapes to produce seeds, roots or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup of the weed seedbank.

Prevent field-to-field and within-field movement of weed seed or vegetative propagules. Thoroughly clean plant residues from equipment before leaving fields.

Prevent an influx of weeds into the field by managing field borders.

Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program should consider all of the weeds present.

Difficult to control weeds may require sequential applications of herbicides with differing mechanisms of action.

Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.

Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed-control program. Do not use more than two applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.

Integrated Pest (Weed) Management

ATRAZINE 4L Herbicide may be integrated into an overall pest management strategy. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding, and rotations) should be followed wherever possible. Consult local agricultural authorities or weed control specialists for additional Integrated Pest (Weed) Management strategies established for your area.

APPLICATION PROCEDURES

Ground boom 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 application (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, 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 gals/minute/100 gal. tank size circulated through a correctly positioned sparger tube or jets.

Use screen to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be 18-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.

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Boom Applications:

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

Aerial application: Use aerial application only where broadcast applications are specified. Apply in a minimum of 1 qt. of water for each quart of this product applied per acre. For postemergence treatments on corn and sorghum, apply recommended rate in a minimum of 2 gals. of water/A. Avoid applications under conditions where coverage cannot be obtained or where excessive spray drift may occur.

MANDATORY SPRAY DRIFT MANAGEMENT

Aerial Applications:

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Do not apply during temperature inversions.
- If the windspeed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter

for helicopters.

- Applicators are required to use a coarse or coarser droplet size (ASABE S572).
- User must maintain a 150 foot (46 m) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.

SPRAY DRIFT ADVISORIES

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

IMPORTANCE OF DROPLET SIZE

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

Controlling Droplet Size – Ground Boom

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

Controlling Droplet Size – Aircraft

 Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

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

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

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

TEMPERATURE AND HUMIDITY

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

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

WIND

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

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, except as noted under Lay-by treatment for corn, or crop injury may occur.

For band applications, calculate amount to be applied per acre as follows:

band width in inches		Broadcast rate		amount needed
row width in inches	Х	per acre	=	per acre of field

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 fertilizer, 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 gals. per acre. For other spray volumes, make appropriate changes in the ingredients. Check compatibility using this procedure:

Within rate ranges in all tables on this label, use the lower rate on soil relatively coarse-textured or low in organic matter; use the higher rate on soil relatively fine-textured or high in organic matter.

Rotation 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 4 pts. of **ATRAZINE 4L**/A or equivalent band application rate, or soybean injury may occur. (5) Injury may occur to soybeans 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 4L APPLIED ALONE - CORN OR GRAIN SORGHUM*

The maximum application rate of corn and sorghum is 2.5 lbs. active ingredient (5 pts. **ATRAZINE 4L**) per acre per calendar year. Application for quackgrass suppression in corn and sorghum are restricted to a spring application only. No fall applications are permitted. Postemergence application to corn and sorghum must be made before corn and sorghum reaches 12 inches in height.

Preplant surface - Applied, Preplant Incorporated, or Preemergence (or Postemergence at 4 pts. **ATRAZINE 4L** /A with Oil). The maximum single application rate for corn and sorghum is 2 lbs active ingredient per acre per year.

Broadleaf or Grass Weeds Controlled

Barnyard grass*** (watergrass) Cocklebur** Nightshade Giant foxtail** Groundcherry Pigweed Green foxtail*** Jimsonweed Purslane Large (hairy) crabgrass** Kochia Ragweed Wild oats Lambsquarters Sicklepod** Witchgrass Annual morningglory Velvetleaf (panicum capillare)*** Mustards (buttonweed)*** Yellow foxtail***

Postemergence with Emulsifiable Oil or Oil Concentrate in Water (2 + 2.4 pts./A)

Broadleaf Weeds Controlled

Annual morningglory	Mustards
Lambsquarters	Smartweed
Ragweed	Jimsonweed
Cocklebur	Pigweed

Wild buckwheat Velvetleaf**

*Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or higher set-backs) which are different from the label, the more restrictive/protective requirements apply. 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, IL, IN, IA, KS, KY, MN, MO, MT, NE, ND, SD, WI, and WY. Apply 2/3 the recommended rate of **ATRAZINE 4L** shown in Table 1 for the soil texture as a split treatment 30-45 days prior to planting and the remainder at planting. Applications made less than 30 days prior to planting may be as either a split or single treatment. On coarse-textured soils, do not apply more than two weeks prior to planting.

If weeds are present at the time of treatment, apply in tank mix combination with a contact herbicide, (for example, Gramoxone® or Roundup®). Observe directions for use, 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 rate in Table 1.

Table 1: Broadleaf and Grass Weed Control on Corn*

FOR ALL SOIL APPLICATIONS PRIOR TO CROP EMERGENCE

On Highly Erodible Soils (as defined by the Natural Resource Conservation Service)

If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at planting, apply a maximum of 2.0 pounds active ingredient (4 pints of **ATRAZINE 4L**) per acre as a single pre-emergence application.

If the soil coverage with plant residue is less than 30% at planting, apply a maximum of 1.6 pounds active ingredient (3.2 pints of **ATRAZINE 4L**) per acre as a single pre-emergence application.

On Soils Not Highly Erodible

Apply a maximum of 2 pounds active ingredient (4 pints of ATRAZINE 4L) per acre as a single preemergent broadcast spray.

FOR POSTEMERGENCE APPLICATION

If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 pounds active ingredient (4 pints of **ATRAZINE 4L**) per acre broadcast. If a postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds active ingredient (5 pints of **ATRAZINE 4L**) per acre per calendar year.

*Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or higher set-backs) which are different from the label, the more restrictive/protective requirements apply. 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. *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 2.4 pts. of ATRAZINE 4L /A, either preplant surface, preplant incorporated, or preemergence. On other soils in these areas, apply rate in Table 1 for broadleaf and grass control.

Lay-by treatment (Broadleaf and grass control): Broadcast 2-4 pts. of ATRAZINE 4L /A before weeds are 1.5 inches tall and before corn is 12 inches tall. When using nitrogen solutions, direct the spray to lower 3-4 inches of cornstalks to avoid corn foliage injury.

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	1 qt. a.i./A	1/2 - 1 qt. a.i./A
(Crop or Petroleum-derived)		
Petroleum-derived oil	1 gal. a.i./A	2 qts. a.i./A
	-	

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

Broadleaf and grass control: For postemergence control of those weeds listed under Preplant Incorporated and Preemergence, broadcast 4 pts. of ATRAZINE 4L /A plus emulsifiable oil or oil concentrate after weed emergence, but before weeds reach 1.5 inches in height.

Broadleaf control: For postemergence control of those weeds listed under Post-emergence with emulsifiable oil or oil concentrate in water, broadcast 2.4 pts. of **ATRAZINE 4L** /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.

Use 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. To avoid crop injury,
 (4) 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 5 pts. of ATRAZINE 4L) per acre per calendar year.
 (6) Postemergence applications to corn must be made before corn reaches 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®	Lasso® or Lasso® EC + Gramoxone®
Dual® + Roundup® (glyphosate)	Gramoxone®
Dual® + Princep®	Princep®
Dual® + Princep® + Gramoxone®	Princep® + Gramoxone®
Dual® + Princep® + Roundup®	Princep® + Roundup®
Ramrod® (propachlor)	Roundup®
Lasso® or Lasso® EC (alachlor)	Sencor® 4
	Sutan + ®

Use tank mix direction appearing on the labels of the above herbicides when tank mixing with this product. Observe all use 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 4L. One lb. of 80W equals 1.6 pts. of ATRAZINE 4L.

Princep® 80W, Princep® 4L, or Princep® Caliber® 90

In addition to the weeds listed under **ATRAZINE 4L** Applied Alone - Corn and 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, IL, IN, IA, KS, KY, MN, MO, MT, NE, ND, SD, WI, and WY. Apply 2/3 the recommended rate of **ATRAZINE 4L** and Princep® shown in Table 2 for the soil texture as a split treatment 30-45 days prior to planting and the remainder at planting. Applications made less than 30 days prior to planting may be as either a split or single treatment. On coarse-textured soils, do not apply more than two weeks prior to planting. Refer to the **ATRAZINE 4L** 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® or Roundup®). Observe directions for use, 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 use precautions.

Table 2: Tank Mixtures with Princep® on Corn

	Broadcast Rate/A				
	1:1 Ratio*		1:2 Ratio**		
Soil Texture	This Product	Princep® 80W ¹	This Product	Princep® 80W ¹	
Sand, loamy sand, sandy loam	2 pts.	1.25 lbs.	1.32 pts.	1.67 lbs.	
Loam, silt loam, silt, clay loam, sandy clay loam, silty clay loam, sandy clay, or silty clay with low organic matter	2.4 pts.	1.5 lbs.	1.6 pts.	2 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)	3 pts.	1.8 lbs.	1.92 pts.	2.4 lbs.	

*For control of most weeds

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

¹When using Princep® Caliber 90® or Princep® 4L use equivalent rates. One lb. of Princep® 80W equals 0.9 lb. of Princep® Caliber 90® or 1.6 pts. of Princep® 4L.

For soil applications prior to crop emergence (i.e., early preplant, preplant incorporated, preplant surface, at planting or preemergence) the following applies:

a. On highly erodible soils, as defined by the Natural Resource Conservation Service (NRCS), if conservation tillage is utilized (>30% plant residue), the maximum rate is 2 pounds active ingredient (4 pints of **ATRAZINE 4L**)/A. If plant residue is < 30%, the maximum rate is 1.6 pounds active ingredient (3.2 pints of **ATRAZINE 4L**)/A.

b. Apply a maximum of 2 pounds active ingredient (4 pints of **ATRAZINE 4L**) per acre as a single preemergent broadcast application.

For postemergence applications, if there has been no previous soil application to that crop, the maximum rate is 2 pounds active ingredient (4 pints of **ATRAZINE 4L**)/A. If there has been a previous soil application to that crop, do not exceed a total of 2.5 pounds active ingredient (5 pints of **ATRAZINE 4L**)/A per calendar year.

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, use precautions, and limitations.

Princep® 80W, Princep® 4L or Princep® Caliber 90® plus Gramoxone®: Use as tank mixture with Princep® and Gramoxone® 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® and a nonionic surfactant, such as INDUCE®. Continue agitation during application. Broadcast 2-4 pts. of ATRAZINE 4L plus 1.25-2.5 lbs. Princep® 80W [or 2-4 pts. Princep® 4L, or 1.1-2.2 lbs. Princep® Caliber 90®] plus 1.5-2.5 pts. Gramoxone® in 20-60 gals. of water per sprayed acre. Apply before, during, or after planting, but before corn emerges. Add 0.5 pt. of a nonionic surfactant, such as INDUCE®, per 100 gals. of spray mixture. Use the 2.5 pt. rate of Gramoxone® if existing vegetation is 4-6 inches tall. This mixture will not control weeds taller than 6 inches.

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

Use precautions for all applications to corn: (1) To avoid crop injury and illegal residues, do not apply more than 5 pts. of **ATRAZINE 4L** /A of this product per year. For postemergence applications, if there has been no previous soil application to that crop, the maximum rate is 2 lbs. active ingredient (4 pints of **ATRAZINE 4L**)/A. If there has been a previous soil application to that crop, do not exceed a total of 2.5 lbs. active ingredient (5 pints of **ATRAZINE 4L**)/A. If there has been a previous soil application to that crop, do not exceed a total of 2.5 lbs. active ingredient (5 pints of **ATRAZINE 4L**)/A per calendar year. (2) 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. Field corn forage uses: 60-day PHI. Sweet corn forage uses: 45-day PHI.

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

Preplant Surface-Applied (Broadleaf and grass control): Use on medium- and fine-textured soil with minimum tillage or no-tillage systems only in CO, IL, IN, IA, KS, KY, MN, MO, MT, NE, ND, SD, WI, and WY. Apply 2/3 the recommended rate of **ATRAZINE 4L** shown in Table 3 for the soil texture as a split treatment 30-45 days prior to planting and the remainder at planting.

Applications made less than 30 days prior to planting may be as either a split or single treatment. Under dry conditions, irrigation after application is recommended to move **ATRAZINE 4L** into the soil.

If weeds are present at time of treatment, apply in a tank mix combination with a contact herbicide (for example, Gramoxone® or Roundup®). Observe directions for use, 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 (Broadleaf and grass control): Apply during or shortly after planting but prior to weed or crop emergence at rate shown in Table 3. Pre-emergent sorghum forage uses: 60-day PHI.

Table 3: Broadleaf and Grass Weed control in Sorghum*

FOR ALL SOIL APPLICATIONS PRIOR TO CROP EMERGENCE

On Highly Erodible Soils (as defined by the Natural Resource Conservation Service)

If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at planting, apply 2.0 pounds active ingredient (4 pints of **ATRAZINE 4L**)per acre as a single pre-emergence application.

If the soil coverage with plant residue is less than 30% at planting, apply a maximum of 1.6 pounds active ingredient (3.2 pints of **ATRAZINE 4L**)per acre as a single pre-emergence application.

On Soils Not Highly Erodible

Apply a maximum of 2 pounds active ingredient (4 pints of ATRAZINE 4L) per acre as a single preemergent broadcast application.

FOR ALL POSTEMERGENCE APPLICATION

If no atrazine was applied prior to sorghum emergence, apply a maximum of 2.0 pounds active ingredient (4 pints of **ATRAZINE 4L**) per acre broadcast. If a postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 5 pints of **ATRAZINE 4L** per acre per calendar year.

*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.

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. However, the maximum application rate for sorghum is 5 pts. of **ATRAZINE 4L** per acre per calendar year.

Preemergence broadleaf weed control in furrow irrigated bedded sorghum (AZ and CA only): For preemergence control of many broadleaf weeds, broadcast 1.6-2.4 pts. of ATRAZINE 4L /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.

Use precautions for preemergence application to furrow irrigated bedded sorghum in AZ and CA: To avoid possible sorghum injury, do not use on sand or loamy sand soil or on sorghum planted in furrows. Applications to sorghum growing in 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 shown in Table 3 before weeds exceed 1.5 inches in height. Postemergence application to sorghum must be made before sorghum reaches 12 inches in height. Postemergent sorghum forage uses: 45-day PHI.

Postemergence broadleaf weed control with emulsifiable oil or oil concentrate in water: Broadcast 2.4 pts. of **ATRAZINE 4L** /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 6-10 inches in height, but before it reaches boot stage or no higher than 12". Add 1 gal. of emulsifiable oil/A for ground application and 0.5 gal./A for aerial application, or add 1 qt./A of oil concentrate for ground application. A cultivation may be necessary if all weeds are not controlled or if weeds regrow.

For the list of weeds controlled, see **ATRAZINE 4L**, Applied Alone - Corn or Grain Sorghum - Postemergence with Emulsifiable Oil or Oil Concentrate in Water.

Use precautions for applications with emulsifiable oil or oil concentrate in water: See "Use 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 2-4 pts. of ATRAZINE 4L /A 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.

Use 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 surface, preplant incorporated, or preemergence, and an at-planting systemic insecticide applied in-furrow are used.

Restrictions: Do not graze or feed forage from treated areas for 21 days following application, or illegal residues may result. Do not apply atrazine and propazine products to the same sorghum acre

TANK MIXTURES FOR GRAIN SORGHUM

Dual® 8E: Use as tank mixture with Dual® 8E for control of those weeds listed on the Dual® 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, use precautions, and limitations.

WINTER WEED CONTROL IN TEXAS

For post emergence control of winter weeds only, such as henbit, seedling dock, and annual thistle on fall bedded land in the Gulf Coast and Blackland of Texas. Apply 1.6-2 pints active ingredient /A postemergence to the weeds in November or December to land that will be planted to corn, grain, or sorghum, or forage sorghum the following spring. For best results, add a suitable surfactant, such as INDUCE®, 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 2 pints per acre.

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

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

ATRAZINE 4L ALONE - CHEMICAL FALLOW

Wheat-Sorghum-Fallow (AR, CO, GA, IL, KS, MS, MO, NE, NM, NC, OK, SD & TX): To control annual broadleaf and grass weeds following wheat harvest and in the following sorghum crop when grown under minimum tillage, broadcast 4.5 pts. of ATRAZINE 4L /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 the application of ATRAZINE 4L. 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. Only one application is allowed per cycle for all chemical fallow applications.

For the list of weeds controlled, see **ATRAZINE 4L** Applied Alone - Corn or Grain Sorghum-Preplant Surface-Applied, Preplant Incorporated, or Preemergence.

Restrictions: (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, & 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 high pH greater than 7.5, do not exceed 1.5 lbs. active ingredient (3.0 pints of **ATRAZINE 4L**)/A for any application. For all other locations: Do not apply more than 2.25 pounds active ingredient (4.5 pints of **ATRAZINE 4L**)per acre for any application. Do not make more than one application per cycle. For soils with a pH less than 7.5 in ND and SD, apply 1-2 lbs. active ingredient (2-4 pints of **ATRAZINE 4L**)/A. Do not apply more than 2.0 lbs. active ingredient (4 pints of **ATRAZINE 4L**) /A for any application. Do not make more than one application per cycle. 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 in corn.

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

Wheat-Fallow-Wheat (CO, KS, MT, 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 a wheat-fallow-wheat rotation, broadcast 1-2 pts. of ATRAZINE 4L /A on all soils except those listed under "Use Precautions." For control of pigweed and wild sunflower, use the higher rate. Apply to stubble ground. Treat only once during same fallow period. On soils in ND and SD with a pH greater than 7.5, do not exceed 1.5 lbs. active ingredient (3 pints of ATRAZINE 4L) /A for any application. For all other locations: Do not apply more than 2.25 pounds active ingredient (4.5 pints of ATRAZINE 4L)per acre for any application. Do not make more than one application per cycle. For soils with a pH less than 7.5 in ND and SD, apply 1-2 lbs. active ingredient (2-4 pints of ATRAZINE 4L)/A. Do not apply more than 2.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not make more than one application per cycle.

TANK MIXTURES FOR CHEMICAL FALLOW

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

Gramoxone®: If weeds are present at application, a tank mix with Gramoxone® may be used. Broadcast 4.5 pts. of **ATRAZINE 4L** plus 1.5-2.5 pts. of Gramoxone® in 20-60 gals. of water/A by ground equipment.

Add 0.5-1 pt. of a nonionic surfactant, such as INDUCE® per 100 gals. of spray mixture. Add **ATRAZINE 4L** to spray tank first and thoroughly mix with water. Then add Gramoxone®, followed by surfactant. Use the 2.5 pt. rate of Gramoxone® 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® label for further directions, use precautions, and limitations. Do not apply more than 2.25 lbs. active ingredient (4.5 pints of **ATRAZINE 4L**) /A for any application. Do not make more than one application per cycle. Only one application is allowed per cycle for all chemical fallow applications.

Wheat-Fallow-Wheat (CO, KS, MT, NE, ND, SD, and WY)

Gramoxone®: If weeds are present at application, a tank mix with Gramoxone® may be used. Broadcast 1-2 pts. of ATRAZINE 4L plus 1.5-2.5 pts. of Gramoxone® in 20-60 gals. of water/A by ground equipment. Add 0.5-1 pts. of a nonionic surfactant, such as INDUCE®, per 100 gals. of spray mixture. Add ATRAZINE to spray tank first and thoroughly mix with water. Then add Gramoxone®, followed by surfactant. Use the 2.5 pt. rate of Gramoxone® if weeds are 4-6 inches tall. On soils in ND and SD with a pH greater than 7.5, do not exceed 1.5 lbs. active ingredient (3 pints of ATRAZINE 4L)/A for any application. For all other locations: Do not apply more than 2.25 pounds active ingredient (4.5 pints of ATRAZINE 4L) per acre for any application. Do not make more than one application per cycle. For soils with a pH less than 7.5 in ND and SD, apply 1-2 lbs. active ingredient (2-4 pints of ATRAZINE 4L) /A. Do not apply more than 2.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not mapply more than 2.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not apply more than 2.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not make more than 0.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not make more than 0.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not make more than 0.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not make more than 0.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not make more than 0.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not make more than 0.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application. Do not make more than 0.0 lbs. active ingredient (4 pints of ATRAZINE 4L) /A for any application.

This mixture will not control weeds taller than 6 inches. Apply to stubble ground. Treat only once during same fallow period. Refer to Gramoxone® label for further directions, use 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®, plant at least 2 inches deep and 12 months or more after application.

Restritions: To avoid crop injury, (1) Do not use on sand 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 non-target plants, apply ATRAZINE 4L alone by aircraft at a minimum upwind distance of 400 ft. from sensitive plants.

SEVERE DROUGHT CONDITIONS

Do not graze forage or cut forage for hay.

SUGARCANE

For control of many broadleaf and grass weeds, including amaranths, crabgrass, fireweed, Flora's paintbrush, foxtails, junglerice, and wiregrass, broadcast 4-8 pts. of **ATRAZINE 4L** /A at time of planting or ratooning, but before sugarcane emerges.

Broadcast aerially in a minimum of 5 gals. of spray per acre, or broadcast or band by ground equipment in a minimum of 20 gals. 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 maximum rate of 10 pounds active ingredient (20 pints of **ATRAZINE 4L**) per acre per crop of sugarcane.

Note: Where high rates of ATRAZINE are used alone, apply in a minimum of 2 pints of water for each 2 pints of ATRAZINE applied per acre. Do not apply more than 4.0 pounds of active ingredient (8 pints of ATRAZINE 4L) per acre for any application. Do not apply more than 10 pounds active ingredient (20 pints of ATRAZINE 4L) per acre per crop.

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 non-target plants, apply ATRAZINE 4L alone by aircraft at a minimum upwind distance of 400 ft. from sensitive plants.

Florida

For control of emerged pellitory weed: Apply 0.8-1.2 pts. of **ATRAZINE 4L** /A in at least 40 gals. of water as directed spray by ground equipment prior to close-in. Add 4 qts. 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 8 pts. of **ATRAZINE 4L** /A preemergence. Follow with one or two applications, as needed, postemergence to sugarcane and weeds, at 4 pts. of **ATRAZINE 4L** /A. Treat before weeds exceed 1.5 inches in height.

2. Apply 1-3 times, as needed, at 4 pts. of ATRAZINE 4L /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 4 pts. of **ATRAZINE 4L** /A to weed-free beds immediately after bed formation. Follow normal weed control after planting.

Use precautions: To avoid crop injury, (1) Do not apply more than

20 pints/A to any one crop of sugarcane. (2) If making 4 pts. of **ATRAZINE 4L** /A application during summer fallow period, do not exceed 16 pints **ATRAZINE 4L** /A during the remainder of the growing season, or illegal residues may result. (3) Do not apply more than 4.0 pounds of active ingredient (8 pints of **ATRAZINE 4L**)per acre for any application. (4) Do not apply more than 10.0 pounds of active ingredient (20 pints of **ATRAZINE 4L**) per acre per year.

Texas

Use ATRAZINE 4L for control of barnyardgrass, pigweed purslane, and sunflower in plant or ration sugarcane.

Apply 8 pts. of **ATRAZINE 4L** /A preemergence. Follow with one or two applications, as needed, at 6 pts. of **ATRAZINE 4L** /A postemergence to sugarcane and weeds.

For best results when weeds are emerged, add a nonionic surfactant at a concentration of 4 pints **ATRAZINE 4L** /100 gals. to the spray and apply before weeds exceed 1.5 inches in height.

Restrictions: (1) Injury to sugarcane may occur when under moisture stress, when soil is of low adsorptive capacity, or when land is first cropped to sugarcane. (2) Do not apply after close-in. (3) Do not apply more than 20 pts. of **ATRAZINE 4L** /A to any one crop of sugarcane, or crop injury may result. (4) Do not apply more than 4.0 pounds of active ingredient (8 pints of **ATRAZINE 4L**) per acre for any application. (5) Do not apply more than 10.0 pounds of active ingredient (20 pints of **ATRAZINE 4L**) per acre per year.

TURFGRASSES FOR SOD (FLORIDA ONLY)

St. Augustinegrass, Centipedegrass, and Zoysia Grass

Broadcast 4-8 pts. of **ATRAZINE 4L** /A according to soil texture to control those weeds listed under **ATRAZINE 4L** Applied Alone - Corn or Grain Sorghum-Preplant Surface-Applied, or Preplant Incorporated, or Preemergence.

Muck or peat	8 pts.
Old beds:	Within 2 days after lifting sod
New beds:	3-4 days after sprigging or plugging
Sandy soil	4 pts.
Old beds:	Within 2 days after lifting sod
New beds:	7-10 days after sprigging or plugging

If weeds regrow, apply an additional 4 pts. of ATRAZINE 4L /A on muck or peat, or 2 pts. of ATRAZINE 4L /A on sandy soil.

Restrictions: 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 infestation of insects, nematodes, and diseases.
- (4) On newly sprigged turfgrass, temporary slowing of growth may follow application.
- (5) For muck or peat soils:
 - (a) Do not apply more than 4 pounds of active ingredient (8 pints of ATRAZINE 4L) per acre for an application.
 - (b) Do not apply more than 6 pounds of active ingredient (12 pints of ATRAZINE 4L) per year.
- (6) For sandy soils:
 - (a) Do not apply more than 2 pounds of active ingredient (4 pints of ATRAZINE 4L) per acre for any application.
 - (b) Do not apply more than 3 pounds of active ingredient (6 pints of ATRAZINE 4L) per year.

TURFGRASSES FOR FAIRWAYS, LAWNS, SOD PRODUCTION* AND SIMILAR AREAS

Turfgrasses for Sod (For All Areas Other Than Florida)

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

Restrictions: (1) For muck or peat soils: Do not apply more than 4 pounds of active ingredient (8 pints of **ATRAZINE 4L**) per acre for any application. Do not apply more than 6 pounds of active ingredient (12 pints of **ATRAZINE 4L**) per year. (2) For sandy soils: Do not apply more than 2 pounds of active ingredient (4 pints of **ATRAZINE 4L**) per acre for any application. Do not apply more than 3 pounds of active ingredient (6 pints of **ATRAZINE 4L**) per year.

Turfgrass At Residential Sites (including homes, daycare facilities, schools, playgrounds, parks, recreational areas and sports fields) Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysia Grass

Apply **ATRAZINE 4L** 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 4L** 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 4L** Applied Alone-Corn or Grain Sorghum section of the label, also apply **ATRAZINE 4L** 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 2 pints **ATRAZINE 4L** /A (22 ml or 0.75 fl. oz. per 1,000 sq. ft.). Use 2 pints **ATRAZINE 4L** /A (22 ml or 0.75 fl. oz. per 1,000 sq. ft.) for control of the other weeds named above. Do not exceed 2 pints **ATRAZINE 4L** /A per treatment on newly sprigged turfgrass or on hybrid bermudagrass such as Tiflawn, Tifway, and Ormond.

Restrict backpack application to landscape turf to spot treatments only.

For continued summer annual weed control, apply another 2 pints active ingredient /A 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.

Restrictions:

- (1) Do not apply more than 1.0 pound active ingredient (2 pints of ATRAZINE 4L) per acre for any application.
- (2) Do not apply more than 2.0 pounds active ingredient (4 pints of **ATRAZINE 4L**) per acre per year
- Note: Do not graze or feed turf clippings to animals, or illegal residues may result.

Restrictions: 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) 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 4 pints **ATRAZINE 4L** /A within 12 months of seeding bermudagrass.

MACADAMIA NUTS

For preemergence control of many broadleaf and grass weeds, including crabgrass, foxtail, wiregrass, Flora's paintbrush, spanishneedles, and fireweed, broadcast 4-8 pts. **ATRAZINE 4L** /A before harvest and before weeds emerge. Repeat as necessary. Do not spray when nuts are on ground during harvest period. Do not apply by air.

Notes: (1) Do not apply more than 4 pounds of active ingredient (8 pints of **ATRAZINE 4L**) per acre for any application. (2) Do not apply more than 8 pounds of active ingredient (16 pints of **ATRAZINE 4L**) per year.

GUAVA

Use only on established plantings which are at least 18 months old. Apply as a directed spray at 4-8 pts. of **ATRAZINE 4L** /A 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 sowthistle.

Restrictions: (1) Do not allow spray to contact foliage or fruit. (2) Do not apply more frequently than at 4- month intervals. (3) Do not apply more than 16 pts. of **ATRAZINE 4L** per year. (4) Do not apply more than 4 pounds of active ingredient (8 pints of **ATRAZINE 4L**) per acre per any application. (5) Do not apply more than 8 pounds of active ingredient (16 pints of **ATRAZINE 4L**) per year.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store in original container only. In case of leak or spill, contain material and dispose as waste.

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 (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available.

REFILLABLE CONTAINER: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

CONDITIONS OF SALE - LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

Read the Conditions of Sale - Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Agri-Enterprises, LLC (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Agri-Enterprises, LLC's election, one of the following:

- 1. Refund of the purchase price paid by buyer or user for product bought, or
- 2. Replacement of the product used

To the extent allowed by law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies. © Copyright Helena Holding Company, 2020.

INDUCE® is a registered trademark of Helena Holding Company.

CALIBER 90®, CONCEP®, DUAL®, GRAMOXONE®, and PRINCEP® trademarks of Syngenta Crop Protection.

SUTAN+® trademarks of Cedar Chemical Company.

LASSO®, RAMROD®, and ROUNDUP® trademarks of Monsanto Company.