

RESTRICTED USE PESTICIDE

(GROUND WATER CONCERN)

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 CERTIFICATIONS.

THIS PRODUCT IS A RESTRICTED USE HERBICIDE DUE TO GROUND WATER CONCERN.
USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS
FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND WATER.

Farmland

EPA Est. No. 32761-MO-2
EPA Reg. No. 1990-561

LIQUID ATRAZINE

4 L

Herbicide -- for season-long weed control
in corn and sorghum

ACTIVE INGREDIENTS:

Atrazine: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine..... 40.8%

Related compounds..... 2.2%

INERT INGREDIENTS..... 57.0%

TOTAL..... 100.0%

Liquid Atrazine 4L contains 4 lbs. active ingredients per gal.

Shake well before using

KEEP OUT OF REACH OF CHILDREN
CAUTION

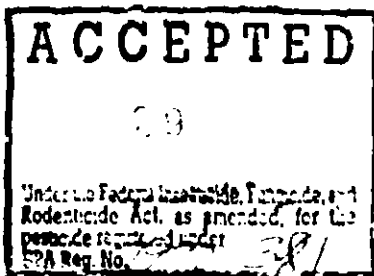
CAUTION AL USUARIO: Si usted no lee ingles, no use este producto hasta que le
etiqueta haya sido explicado ampliamente.

See inside of booklet for additional precautionary statements and directions
for use.

NET CONTENTS 2 1/2 GALLONS

Manufactured by
FARMLAND INDUSTRIES, INC.
Kansas City, Missouri 64116

Revision Date 5-1-90



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STOP
READ ALL
DIRECTIONS FOR
USE AND
PRECAUTIONS
BEFORE
USING.

PRECAUTIONARY STATEMENT
Statement of Practical Treatment

FIRST AID PROCEDURES

If poisoning is suspected, do not wait for symptoms to develop. Immediately begin the recommended procedures below. Contact a physician, the nearest hospital or the nearest Poison Control Center. Tell the person contacted the type and amount of exposure, describe the symptoms and follow the advice given.

IF SWALLOWED: Drink 1 or 2 glasses of water and induce vomiting by touching the back of throat with finger, or, if available, by administering Syrup of Ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

ON SKIN: Immediately remove contaminated clothing, wipe away excess material from the skin. Wash with plenty of soap and water. Do not attempt to neutralize with chemical agents. If irritation occurs, obtain medical advice.

IN EYES: Immediately flush the eyes with large amounts of running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Do not attempt to neutralize with chemical agents. Obtain medical attention if irritation occurs.

IF INHALED: Remove from contaminated atmosphere. If symptoms appear or person is unconscious, get medical attention.

Hazards to Humans and Domestic Animals

CAUTION

KEEP OUT OF REACH OF CHILDREN

Irritant or harmful if swallowed. Do not get in eyes. Avoid contact with skin, inhalation of vapors or spray mist and contamination of food and feed.

USER - PROTECTION

Users are required to wear long sleeve shirts and long pants or equivalent, chemical resistant gloves, and boots (waterproofed). In addition, persons involved in mixing/loading operations are required to use chemical resistant rubber or neoprene gloves and a face shield or goggles.

Environmental Hazards

GROUNDWATER PROTECTION: 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. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material. This product may not be mixed/loaded, or used within 50 feet of all wells including abandoned wells, drainage wells, and sinkholes.

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FISH AND WILDLIFE HAZARDS: This pesticide is toxic to aquatic invertebrates. Do not apply directly to water or wetlands. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

DIRECTIONS FOR USE

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

REENTRY STATEMENT

Do not enter treated areas without protective clothing until sprays have dried. Protective clothing consists of long-sleeved shirt, long pants, gloves, hat and shoes.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. All workers not directly involved with the application of this product must be removed from the area to be treated. All other workers must be informed of the area which is to be treated and informed not to enter the area without the proper protective clothing listed above until such time as the spray has dried. In the event a worker is exposed to this product, he should inform his supervisor immediately of the type of exposure in order that proper protective treatment may be given. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: "CAUTION: Area treated with Atrazine on (insert date of treatment). Do not enter without appropriate protective clothing until spray has dried. In case of accidental exposure, inform supervisor immediately."

STORAGE AND DISPOSAL

Storage

KEEP THIS MATERIAL OUT OF THE REACH OF CHILDREN.

Store only in the original container with cap securely tightened. Containers must be stored in a cool, dry, well-ventilated area. Store away from food, feeds and fertilizers. Do not contaminate water, food or feed by storage or disposal.

Spill or Leak Procedures: In the event of a spill or leak, make sure all personnel involved in spill cleanup follow good industrial hygiene practices. Small spills can be handled routinely. Cover the spill with an absorbent material such as vermiculite or sawdust to prevent dust. Sweep up the material and place in an appropriate chemical waste container. Seal container and dispose of according to "Pesticide" disposal instructions below. Wash the spill area with a saturated solution of sodium carbonate and a strong detergent. Flush the spill area with water to remove any residue.

Disposal

Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Pesticide: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONDITIONS OF SALE AND WARRANTY

Conditions of Sale: This product is sold subject to and buyer and users are deemed to have accepted the terms contained in the CONDITIONS OF SALE AND WARRANTY, DIRECTIONS FOR USE AND PRECAUTIONARY STATEMENTS, which may be varied

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only by agreement in writing by a duly authorized representative of FARMLAND INDUSTRIES, INC.

Inherent Risks: The directions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as presence of other materials or use of the product in a manner inconsistent

with its labeling, all of which are beyond the control of FARMLAND INDUSTRIES, INC., or the seller. All such risks shall be assumed by the buyer.

Warranty Limitations: FARMLAND INDUSTRIES, INC., warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the DIRECTIONS FOR USE, subject to the inherent risks referred to above. FARMLAND INDUSTRIES, INC. MAKES NO OTHER EXPRESSED OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESSED OR IMPLIED WARRANTY.

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

DO NOT REUSE EMPTY CONTAINER.

APPLY THIS PRODUCT ONLY AS SPECIFIED ON THIS LABEL.

GENERAL INFORMATION

ATRAZINE 4L herbicide will control ann. annual broadleaf and grass weeds in corn and sorghum including barnyard grass, wild hyssop (*Panicum capillare*), yellow foxtail, green foxtail, wild oats, large (heavy) crabgrass, giant foxtail, velvetleaf, morning-glory, lambquarters, pigweed, ragweed, nightshade, purslane and smartweed. Atrazine may be applied before or after weeds emerge. The continuous use of this product and other triazines may cause the development of biotypes of grasses and broadleaf weeds that cannot be effectively controlled. Where this is known or suspected, **ATRAZINE 4L** should be either tank mixed with or used in conjunction with a registered grass herbicide approved for use with Atrazine which is not in the triazine class of chemicals. Read and follow all directions for use and precautions on the labels of products to be tank mixed with Atrazine. Consult your State Extension Service for specific recommendations for your area.

In each case where a range of rates is given, the lower rate should be used on coarse-textured soils and soils low in organic matter, and the higher rate should be used on fine-textured soils and soils high in organic matter. Since Atrazine acts mainly through root absorption, its effectiveness depends on rainfall or irrigation to move it into the root zone. Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control.

Care should be taken to avoid using Atrazine where adjacent desirable trees, shrubs or plants might be injured.

NOTE: FARMLAND INDUSTRIES, INC., does not recommend the use of **ATRAZINE 4L** in combination with other herbicides or oils except as specifically described on the label.

APPLICATION PROCEDURES

Ground Application: For the most uniform distribution of broadcast applications, use 80 degrees flat fan-type nozzles. For band applications, use flat fan even-spray nozzles. Screens and strainers should be no finer than 50 mesh. Use a pump with capacity to (1) provide sufficient hydraulic agitation during mixing and application to keep the material in suspension and (2) maintain 30-40 psi operating pressure. Unless otherwise specified, use a minimum of 5 gallons of water per acre for preplant incorporated, pre-emergence and post (without oil or surfactant) application. Use a minimum of 10 gallons of water per acre for all postemergence applications combined with oil or surfactant.

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

<u>Band width in inches</u>	<u>Rate/A for</u>	<u>Amount needed for</u>
<u>Row width in inches</u> X	<u>Broadcast Treatment</u>	<u>Band Treatment</u>

Aerial Application: For preplant and pre-emergence broadcast treatments, apply at a 1:1 ratio of **ATRAZINE 4L** to water (example: recommendation calls for 1 quart of product and is mixed with 1 quart of water) to be applied per acre. For postemergence treatments, apply the recommended rate of **ATRAZINE 4L** plus oil in a minimum of 2 gallons of water per acre. Avoid applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. The above water volumes are the minimum to be applied per acre.

ATRAZINE 4L in Water Applications: **ATRAZINE 4L**, a liquefied formulation, should be mixed with water and applied as a spray. Pour **ATRAZINE 4L** into the tank during or after filling. Hydraulic (jet) or mechanical agitation is recommended during mixing and application to keep the material in suspension. All return lines to the tank must discharge below liquid level and agitation should not be so violent as to cause air bubbles to form in the liquid. Wash sprayer thoroughly after use.

ATRAZINE 4L in Liquid Fertilizer Applications: Nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier for pre-emergence and preplant applications of **ATRAZINE 4L**. Mixing should be

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accomplished as described under water applications. Do not apply after corn or sorghum has emerged as there is danger of liquid fertilizers causing crop injury.

ATRAZINE 4L Plus Emulsifiable Oil in Water Applications: The addition of oil to postemergence Atrazine in water sprays may speed the activity of Atrazine and provide quicker kill of weeds. However, under certain conditions, the use of oil may seriously damage corn or sorghum. To minimize the possibility of damage, follow the directions, procedure, and precautions given below.

For combining with atrazine, use a crop oil designated for use with atrazine containing 1-2% suitable emulsifier. Several oils of this type are on the market. Oils contaminated with water or other materials can cause compatibility problems and/or crop injury.

Mixing procedures:

- (1) Thoroughly clean sprayer prior to use. Do not use sprayer contaminated with 2,4-D or other materials as crop damage or sprayer clogging may result.
- (2) Fill spray tank one-half to two-thirds full of clean water.
- (3) With the agitation system in operation, add the Atrazine.
- (4) Add the emulsifiable oil last.
 - (a) Empty the tank as completely as possible before refilling to prevent a buildup of oil in the tank. Keep the agitation system in operation to avoid a separation of the oil from the water in the spray mixture still remaining in the tank.
- (6) If an oil film starts to build up in the tank, drain the tank and clean out with a strong detergent solution or solvent.
- (7) Clean the sprayer thoroughly immediately after using by flushing the system with water containing a detergent.

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

DIRECTIONS FOR USE

Corn: ATRAZINE 4L may be applied either before planting, at planting or after planting as indicated below.

Preplant (Broadleaf and Grass Control): Broadcast in the spring after plowing the rate indicated in Table 1. Application may be made before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of ATRAZINE 4L. Best results have been obtained when ATRAZINE 4L is applied within two weeks prior to planting.

Pre-emergence (Broadleaf and Grass Control): Apply during or shortly after planting prior to weed emergence at the rate indicated in Table 1.

Postemergence (Broadleaf and Grass Control): Apply before weeds exceed 1.5 inches in height at the rate indicated in Table 1. **Postemergence application must be made before corn reaches 12 inches in height.**

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TABLE 1
For Control of Broadleaves and Grasses (1)

Soil Texture	ATRAZINE 4L Broadcast Rate/A
Coarse-textured soil: sands, loamy sands, and sandy loams	4 pints
Medium-textured soils: silt and clay loams that are low in organic matter	4.75 pints
Fine-textured soils: silt and clay loams with medium to high organic matter and clays (including the dark prairie soils of the Corn Belt)	6 pints
Peats, muck and high organic clays (apply Postemergence only)	6 pints

(1) For preplant or pre-emergence applications (western Kansas, western Nebraska, eastern Colorado, eastern Wyoming, New Mexico, western Texas and the Panhandle of Oklahoma): on sands, loamy sands, sandy loams, mild to strong alkaline soils and all recently leveled soils, apply 2.4 pints per acre for broadleaf weed control. Many broadleaf weeds including pigweed, lambsquarters, nightshade, purslane and kochia will be controlled. On other soil types in the areas above, make applications at the rate shown in Table 1 for broadleaf and grass control.

Lay-By Treatment (Broadleaf and Grass Control): Broadcast 2-4 pints per acre in a minimum of 5 gallons of water in nitrogen solution before weeds are 1.5 inches high and the corn is 12 inches high maximum. When nitrogen solutions are used, direct the spray to the lower 3-4 inches of cornstalks to avoid corn foliage injury. Agitation in the spray tank during application is essential.

Postemergence Broadleaf and Grass Weed Control with ATRAZINE 4L Plus Emulsifiable Oil in Water: Broadcast 4 pints per acre after weed emergence, but before weeds reach 1.5 inches in height and before corn reaches 12 inches in height. Add emulsifiable oil at the rate of 1 gallon per acre for ground applications and one-half gallon per acre for aerial applications.

Postemergence Broadleaf Weed Control with ATRAZINE 4L Plus Emulsifiable Oil in Water: Broadcast 2.4 pints per acre for control of many broadleaf weeds including annual morning-glory, cocklebur, lambsquarter, mustard, pigweed, ragweed, smartweed and wild buckwheat. Application should be made before pigweed and lambsquarters reach 6 inches in height and before all other weeds reach 4 inches in height and before corn reaches 12 inches in height. Add emulsifiable oil at the rate of 1 gallon per acre for ground applications and one-half gallon per acre for aerial applications. A cultivation may be necessary if all weeds are not controlled or if re-growth of weeds occurs.

Precautions for Applications of ATRAZINE 4L Plus Emulsifiable Oil in Water to Corn:

- (1) Do not use oil in Atrazine sprays 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) Do not use oils in sprays when treating inbred lines or any breeding stock as injury may occur.
- (3) Adding other insecticides, herbicides, liquid fertilizers or other material is not recommended with Atrazine and emulsifiable oil in water because they may cause compatibility problems or crop injury.
- (4) Store and handle emulsifiable oil carefully. Oil contaminated with even a small amount of water may not emulsify properly when added to the tank.
- (5) Do not make more than one application of Atrazine and emulsifiable oil in water per season (except as recommended for control of yellow nutsedge and Canada thistle on this label).

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PROBLEM WEEDS

For Control of Yellow Nutsedge and Canada Thistle: ATRAZINE 4L will control yellow nutsedge (*Cyperus rotundus*) and Canada thistle (*Cirsium arvense*) when applied according to directions. For best results, ATRAZINE 4L should be used each year until yellow nutsedge or Canada thistle is eliminated or reaches a level of infestation where neither weed species is a problem. If re-growth of yellow nutsedge or Canada thistle occurs following application of Atrazine during the season, cultivate once. When ATRAZINE 4L is applied postemergence to the weeds, 1 gallon of emulsifiable crop oil should be added per acre.

For control of yellow nutsedge and Canada thistle with ATRAZINE 4L, several alternative methods of use are available. These methods are listed in order of preference below. If other weed species, such as annual grasses, are also expected, use an alternative method that includes a preplant or pre-emergence treatment plus a postemergence combination with emulsifiable oil or apply all the ATRAZINE 4L preplant or pre-emergence.

PROBLEM WEEDS (CONT'D)

- (1) Broadcast **3** pints of **ATRAZINE 4L** plus 1 gallon emulsifiable oil per acre after the crop has emerged and after yellow nutsedge or Canada thistle plants emerge, but before yellow nutsedge plants reach a height of 3 inches or Canada thistle plants reach a height of 6 inches. Follow with a second application of **3** pints of **ATRAZINE 4L** plus 1 gallon of oil per acre 10-20 days but prior to lay-by (**12 inches**) after the initial application has been made.
- (2) Broadcast **3** pints of **ATRAZINE 4L** per acre preplant. Follow with an application of **3** pints of **ATRAZINE 4L** plus 1 gallon of oil per acre after the corn and weeds emerge, but before yellow nutsedge plants reach a height of 3 inches (for nutsedge control only).
- (3) Broadcast **3** pints of **ATRAZINE 4L** per acre during or shortly after planting, but prior to crop or weed emergence. Follow with an application of **3** pints of **ATRAZINE 4L** plus 1 gallon of oil per acre after the corn and weeds emerge, but before yellow nutsedge plants reach a height of 3 inches or Canada thistle plants reach a height of 6 inches.
- (4) Broadcast **6** pints of **ATRAZINE 4L** plus one gallon of oil per acre after the crop has emerged but prior to lay-by (**12 inches**) and after yellow nutsedge and Canada thistle plants emerge, but before yellow nutsedge reaches a height of 3 inches or Canada thistle is more than 6 inches tall.
- (5) Broadcast **6** pints of **ATRAZINE 4L** per acre preplant (for yellow nutsedge control only).
- (6) Broadcast **6** pints of **ATRAZINE 4L** per acre during or shortly after planting, but prior to crop or weed emergence (for yellow nutsedge control only).

NOTE: Oil should not be used in Atrazine sprays when corn is wet or under stress, especially when using **6** pints of **ATRAZINE 4L** per acre. See precaution section under Postemergence Applications of **ATRAZINE 4L** Plus Emulsifiable Oil in Water on Corn for additional directions.

For Quackgrass Control on Land Going into Corn Production: Application is restricted to spring only. No fall applications are permitted. Broadcast 6 pints per acre in the spring. Plow 1-3 weeks after applications.

Tank-Mixtures with ATRAZINE 4L on Corn: **ATRAZINE 4L** Plus Paraquat CL -- 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: Broadcast 4-6 pints **ATRAZINE 4L** and 1-2 pints Paraquat CL per acre in 20-60 gallons of water per acre. Add 8 ounces of non-ionic surfactant per 100 gallons of dilute spray. Add **ATRAZINE 4L** to spray tank first and thoroughly mix with water. Add the Paraquat and surfactant last.

Refer to the Paraquat CL label for further directions, limitations and cautions.

ATRAZINE 4L Plus Alachlor EC: Use a tank-mixture of **ATRAZINE 4L** Plus Alachlor 4EC for the control of many annual broadleaf and grass weeds in corn (field and silage corn only) including annual morning-glory, barnyard grass, black nightshade, Brachiaria, buttonweed (velvetleaf), carpetweed, cocklebur, crabgrass, fall panicum, Florida pusley, giant foxtail, green foxtail, yellow foxtail, goosegrass, lambsquarters, pigweed, purslane, mustard, common ragweed, smartweed and witchgrass.

Make applications at the rates indicated in Table 2. For preplant applications, apply within 7 days of planting and incorporate to a depth of 2-3 inches. For pre-emergence applications, apply to the soil surface after planting, but before the crop or weeds emerge. For post-emergence treatments, make applications until weeds reach the two-leaf stage, and the corn is no more than 3 inches tall

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TABLE 2
 Tank-mixtures of ATRAZINE 4L plus Alachlor 4EC on Corn
 (Field and Silage Only)
 Broadcast Rate Per Acre

Soil Texture	Less than 3% organic matter		More than 3% organic matter	
	Liquid Atrazine (pts./A)	Alachlor 4EC (qts./A)	Liquid Atrazine (pts./A)	Alachlor 4E (qts./A)
Light sandy soils	2	1.5	2	1.5
Silt loam soils	2 to 2.4	1.5 to 1.75	2 to 2.4	1.75 to 2
Heavy clay soils	2.4 to 3.2	2 to 2.5	2.4 to 3.2	2 to 2.5

NOTE: Apply in a minimum of 40 gallons of water per acre. Non-pressure fluid fertilizer may replace all or part of the water used as a carrier for application applied to the soil surface before crop emerges. Add the **ATRAZINE 4L** to the spray tank first and thoroughly mix with water. Add the Alachlor last. At least 12 weeks must elapse following treatment with **ATRAZINE 4L** Plus Alachlor 4EC before immature corn forage can be harvested or fed to cattle. Refer to the Alachlor 4EC label for further directions, limitations and cautions.

Precautions for all Applications to Corn

- (1) The maximum application rate for corn is **3 lbs. a.i. per acre per calendar year**. Therefore, do not apply more than **6 pints of ATRAZINE 4L** on corn in a one year.
- (2) Following harvest of a treated crop, plow (moldboard or disk-plow) and thoroughly till the soil in the fall or spring to minimize possible injury to rotational spring-seeded crops, regardless of the rate used.
- (3) Do not graze treated area or feed-treated forage to livestock for 21 days following application.

For postemergence applications plus emulsifiable oil, see additional precautions under that section of this label.

Rotational Crop Suggestions

- (1) Land treated with Atrazine should not be planted to any crop except corn or sorghum until the following year or injury may occur.
- (2) If Atrazine is applied after June 10, do not rotate with crops other than corn or sorghum the next year or injury may occur.
- (3) In the high plains or intermountain areas of the west where rainfall is sparse and erratic or where irrigation is required, use Atrazine only when corn or sorghum is to follow corn or sorghum, or a crop of untreated corn or sorghum is to precede other rotational crops.
- (4) In western Minnesota and eastern parts of the Dakotas, Nebraska and Kansas, corn or sorghum treated with Atrazine should not be followed with soybeans if the broadcast rate applied was more than 4 pints per acre (or comparable rate in a band) or injury may occur.
- (5) Injury may occur to soybeans planted in north-central Iowa and south-central Minnesota the year following an Atrazine application on Harps, Canisteo, Storden or other soils having a calcareous surface layer.
- (6) Do not plant sugarbeets, tobacco, vegetables (including dry beans), spring-seeded legumes and grasses the year following Atrazine application or injury may occur.

Sorghum and Sorghum-Sudan Hybrids (Grain and Forage Types): **ATRAZINE 4L** may be applied either before planting or after planting as indicated below.

Preplant (Broadleaf and Grass Control): Broadcast in the spring after plowing at the rate indicated in Table 3. Application may be made before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of **ATRAZINE 4L**.

Best results have been obtained when Atrazine is applied within two weeks prior to planting.

Pre-emergence (Broadleaf and Grass Control): Apply during or shortly after planting, but prior to weed or crop emergence at the rate indicated in Table 3.

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TABLE 3
Preplant and Pre-emergence Applications* For Broadleaf and Grass Weed Control
in Sorghum

Soil Texture	Organic Matter	Broadcast Rate of ATRAZINE 4L Per Acre
Coarse-textured soils: sands, loamy sands, sandy loams and sandy clay loams	any level	DO NOT USE (except for pre- emergence use on bedded sorghum in Arizona and California as indicated below)
Medium and fine-textured soils: silt loams, clay loams and clays	less than 1% 1% to 1.5% more than 1.5%	3.2 to 4 pints 3.2 to 4.7 pints

*ATRAZINE 4L should not be applied preplant to sorghum grown in New Mexico, Oklahoma, Texas, Arkansas, Louisiana, Tennessee, Mississippi, Alabama, Georgia, Florida, South Carolina, and North Carolina or pre-emergence to sorghum grown in New Mexico, Texas and Oklahoma except in northeast Oklahoma and the Texas Gulf Coast.

Pre-emergence (Broadleaf and Grass Control) Cont'd

In case of planting failure, sorghum can be replanted into soil previously treated with ATRAZINE 4L. Do not make a second broadcast application or injury may occur. If ATRAZINE 4L is applied in a band and sorghum is replanted in the untreated row middles, ATRAZINE 4L can be applied in a band to the second planting.

Postemergence (Broadleaf and Grass Weed Control): Apply before weeds exceed 1 1/2 inches in height at the rate indicated in Table 4. Applications may be made up to close-in. **Postemergence application must be made before sorghum reaches 12 inches in height.**

TABLE 4

Postemergence Broadleaf and Grass Weed Control in Sorghum

Soil Treatment	Minimum Height of Sorghum at Treatment	Broadcast Rate of ATRAZINE 4L Per Acre
Sand or loamy sand	DO NOT USE	
Sandy loam	See directions for broadleaf weed control (below)	
Clay loam to sandy clay	Completely emerged	4 to 4.75 pints
Clay loam		
Olton and Pullman	At least 6 inches high	4 to 4.75 pints
clay soils		
Silty clay loams	Completely emerged	6 pints
and heavier soils		

Postemergence Broadleaf Weed Control with ATRAZINE 4L Plus Emulsifiable Oil in Water: Broadcast 2.4 pints per acre for control of broadleaf weeds including annual morning-glory, cocklebur, lambsquarters, mustard, pigweed, ragweed, smartweed and wild buckwheat. Application should be made before pigweed and lambsquarters reach 6 inches in height and before all other weeds reach 4 inches in height. In Texas, New Mexico, Oklahoma, western Kansas, Colorado and the desert regions of California and Arizona, apply when sorghum is 6-10 inches in height, but before it reaches the boot stage (12 inches). In all other areas, apply after sorghum reaches three-leaf stage and before it is 12 inches in height.

Add emulsifiable oil at the rate of 1 gallon per acre for ground applications

and one-half gallon per acre for aerial applications. A cultivation may be necessary if all weeds are not controlled or if re-growth of weeds occurs.

Precautions for Applications of ATRAZINE 4L Plus Emulsifiable Oil in Water to Sorghum: See precautions under Atrazine Plus Emulsifiable Oil in Water Applications to Corn.

Postemergence Broadleaf Weed Control with ATRAZINE 4L Plus Surfactant (Oklahoma, New Mexico, Texas, Western Kansas, Colorado and Desert Regions of Arizona and California only): Broadcast 2.4 pints of ATRAZINE 4L plus .75 to 1.5 pints of surfactant per acre after sorghum reaches 6-12 inches in height, but before weeds reach 1.5 inches in height. Apply only on sandy loam and finer-textured soils.

Precautions for all Applications to Sorghum

- (1) **The maximum application rate for sorghum is 3 lbs. a.i. per acre per calendar year.**
- (2) Heavy rains immediately following application tend to result in excessive concentrations of herbicide in seed furrow, resulting in possible crop injury. Applications to furrow-planted sorghum should not be made until furrows are leveled (plow-in). Deep planter marks or seed furrows should also be leveled before application.
- (3) Application made to sorghum growing under stress caused by minor element deficiency or to sorghum growing on highly calcareous soils may result

in crop injury.

- (4) Do not graze or feed forage from treated areas for 21 days following application.
- (5) Following harvest of a treated crop, plow (moldboard or disk plow) and thoroughly till the soil in the fall or spring to minimize possible injury to subsequent crops, regardless of rate used.
- (6) Crop injury may occur when this herbicide is either applied, applied and incorporated or postemergence in conjunction with an at-planting systemic insecticide.

For applications to furrow-irrigated bedded sorghum in Arizona and California, and for postemergence applications plus emulsifiable oil, see additional precautions under those sections of this label.

Rotational Crop Suggestions: See rotational crop recommendations under corn.

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 Kansas City, Missouri 64116

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