

PM 25 REG# 34704-69  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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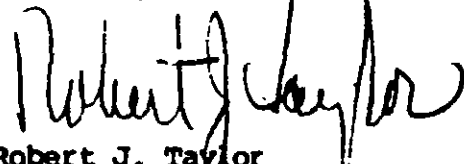
William M. Mahlburg  
Registration manager  
Herbicides and Specialty Products  
Platte Chemical Company  
419 18th Street  
P.O. Box 667  
Greeley, Colorado 80632

Dear Mr. Mahlburg:

Subject: Clean Crop Atrazine 4L Herbicide  
EPA Registration No. 34704-69  
Re: Alternate Confidential Statement of Formula  
Your Re-submission Dated June 4, 1990

There is no objection to the use of the alternate formulation requested in your letter of the above date. The amendment has been inserted in the file for the subject product.

Sincerely yours,



Robert J. Taylor  
Product Manager (25)  
Fungicide-Herbicide Branch  
Registration Division (H7505C)

CONCURRENCES

SYMBOL	17505C						
SURNAME	Mahlburg						
DATE	6/12/90						

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

William Mahlburg  
 Registration Manager  
 Platte Chemical Company  
 150 South Main Street  
 Fremont, NE 68025

JUN 14 1990

Dear Mr. Mahlburg:

Subject: Clean Crop Atrazine 4L  
 EPA Reg. No. 34704-69  
 Atrazine 90 WDG  
 EPA Reg. No. 34704-622  
 Re: Atrazine Voluntary Exposure Reductions Measures  
 Your Amendment Submissions Dated June 4, 1990

The labeling referred to above, submitted in connection with the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable with the following comments:

1. Add the following statement where appropriate: "Postemergence application to corn and sorghum must be made before corn and sorghum reaches 12 inches in height."
2. Where applicable, delete the term "boot stage" and clarify the 12 inch height restriction.

Stamped approved copies of your label are attached. Please submit five (5) copies your final printed labels incorporating this amendment and above mentioned comments before you release the products for shipment. All technical and end-use products released for shipment must have amended labels after September 1, 1990.

Sincerely yours,

*Robert J. Taylor*  
 Robert J. Taylor  
 Product Manager (25)  
 Fungicide-Herbicide Branch  
 Registration Division (H7505C)

CONCURRENCES

SYMBOL	H7505C						
SURNAME	M. M. C.						
DATE	6/12/90						

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 HERBICIDE DUE TO GROUND WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS TO AVOID ANY GROUND WATER POTENTIAL FOR ATRAZINE TO REACH GROUNDWATER.

# ATRAZINE 4L HERBICIDE

For Season-Long Weed Control in Corn and Sorghum and Other Crops.

EPA REG. NO. 34704-69

ACTIVE INGREDIENTS:	
Atrazine (2-chloro-4-ethylamino-6-isopropylamino-s-triazine)	48.5%
Related compounds	2.3%
INERT INGREDIENTS:	47.2%
TOTAL	100.0%

ATRAZINE 4L CONTAINS 4 LBS. ACTIVE INGREDIENTS PER GALLON  
**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

Read Booklet For Additional Precautionary Statements, Warranty And Limitation Of Damages And Directions For Use

FORMULATED FOR: PLATTE CHEMICAL CO.  
 100 SO. MAIN STREET PREMONT, NEBRASKA 68025

**NET CONTENTS 2 1/2 GALLONS**

ACCEPTED  
 with COMMENTS  
 in EPA Letter Dated:

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 34704-69

(Ground water concerns)

42.2%  
 0.8%

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## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS

### CAUTION

Harmful if swallowed, absorbed through the skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Keep away from food and feedstuffs.

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

### STATEMENT OF PRACTICAL TREATMENT

If Swallowed: Call Physician or Poison Control Center immediately. Drink one or two glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

If On Skin: Remove contaminated clothing. Wash skin with soap and water.

If In Eyes: Flush with plenty of water. Get medical attention if irritation persists.

If Inhaled: Remove victim to fresh air. Apply artificial respiration if indicated.

### ENVIRONMENTAL 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. Keep out of lakes, streams, and ponds. Do not contaminate water when disposing of equipment washwaters.

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 ground water.

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 mixedloaded, or used within 50 feet of all wells including abandoned wells, drainage wells, and sink holes.

### 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 means, at least, a hat or other suitable head covering, a long sleeved shirt and long-legged trousers or a coverall type garment (all of closely woven fabric covering the body, including the arms and legs), shoes and socks.

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.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

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. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers.

When oral warnings are given, warnings shall be given in a language customarily understood by workers.

Written or oral warnings must include the following information:

#### CAUTION

(Insert area or field description) treated with Atrazine on (insert date of application.)

Do not enter treated areas without protective clothing until sprays have dried.

In case of accidental exposure: Call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to Atrazine and describe the condition. For further information see the "STATEMENT OF PRACTICAL TREATMENT" portion of the pesticide label.

### STORAGE AND DISPOSAL

**PROHIBITIONS:** Do not contaminate water, food, or feed by storage or disposal. Do not store under conditions which might adversely affect the container or its ability to function properly.

**STORAGE:** Do not store below temperature of 0°F. If frozen, warm to 40°F. and reconstitute before using by rolling or shaking the container. Store in safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can effect package strength. Personnel should use clothing and equipment consistent with good pesticide handling.

**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:** Plastic: 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. Metal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

### NOTICE

The Directions For Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of Platte Chemical Co. or the Seller. All such risks shall be assumed by the Buyer.

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### WARRANTY AND LIMITATION OF DAMAGES

Platte Chemical Co. warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions For Use, and Conditions of Sale, subject to the inherent risks referred to therein.

Platte Chemical Co. makes no other express or implied warranty of FITNESS or of MERCHANTABILITY, and no agent of Platte Chemical Co. is authorized to do so except in writing with a specific reference to this warranty. Any damages, arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or of value, etc.

### GENERAL INFORMATION

ATRAZINE 4L herbicide controls\* most annual broadleaf and grass weeds in the crops included on this label. It is also effective in noncrop areas and industrial sites for the control of many annual and perennial broadleaf and grass weeds. ATRAZINE 4L may be applied before or after weeds emerge.

\*Important Note: 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. These weeds may include lambsquarters, pigweed, black nightshade, kochia, and others. Where this is known or suspected, we recommend the use of this product in combination with other registered herbicides which are not triazines. Consult your State Agricultural Extension Service about specific weed resistance to atrazine in your area and weed control recommendations. Within the specific crop directions on this label certain weeds are indicated for suppression only. Weed suppression is a visual reduction in weed competition (reduced population and/or vigor) as compared to an untreated area. Degree of suppression will vary with rate used, size of weeds, and environmental conditions following treatment. In each case where a range of rate is given, the lower rate should be used on light soils and soils low in organic matter, and the higher rate should be used on heavy soils high in organic matter. Since ATRAZINE 4L acts mainly through root absorption, its effectiveness depends on rainfall or irrigation to move it into root

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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 4L where adjacent desirable trees, shrubs, or plants might be injured. Note: Platte Chemical Co. 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° 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 35-40 psi operating pressure. Use a minimum of 5 gallons of water per acre for preplant incorporated, pre-emergence and post (without oil or surfactant) applications. Use a minimum of 10 gallons of water per acre for all post-emergence applications combined with oil or surfactant. For band applications, calculate the amount to be applied per acre as follows:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Rate/A for broadcast treatment} = \text{Amount needed for band treatment}$$

#### 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 post-emergence treatments, on corn and sorghum, apply the recommended rate of ATRAZINE 4L or 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 drift may occur.

Avoid application directly to animals or humans. Flagmen or loaders should avoid inhalation of spray mist or contact with skin and should wash thoroughly before eating and at the end of each day's operation.

With fixed-wing aircraft or helicopter application, an exactly even

even deposition cannot be achieved, and consequently crop injury or pesticide nonperformance may result wholly or in part. Do not apply by air during periods of thermal inversion.

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

**ATRAZINE 4L in water application**

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 materials 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 on corn or sorghum. Mixing should be accomplished as described under water applications. Do not apply after corn or sorghum has emerged as there is danger of liquefied fertilizers causing crop injury.

**IMPORTANT** — Check the compatibility of this product with liquid fertilizers and/or nitrogen solutions before use. Prepare the proposed mixture on a small scale and evaluate its suitability for spraying before mixing a large quantity.

**Application in water plus emulsifiable oil or oil concentrate**  
Adding emulsifiable oil or oil concentrate to postemergence water-based sprays may improve weed control in corn and sorghum. However, under certain conditions, use of either emulsifiable oil or oil concentrate may seriously damage corn or sorghum. To minimize this possibility, follow directions, procedures, and precautions below. Use a crop oil designed for use with this product containing 1-2% suitable emulsifier, or a suitable crop oil concentrate designed for use with this product and containing not more than 20% emulsifier or surfactant blend. Several oils and crop oil concentrates of these types are on the market. Emulsifiable oil and oil concentrate contaminated with water or other materials can cause compatibility problems and/or crop

**Injury.**

**Mixing procedures - all uses:** (1) Be sure sprayer is clean and not contaminated with other products like 2,4-D or other materials, as crop injury may result. (2) Fill tank 1/2 to 2/3 full with clean water. (3) Start agitation. (4) Pour product directly from container into tank. (5) Add emulsifiable oil, or oil concentrate, or a tank mix herbicide. (6) Finish filling tank with water, nitrogen solution, or liquid fertilizer. (7) Empty tank as completely as possible before refilling to prevent buildup of oil or emulsifiable concentrate residue in tank. Maintain agitation to avoid separation of other materials from water, nitrogen solution, or liquid fertilizer remaining in tank. (8) If an oil or oil concentrate film starts to build up in tank, drain it, and clean with strong detergent solution or solvent. (9) Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent. (10) For liquid nitrogen or liquid fertilizer, use suction screens of 18-mesh or coarser.

**NOTE:** 1) Do not use oil in ATRAZINE 4L sprays when corn or sorghum is under stress from prolonged cold, wet weather, poor fertility, or other factors or when corn or sorghum 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 fertilizer, or other materials is not recommended 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 4L and emulsifiable oil in water per season. 6) All return lines to the tank must discharge below liquid level.

**CORN**

The total maximum application rate for all atrazine corn treatments per calendar year is 3 lbs. active ingredient (6 pts. of this product) per acre.

One application will control most annual broadleaf and grass weeds such as barnyardgrass\*, witchgrass\*, (Panicum capillare), yellow foxtail\*, green foxtail\*, wild oats, large (hairy) crabgrass, giant foxtail\*, velvetleaf\*, morning-glory, lambsquarters\*, ragweed, nightshade\*, purslane, and mustard.

(\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

ATRAZINE 4L may be applied either before planting, at planting or after planting at the rate indicated in Table 1.

For preplant and preemergence applications, nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier of ATRAZINE 4L. Do not apply after corn has emerged as there is danger of liquid fertilizer causing crop injury.

**PREPLANT:** Broadcast in the spring after plowing at the rate indicated in Table 1.

Apply 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.

**PREEMERGENCE:** Apply during or shortly after planting prior to weed emergence at the rate indicated in Table 1.

**POSTEMERGENCE:** Apply before weeds exceed 1 1/2 inches in height and before corn is 18 inches tall at the rate indicated in Table 1. When using nitrogen solutions, direct the spray to avoid corn foliage injury. Maintain agitation in spray tank during application.

**TABLE 1**

Rate of ATRAZINE 4L Depending Upon Soil Type*	
Soil Texture	Atrazine 4L Broadcast Rate/A
Light Soils: sands, loamy sands and sandy loams	4 pints
Medium Soils: silt and clay loams that are low in organic matter	4 1/2 pints
Heavy 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 post-emergence only)	8 pints

For Preplant or Preemergence Applications in Western KS, Western NE, Eastern CO, Eastern WY, NM, West TX and the Pan Handle of OK. On sands, loamy sands, sandy loams, mild to strongly alkaline soils and all moisture conditions.

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. Postemergence with emulsifiable oil or oil concentrate in water.)

**IMPORTANT:** Be sure to read precautions under use with water plus emulsifiable oil or oil concentrate in water.

**BROADLEAF AND GRASS CONTROL:** Broadcast 4 pts. per acre after weed emergence, but before weeds reach 1 1/2 inches in height and before corn is 12 inches tall. Add emulsifiable oil at rate of 1 gal. per acre for ground applications and 1/2 gal. per acre for aerial applications. Add oil concentrate at rate of 1 qt. per acre for ground applications.

**BROADLEAF CONTROL:** Broadcast 2 2/3 pts. per acre for control of broadleaf weeds, such as annual morningglory, cocklebur, lambsquarters, mustard, pigweed, ragweed, smartweed, and wild buckwheat. Add emulsifiable oil at rate of 1 gal. per acre for ground applications and 1/2 gal. per acre for aerial applications. Add oil concentrate at rate of 1 qt. per acre for ground applications. Apply before pigweed and lambsquarters reach 6 inches in height before all other weeds reach 4 inches in height and before corn is 12 inches tall. A cultivation may be necessary if all weeds are not controlled or if weeds regrow.

**PROBLEM WEEDS**

For control of yellow nutsedge\* and Canada Thistle\*, ATRAZINE 4L will control yellow nutsedge (Cyperus esculentus) and Canada thistle (Cirsium arvense) when applied as indicated below. 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 regrowth of yellow nutsedge or Canada thistle occurs following the last application of ATRAZINE 4L 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

such as annual grasses, are also expected, use an alternative method that includes a preplant or pre-emergence treatment plus a post-emergence combination with emulsifiable oil or apply all the ATRAZINE 4L preplant or pre-emergence.

1) Broadcast 3 pts. of ATRAZINE 4L plus 1 gallon of 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 pts. of ATRAZINE 4L plus 1 gal. of oil per acre 10 to 20 days after the initial application has been made, but before corn reaches 12 inch height.

2) Broadcast 3 pts. of ATRAZINE 4L per acre preplant. <sup>With</sup> Follow an application of 3 pts. of ATRAZINE 4L plus 1 gallon of oil per acre, after the corn and weeds emerge, but before nutsedge plants reach a height of 3 inches (for nutsedge suppression only), and before corn reaches 12 inch height.

3) Broadcast 3 pts. of ATRAZINE 4L per acre during or shortly after planting, but prior to crop or weed emergence. Follow with an application of 3 pts. 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, and before corn reaches 12 inch height.

4) Broadcast 6 pts. of ATRAZINE 4L plus 1 gallon of oil per acre after the crop has emerged and before corn reaches 12 inch height. Apply after yellow nutsedge and Canada thistle plants emerge, but before nutsedge reaches a height of 3 inches or Canada thistle is more than 6 inches tall.

5) Broadcast 6 pts. of ATRAZINE 4L per acre preplant (for yellow nutsedge suppression only).

6) Broadcast 6 pts. of ATRAZINE 4L per acre during or shortly after planting, but prior to crop or weed emergence. (For yellow nutsedge suppression only).

NOTE: Oil should not be used in Atrazine sprays when corn is wet or under stress. See precaution section under Postemergence Applications of ATRAZINE 4L plus Emulsifiable Oil in Water on Corn for additional directions.

For Quackgrass\* Suppression On Land Going Into Corn Production

Split application: Broadcast 3 pts. per acre in the spring and plow 1 to 3 weeks later.

Broadcast a second application at the rate of 3 pts. per acre in the spring before, during or after planting, but before weeds are 1 1/2 inches high. This split application will suppress both quackgrass and most annual broadleaf grass weeds.

Single application: Broadcast 6 pts. per acre in the spring. Plow 1 to 3 weeks after application.

(\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

#### TANK MIXTURES WITH ATRAZINE 4L IN CORN

##### ATRAZINE 4L + Paraquat

For control of existing vegetation and residual control where corn will be planted directly into cover crop, established sod or in previous crop residues - Broadcast 4 to 6 pts. ATRAZINE 4L and recommended label rate of Paraquat per acre in 20 to 60 gallons of water per acre. Following the Paraquat label, add recommended rate of nonionic surfactant per 100 gallons of diluted spray. Add ATRAZINE 4L to spray tank first and thoroughly mix with water. Add the Paraquat and surfactant last.

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

##### ATRAZINE 4L + Alachlor 4EC

Use a tank mixture of ATRAZINE 4L + alachlor 4EC for the control of most annual broadleaf and grass weeds in corn (field and silage corn only) such as annual morningglory, barnyardgrass, 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.

Applications may be made preplant, within 7 days of planting; pre-emergence, or post-emergence, until weeds reach the two leaf stage and the corn is no more than 5 inches tall.

Refer to the alachlor 4EC label for application rates and directions. Applicable limitations and precautions on this and the

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alachlor 4EC label must also be followed.

##### ATRAZINE 4L + Alachlor 4EC + Paraquat or Glyphosate For Minimum-Tillage or No-Tillage Systems

For control of many emerged annual weeds, suppression of many emerged perennial weeds, and pre-emergence control of many annual grasses and weeds in areas where corn will be planted directly into a cover crop, established sod or in previous crop residues. Regrowth from perennial weeds will not be controlled. Do not apply by air.

Make application immediately before, during, or after planting, but before crop emergence. Refer to the alachlor 4EC label for application rates and directions. All applicable directions, limitations, and precautions on this and the alachlor 4EC and paraquat or glyphosate labels must be followed.

##### ATRAZINE 4L + Propachlor 65W

Use a tank mixture of ATRAZINE 4L + propachlor 65W for control of most annual broadleaf and grass weeds in corn (field, hybrid seed, silage and sweet corn only), such as annual morningglory, annual ryegrass, barnyardgrass (watergrass), buttonweed (velvetleaf), carpetweed, cocklebur, crabgrass, fall panicum, Florida pusley, giant foxtail, green foxtail, yellow foxtail, goosegrass, groundsel, jimsonweed, lambsquarters, mustard, nightshade, pigweed, purslane, ragweed, smartweed and sunflower. Broadcast 2 1/2 to 3 1/2 pts. of ATRAZINE 4L plus 3 1/2 to 6.0 lbs. of propachlor 65W per acre on the soil surface any time from immediately after planting until broadleaf and grasses reach the two-leaf stage. Use the lower rates of ATRAZINE 4L and propachlor 65W on light-textured soils low in organic matter. Use the higher rates on heavy-textured soils high in organic matter.

A minimum of 2 1/2 pts. per acre of ATRAZINE 4L in the tank mixture will give better control of annual morningglory, buttonweed (velvetleaf), cocklebur and sunflower.

Apply in a minimum of 20 gallons of water per acre. Non-pressure fluid fertilizer may replace all or part of the water used as a carrier for applications applied to the soil surface before crop and weeds emerge. Add the ATRAZINE 4L to the spray tank first and thoroughly mix with water. Prepare a slurry of propachlor 65W and water and add the slurry to the spray tank.

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Refer to propachlor 65W label for further directions, limitations and cautions.

##### ATRAZINE 4L + Dual® 8E or ATRAZINE 4L + Dual® 8E + Simazine

###### PREPLANT/PREEMERGENCE

Use a tank mixture of ATRAZINE 4L + Dual 8E or ATRAZINE 4L + Dual 8E + simazine as a preplant surface, preplant incorporated or pre-emergence application for the control of barnyardgrass, crabgrass, crowfootgrass, fall panicum, foxtail millet, giant foxtail, goosegrass, green foxtail, prairie cupgrass, red rice, signalgrass (*Brachiaria*), southwestern cupgrass, witchgrass, yellow foxtail, yellow nutsedge, black nightshade, carpetweed, Florida pusley, galinsoga, pigweed, browntop panicum, cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf in corn.

To apply, refer to the tank mix directions appearing on the Dual 8E label. Note, where directions specify AAttrax® 4L, substitute CLEAN CROP ATRAZINE 4L. All applicable directions, limitations, and precautions on this and the Dual 8E and simazine labels must be followed.

###### POSTEMERGENCE

Use a tank mixture of ATRAZINE 4L plus Dual 8E as a post-emergence application for the control of barnyardgrass, crabgrass, crowfootgrass, fall panicum, foxtail (giant, green and yellow), jimsonweed, mustard, pigweed, prickly sida, purslane, ragweed, smartweed, and velvetleaf and for partial control of cocklebur, morning-glory, and yellow nutsedge. To apply, follow the tank mix directions appearing on the Dual 8E label. Note, where directions specify AAttrax 4L, substitute CLEAN CROP ATRAZINE 4L. All applicable directions, limitations, and precautions on the Dual 8E label must be followed.

##### ATRAZINE 4L + Dual 8E + Paraquat or ATRAZINE 4L + Dual 8E + Glyphosate or ATRAZINE 4L + Dual 8E + Simazine + Paraquat or ATRAZINE 4L + Dual 8E + Simazine + Glyphosate

###### For Minimum-Tillage or No-Tillage Systems

Use a tank mixture of ATRAZINE 4L + Dual 8E with paraquat or glyphosate, or ATRAZINE 4L + Dual 8E + simazine with para-

quat or glyphosate in minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues.

The paraquat tank mixtures will control most emerged annual weeds and suppress many perennial weeds, in addition to controlling most pre-emergence annual broadleaf weeds and grasses. The glyphosate tank mixtures will control emerged annual and perennial weeds, in addition to controlling most pre-emergence annual broadleaf weeds and grasses.

Make application before, during, or after planting but before the corn emerges. To apply, follow the tank mix directions appearing on the Dual 8E label. Note, where directions specify AAtrex 4L, substitute CLEAN CROP ATRAZINE 4L. All application directions, limitations, and precautions on this and the Dual 8E, simazine, paraquat and glyphosate labels must be followed.

ATRAZINE 4L + Simazine 80W or Simazine 4L or Simazine 90DF

Use a tank mixture of ATRAZINE 4L + simazine for the control of crabgrass, fall panicum and carpetweed, in addition to the control of the weeds listed for ATRAZINE 4L alone.

Make broadcast application of tank mix before planting, at planting, or after planting, but prior to emergence of corn and weeds. Apply at the rates shown in the table below. Cultivate shallowly if weeds develop.

**PREPLANT SURFACE-APPLIED:** Use on medium- and fine-textured soils in minimum-tillage or no-tillage systems only in CO, IL, IN, IA, KS, KY, MN, MO, MT, NE, ND, SD, WI, and WY. Apply  $\frac{2}{3}$  the recommended rate of ATRAZINE 4L and simazine shown in Table 2 for the soil texture as split treatment 30-45 days before planting. Apply the remainder at planting. Applications made less than 30 days before planting may be made as either a split or single treatment. On coarse-textured soils, do not apply more than two weeks before planting.

If weeds are present at time of treatment, apply in a tank mix combination with a contact herbicide (for example, paraquat or glyphosate). All applicable directions, precautions and limitations on the contact herbicides' label must be followed.

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:** Make soil application and incorporate in the spring before, during, or after final seedbed preparation. Avoid deep incorporation. For best results, apply within two weeks before planting.

**PREEMERGENCE:** Apply during or shortly after planting, but prior to crop and weeds emergence.

All applicable directions, precautions, and limitations on this and the simazine label must be followed.

TABLE 2  
Tank Mixtures With Simazine on Corn  
BROADCAST RATE PER ACRE

1:1 Ratio*				1:2 Ratio**			
Atrazine 4L	Simazine 80W	Simazine 90DF	Simazine 4L	Atrazine 4L	Simazine 80W	Simazine 90DF	Simazine 4L
SOIL TEXTURE:							
Sand, loamy sand, sandy loam: $\frac{1}{2}$							
2 pts.	1 1/4 lbs.	1 1/2 lbs.	2 pts.	1 1/2 pts.	1 1/2 lbs.	1 1/2 lbs.	2 1/2 pts.
Loam, silt loam, silty clay loam, sandy clay loam, silty clay loam, sandy clay, or silty clay with low organic matter:							
2 2/5 pts.	1 1/2 lbs.	1 1/2 lbs.	2 1/2 pts.	1 1/2 pts.	2 0 lbs.	1 1/2 lbs.	3 1/2 pts.
Loam, silt loam, silty 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 1/2 lbs.	1 1/2 lbs.	3 pts.	1 1/2 pts.	2 1/2 lbs.	2 1/2 lbs.	3 1/2 pts.

\*For control of most weeds.

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

ATRAZINE 4L + Simazine 80W, Simazine 4L, or Simazine 90DF with Glyphosate

Use a tank mixture of ATRAZINE 4L + simazine + glyphosate for control of certain broadleaf weeds and grasses where corn will be planted directly into a cover crop, established sod, or in previous crop residues. Refer to glyphosate label for rates and tank mix directions. All applicable directions, limitations, and precautions on this, the simazine, and the glyphosate label must be followed.

ATRAZINE 4L + Simazine 80W, Simazine 4L, or Simazine 90DF with Paraquat

Use a tank mixture of ATRAZINE 4L + simazine + paraquat to control most emerged weeds and for residual weed control where

corn will be planted directly into a cover crop, established sod or in previous crop residues. Add ATRAZINE 4L and simazine to water in spray tank. Agitate until thoroughly mixed. Next add paraquat and a nonionic surfactant, such as X-77<sup>®</sup>, LOVELAND ACTIVATOR 90, or similar nonionic surfactant approved for agricultural use.

Continue agitation during application. Apply 2 to 4 pts. of ATRAZINE 4L plus 1 1/4 to 2 1/2 lbs. simazine 80 (or 2 to 4 pts. simazine 4L, or 1-1 1/2 to 2 1/2 lbs. simazine 90DF) plus 1 to 2 pts. paraquat in 20 to 60 gals. of water per sprayed acre. Make broadcast application before, during, or after planting, but before emergence of corn. Add 1/2 pt. of a nonionic surfactant per 100 gallons of spray mixture. Use the higher rate of paraquat if existing weeds are 4 to 6 inches tall. Weeds taller than 6 inches will not be controlled.

All applicable directions, limitations, and precautions on this, the simazine and the paraquat labels must be followed.

**PRECAUTIONS FOR ALL APPLICATIONS TO CORN**

- 1) Do not apply more than 2 pts. ATRAZINE 4L to corn in any 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 post-emergence applications plus emulsifiable oil, see additional precautions under that section of this label.

**SUGGESTIONS FOR ROTATIONAL CROPS**

- 1) Land treated with ATRAZINE 4L should not be planted to any crop except corn or sorghum until the following year or injury may occur.
- 2) If ATRAZINE 4L is applied after June 10, do not rotate with crops other than corn or sorghum the next year or injury may occur.
- 3) If ATRAZINE 4L is used at a broadcast rate of 2 pts. per acre (or comparable rates in a band application) + simazine 4L (or equiv-

alent of another simazine formulation), a crop of untreated corn or sorghum should precede the next rotational crop.

4) In the High Plains and Intermountain area of the West where rainfall is sparse and erratic or where irrigation is required, use ATRAZINE 4L to control weeds in corn only when corn is to follow corn or a crop of untreated corn, or sorghum is to precede other rotational crops.

5) 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/A or equivalent band application rate, as soybean injury may occur.

6) Injury may occur to soybeans planted in north-central and northwest IA, south-central and southwest MN, north-east NE, southeast SD, and other areas the year following application on soils having a calcareous surface layer.

7) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains or small-seeded legumes and grasses the year following ATRAZINE 4L application or injury may occur.

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

The total maximum application rate for all atrazine sorghum treatments is 4 pts. per acre for active ingredient (8 pts. of this product per acre). ATRAZINE 4L will control most annual broadleaf and grass weeds such as barnyardgrass\*, witchgrass\* (Panicum capillare), yellow foxtail\*, green foxtail\*, wild oats, large (hairy) crabgrass, giant foxtail\*, velvetleaf\*, morningglory, lambsquarters\*, ragweed, nightshade\*, purslane and mustard. (\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

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 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 4L 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.

TABLE 3

Preplant and Pre-emergence Applications<sup>1</sup> in Sorghum

Soil Texture	Organic Matter	Broadcast Rate of Atrazine 4L Per Acre
Light 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 Heavy Soils:	Less than 1%	3 1/8-4 pts.
Silt loams, clay loams and clays	1%-1 1/2%	
	More than 1 1/2%	3 1/8-4 1/2 pts.

<sup>1</sup> ATRAZINE 4L should not be applied preplant to sorghum grown in NM, OK, TX, Western KS, Eastern CO, AR, LA, TN, MS, AL, GA, FL, SC, and NC, or pre-emergence to sorghum grown in NM, TX, OK, Western KS, Eastern CO, except in Northeastern OK and the Texas Gulf Coast.

In case of planting failures, sorghum can be replanted into soil previously treated with ATRAZINE 4L. Do not make a second broadcast application or injury may occur. If ATRAZINE 80W 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.

**Pre-emergence Broadleaf Weed Control in Furrow Irrigated Bedded Sorghum (Arizona and California only):**

For pre-emergence control of broadleaf weeds such as ground cherry, lambsquarters, morningglory, mustard, pigweed and purslane, broadcast 1 1/2 to 2 1/2 pts. per acre. Use the lower rate on coarse-textured soils and soils low in organic matter and use

the high rate on fine-textured soils and soils high in organic matter. Make application after bed preparation, during or after planting, but before sorghum and weeds have emerged and before the first furrow irrigation. Several regular irrigations should follow the application, making sure that all soil is thoroughly wet. Precautions for Pre-emergence Applications for ATRAZINE 4L to Furrow Irrigated Bedded Sorghum Grown in Arizona and California:

To avoid possible sorghum injury, do not use on sand or loamy sand soils or on sorghum planted in the furrow. Additionally, applications made to sorghum growing on alkali soils or where cuts, fills or erosions have exposed calcareous or alkali subsoils, may result in crop injury. In case of crop failure, do not replant sorghum for eight months following application. Corn may be planted immediately.

**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.

TABLE 4

Postemergence Applications in Sorghum		
Minimum Height of Sorghum Soil Texture	Broadcast Rate at Treatment	Atrazine 4L
Sand or loamy sand	DO NOT USE	
Sandy loam	See directions for broadleaf weed control below	
Silt loam to sandy clay loam	Completely emerged	4-4 1/2 pts.
Open and Pullman clay soils	At least 6 inches high	4-4 1/2 pts.
Silty clay loams and heavier soils	Completely emerged	6 pts.

**Postemergence Broadleaf Weed Control with ATRAZINE 4L plus Emulsifiable Oil In Water:**

Broadcast 2 2/3 pts. per acre for control of broadleaf weeds such as annual morningglory, cocklebur, lambsquarters, mustard, pigweed, ragweed, smartweed and wild buckwheat. Application

*crop height of 12 inches.*

*not bold*

should be made before pigweed and lambsquarters reach six inches in height, before all other weeds reach four inches in height and before sorghum is 12 inches tall. In TX, NM, OK, Western KS, CO and the desert regions of CA and AZ, apply when sorghum is 6-10 inches in height, but before it reaches the boot stage. In all other areas, apply after sorghum reaches the three-leaf stage and before sorghum is 12 inches tall. Add emulsifiable oil at the rate of 1 gal. on per acre for ground applications and 1/2 gallon per acre for aerial applications. A cultivation may be necessary if all weeds are not controlled or if regrowth of weeds occur.

**Precautions for Application of ATRAZINE 4L plus Emulsifiable Oil in Water to Sorghum**

- 1) Do not use oil in ATRAZINE 4L sprays when sorghum is under stress for prolonged cold, wet weather, poor fertility or other factors or when sorghum is wet and succulent from recent rainfall as crop injury may occur.
- 2) Do not use oil in ATRAZINE 4L sprays when treating inbred lines or any breeding stock as injury may occur.
- 3) Adding other insecticides, herbicides, liquid fertilizers or other materials is not recommended because they may cause compatibility problems or crop injury.
- 4) Store and handle emulsifiable oil 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 4L and emulsifiable oil in water per season.

**Postemergence Broadleaf Weed Control with ATRAZINE 4L plus Surfactant in OK, NM, TX, Western KS, CO and Desert regions of AZ and CA only:**

Broadcast 2 1/2 pts. of ATRAZINE 4L plus 1/4 to 1 1/2 pts. of surfactant per acre when sorghum is 6 to 12 inches in height, but before weeds reach 1 1/2 inches in height. Apply only on sandy loam and finer textured soils.

**TANK MIXTURES WITH ATRAZINE 4L IN SORGHUM**

**ATRAZINE 4L + Igran<sup>®</sup> 80W**

Use a tank mixture of ATRAZINE 4L + Igran 80W to control certain broadleaf weeds and grasses. Refer to Igran 80W label for

directions, precautions, limitations, and weeds controlled by Igran 80W.

**ATRAZINE 4L + Dual 8E (for use only on seed treated with Concep<sup>®</sup>)**

Use a tank mixture of ATRAZINE 4L + Dual 8E for control of most annual broadleaf weeds and grasses. For use only when the sorghum seed has been properly treated by the seed company with Concep. Refer to the Dual 8E label for directions, precautions, and limitations.

**PRECAUTIONS FOR ALL APPLICATIONS TO SORGHUM**

- 1) 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.
- 2) 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.
- 3) Do not graze or feed forage from treated areas for 21 days following application.
- 4) 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 rate used.

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

**SUGGESTIONS FOR ROTATIONAL CROPS:**

- 1) Land treated with ATRAZINE 4L should not be planted to any crop except corn or sorghum until the following year or injury may occur.
- 2) If ATRAZINE 4L 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 and Intermountain areas of the West where



rainfall is sparse and erratic or where irrigation is required, use ATRAZINE 4L to control weeds in sorghum only when sorghum is to follow sorghum or a crop of untreated sorghum, or corn is to precede other rotational crops.

4) In Western Minnesota and Eastern parts of the Dakotas, Nebraska, and Kansas, sorghum treated with ATRAZINE 4L should not be followed with soybeans if the broadcast rate applied was more than 4 pts. 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 4L application on Harpe, Canisteo, Stroden or other soils having 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 ATRAZINE 4L application or injury may occur.

### POSTEMERGENCE WINTER WEED CONTROL IN TEXAS

For use on fall bedded land and in the Gulf Coast and Blacklands of Texas. Broadcast  $\frac{1}{2}$  to 1 qt. per acre postemergence for control of winter weeds only, such as henbit, seedling dock and annual thistle on land that will be planted to corn, grain sorghum, or forage sorghum the following spring.

For best results, add a suitable surfactant such as X-77 or ACTIVATOR 90, at a rate of 0.5% of spray volume, an emulsifiable oil at a rate of 1.0% of spray volume, or an oil concentrate at rate of 1 ct. per acre.

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

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

### CHEMICAL FALLOW

#### WHEAT-SORGHUM-FALLOW

This treatment controls annual broadleaf and grass weeds following wheat harvest and in the following sorghum crop when grown under minimum tillage.

Apply 6 pts. to wheat stubble immediately following wheat har-

vest. If weeds are present, remove them with a sweep plow or other suitable implement after application. Plant sorghum into wheat stubble the following spring with minimum disturbance of the soil. 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.

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

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

(\*Local resistance may result in suppression only or lack of control of some weeds. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

#### WHEAT-CORN-FALLOW (KS, NE)

This treatment controls cheatgrass (downy brome, chess), kochia\*, mustards, pigweed\*, Russian thistle, wild lettuce, wild sunflower, and volunteer wheat following wheat harvest. Control may extend into the following corn crop when grown under minimum tillage.

Apply 6 pts. per acre to wheat stubble immediately following wheat harvest. If weeds are present, remove them with a sweep plow or other suitable implement after application. Plant corn into wheat stubble the following spring with minimum disturbance of the soil. 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.

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

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

(\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTICE within GENERAL INFORMATION SECTION of this label.)

#### WHEAT-FALLOW-WHEAT (CO, KS, MT, NE, ND, SD, and WY)

This treatment controls cheatgrass (downy brome, chess), com-

mon lambquarters\*, field pennycress, kochia\*, mustard, Russian thistle, wild lettuce, and suppresses volunteer wheat during fallow period of a wheat-fallow-wheat rotation. Apply 1 to 2 pts. per acre. Use higher rate to control wild sunflower and pigweed\*. Apply to stubble ground. Apply only once during the same fallow period. Use only on silt loam or finer texture soil. (\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

### SUGARCANE

To control many broadleaf and grass weeds, such as amaranths\*, crabgrass, freeweed, Flora's paintbrush, foxtails\*, junglerice\*, and wiregrass, apply 2 to 4 qts. per acre at the time of planting or ratooning, but before emergence of sugarcane. Broadcast by air in a minimum of 5 gallons of spray per acre, or broadcast or band by ground equipment in a minimum of 20 gallons of spray per acre, unless otherwise indicated. One additional application may be made over sugarcane as it emerges, and two additional applications may be made interline after emergence as directed sprays. Where needed, repeat treatments may be applied broadcast, band, or interline as suggested with the final application being made prior to close-in. Do not exceed the rate of ATRAZINE 4L recommended for any one crop of sugarcane.

Note: Where high rates of ATRAZINE 4L are used alone, apply in a minimum of 1 qt. of water for each 1 qt. of ATRAZINE 4L applied per acre.

Aerial Application: Apply at a maximum height of 10 feet, using low drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply ATRAZINE 4L alone by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

(\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

#### FLORIDA

To control emerged pokeweed, apply X-77 to 1-77 pts. per acre in at least 40 gallons of water per acre. Apply as a directed spray,

by ground equipment, prior to close-in. Add 4 quarts of surfactant for each 100 gallons of spray. Thoroughly cover the weed foliage. To control alexandergrass\*, large crabgrass, pokeweed (artillery) weed, and spiny amaranth\*, make application by one of the following methods at planting or ratooning:

1. Apply 4 qts. per acre, preemergence. Make one or two additional applications, as needed, postemergence to sugarcane and weeds, at 2 quarts per acre. Make application before weeds are greater than 1 1/2 inches in height.

2. Apply one to three times, as needed, at 2 qts. per acre post-emergence to both sugarcane and weeds. Make application before weeds are greater than 1 1/2 inches in height.

#### LOUISIANA

To control annual weeds during summer fallow period, apply 2 qts. per acre to weed free beds, immediately after beds are formed. After planting, follow normal weed control.

Precautions: (1) Do not apply more than 10 quarts per acre to any one sugarcane crop. (2) If applying 2 quarts per acre during summer fallow period, do not apply more than 4 quarts per acre during the remainder of the growing season.

#### TEXAS

To control barnyardgrass\*, pigweed\*, purslane, and sunflower, in pre-plant or ratoon sugarcane, apply preemergence at 4 qts. per acre. Make one or two additional applications, as needed, at 3 qts. per acre postemergence to sugarcane and weeds.

To achieve best results when weeds are emerged, add a nonionic surfactant at a concentration of 2 qts. per 100 gallons of spray and apply before the weeds are greater than 1 1/2 inches in height.

(\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

Precautions: (1) Sugarcane may be injured when under moisture stress, when soil is of low absorptive capacity, or when land is first planted to sugarcane. (2) Do not apply after close-in. (3) Do not apply more than 10 quarts per acre to any one crop of sugarcane.

### MACADAMIA NUTS

For preemergence control of many broadleaf and grass weeds including crabgrass, foxtail\*, wiregrass, Flora's paintbrush,

Spanishneedles, and fireweed, apply 2 to 4 qts. per acre before harvest. Repeat as necessary. Do not apply when nuts are on the ground during harvest period. Do not apply by air.

### GUAVA

For the control of many annual broadleaf and grass weeds, including fireweed, purslane, scarlet pimpernel, Spanishneedles and sowthistle. Apply only on established plantings, at least 18 months old. Apply preemergence or early postemergence to weeds as a directed spray at 2 to 4 qts. per acre in 20 to 50 gallons of spray mix. When applying postemergence, the use of a surfactant and greater spray volume (80 to 100 gallons of spray mix per acre) may enhance weed control.

Note: (1) Do not allow spray to come into contact with foliage or fruit. (2) Do not apply more frequently than at 4 month intervals. (3) Do not apply more than 8 quarts of ATRAZINE 4L per year.

### TURF GRASSES FOR SOD (FLORIDA ONLY)

#### ST. AUGUSTINEGRASS, CENTIPEDEGRASS, AND ZOYSIA GRASS

For the control of most annual broadleaf and grass weeds such as barnyardgrass\*, witchgrass\* (*Panicum Capillare*), yellow foxtail\*, green foxtail\*, wild oats, large (hairy) crabgrass, velvetleaf\*, morningglory, lambsquarters\*, ragweed, nightshade\*, purslane and mustard. (\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

Apply at the rates indicated in the table below:

Soil Texture	Broadcast Rate Per Acre	Application Timing
Muck or Peat	4 qts.	Old Beds: Within 2 days after lifting sod. New Beds: 3 to 4 days after sprigging or plugging.
Sandy Soil	2 qts.	Old Beds: Within 2 days after lifting sod. New Beds: 7 to 10 days after sprigging or plugging.

If weeds regrow, apply an additional 2 qts. per acre on muck or peat, or 1 qt. per acre on sandy soil.

PRECAUTIONS: (1) Do not apply within 30 days before cutting or lifting. (2) Do not apply in combination with surfactants or other spray additives. (3) Use only on turfgrass that is reasonably free of insect, nematode, and disease infestations. (4) On newly sprigged turfgrass, temporary slowing of growth may follow application.

### TURFGRASS FOR FAIRWAYS, LAWNS, SOD PRODUCTION (In states other than Florida) and SIMILAR AREAS

#### BERMUDAGRASS, CENTIPEDEGRASS, ST. AUGUSTINEGRASS, AND ZOYSIA GRASS.

To control annual bluegrass\*, burclover, carpet burweed, chickweed, corn speedwell, henbit, hop clover, and spurweed, make application after October 1, prior to emergence of winter annual weeds. Annual bluegrass will be controlled even if it is emerged at time of treatment. To control summer annual weeds such as barnyardgrass\*, witchgrass\* (*Panicum capillare*), yellow foxtail\*, green foxtail\*, wild oats, large (hairy) crabgrass, velvetleaf\*, morningglory, lambsquarters\*, ragweed, nightshade, purslane and mustard, apply ATRAZINE 4L in late winter before the weeds emerge. Apply in a minimum of 15 gallons of water per acre or 1 gallon per 1,000 sq. ft. (\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

In areas where the major weed is annual bluegrass, apply 1 qt. per acre (0.75 fl. oz. per 1,000 sq. ft.). To control the other weeds listed above, apply 2 qts. per acre (1.5 fl. oz. per 1,000 sq. ft.). Do not apply more than 1 qt. per treatment on newly sprigged turfgrass or on hybrid bermudagrass such as Tiflawn, Tifway, and Ormond.

For continued summer annual weed control, apply another 1 qt. per acre at least 30 days after the previous application, but not after April 15. Do not make more than 2 applications of this product per year.

Precautions: On newly sprigged turfgrass and hybrid bermudagrass, temporary slowing of growth and yellowing may occur

following application. To avoid turf injury, (1) Use only on turfgrass that is reasonably free of insect, nematode, and disease infestations. (2) Do not use on golf greens. (3) Do not use north of NC (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.

Note: Do not graze or feed turf clippings to animals.

### NONSEI ACTIVE WEED CONTROL ON NONCROP LAND

This product provides long-term weed control on industrial sites, highway medians and shoulders, railroad rights-of-way, lumberyards, petroleum tank farms, and in noncrop areas on farms, such as around buildings, equipment and fuel storage areas, along fences, and lanes.

Do not use near adjacent desirable plants or in greenhouses, or injury to plants may occur.

Apply before or soon after weeds begin growth. Make postemergence applications when weeds are young and actively growing. Use the higher rates on fine clay and muck soils. Use sufficient water to assure thorough coverage. Use at least 1 gal. of water for each quart of product; use more if practical. Do not graze treated areas.

Annual broadleaf and grass weeds (including banyardgrass\*, cheatgrass, crabgrass, lambsquarters\*, foxtail\*, ragweed, puncturevine, and turkey mullein): Broadcast 4 1/2 to 10 qts. per acre.

For suppression of hard-to-kill annual and many perennial broadleaf and grass weeds (including bluegrass\*, burdock, Canada thistle\*, dogfennel, orchardgrass\*, plantain, quackgrass\*, purple top, redtop, and smooth brome): Broadcast 10 qts. per acre.

For small areas, 0.28 pt. per 1,000 sq. ft. is equivalent to 10 qts. per acre.

(\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

The total maximum application rate for all atrazine non-crop treatments per calendar year is 10 lbs. active ingredient (10 qts. of this product) per acre.

### ROADSIDES

For control of certain annual weeds such as cheatgrass (downy brome, chess), common (annual) broomweed, little barley, medusahead, sagewort, and tumble mustard in established perennial grasses along roadides in CO, KS, MT, NE, ND, SD, and WY. Apply 2 pts. per acre in a minimum of 10 gallons of water by ground equipment. Apply in the fall before spring thawing, but before established grasses green up and weeds emerge. Apply only once per year. Following application, temporary discoloration or other forms of injury may occur to the perennial grasses. Precautions: (1) Do not graze treated areas. (2) Do not cut or feed roadside grass for hay.

### CONIFERS

For control of annual broadleaf and grass weeds such as banyardgrass\*, witchgrass\* (*Panicum capillare*), yellow foxtail\*, green foxtail\*, wild oats, large (hairy) crabgrass, velvetleaf\*, morningglory, lambsquarters\*, ragweed, nightshade\*, purslane, and mustard, in Douglas fir, grand fir, noble fir, white fir, Austrian pine, bishop pine, Jeffrey pine, knobcone pine, loblolly pine, lodgepole pine (shore pine), monterey pine, ponderosa pine, Scotch pine, slash pine, blue spruce, and Sitka spruce.

Broadcast 2 to 4 qts. in a minimum of 5 gals. of water per acre by air or 10 gals. by ground prior to transplanting, soon after transplanting, or in established conifers between fall and early spring while trees are dormant. Apply before weeds are 1 1/2 inches tall. For applications prior to transplanting, allow sufficient precipitation to activate ATRAZINE 4L before transplanting. In areas where spring and summer rainfall is inadequate to activate ATRAZINE 4L, apply during fall prior to spring transplanting.

Quackgrass\* Control: Broadcast 4 qts. in a minimum of 5 gals. of water per acre by air or 10 gals. by ground in fall or early spring while trees are dormant and before quackgrass is more than 1 1/2 inches tall. (\*Local resistance may result in suppression only or lack of control. Refer to IMPORTANT NOTE within GENERAL INFORMATION SECTION of this label.)

Precautions: (1) In areas west of Rocky Mountains (except Great Basin), grazing may begin 7 months after a fall application or 3

months after a winter or spring application. (2) To prevent illegal residue, do not graze treated areas of the Great Basin, or areas east of the Rocky Mountains. (3) Temporary injury to trees may occur following use on coarse-textured soil. (4) To avoid crop injury, do not apply to seedbeds. (5) Also apply only once per year.

**Aerial application:** In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft. above vegetation, using low drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply by aircraft at a minimum upwind distance 400 ft. from sensitive plants. Note: In very hilly or mountainous terrain where the 10 foot flying height is unsafe, fly as low as possible. There may be increased risk of spray drift and uneven application.

AAtrex® trademark of CIBA-GEIGY for atrazine.

Concep® trademark of CIBA-GEIGY.

Dual® trademark of CIBA-GEIGY.

Igran® trademark of CIBA-GEIGY for terbutryn.

U.S. Patent No. 3,634,062

X-77® trademark of Chevron Chemical Co.