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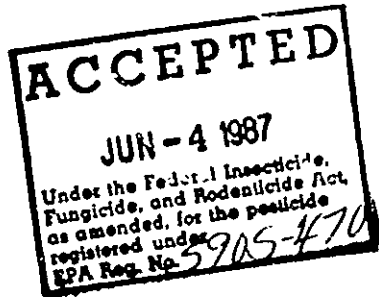
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HELENA CHEMICAL COMPANY

CORPORATE OFFICE

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Telephone 901/761-0050
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HELENA

ATRAZINE 4L
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%

This product contains 4 lbs. of atrazine per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Side Panel For Additional Precautionary Statements.

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

EPA REG. NO. 5905-470

EPA EST. NO.: First two letters of batch code indicate producing establishment-
5905-FL-1=TF, 5905-GA-1=CG, 5905-AR-1=WA,
5905-OK-1=AO, 5905-TX-2=AT, 5905-CA-1=KC,
5905-LA-3=DL

NET CONTENTS: _____

Manufactured by
HELENA CHEMICAL COMPANY
Memphis, TN 38137

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

CAUTION

May be fatal if swallowed. Harmful if absorbed through the skin. Avoid breathing vapors or spray mist. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before use.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Drink one or two glasses of water immediately and induce vomiting by sticking finger down back of throat.

IN CASE OF CONTACT: Immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

ENVIRONMENTAL HAZARDS

Atrazine can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply atrazine to sand and loamy sand soils where the 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.

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.

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

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. 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 (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, flush eyes or skin with plenty of water. If irritation persists, consult a physician. Contaminated clothing should be washed before reuse.'

STORAGE AND DISPOSAL

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

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: 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.

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ATRAZINE 4 L herbicide controls most annual broadleaf and grass weeds in corn and sorghum.

Apply at the rates given under each crop before or after weeds emerge. Use lower rates on light soils and low organic matter soils. Use higher rates on heavy soils and high organic matter soils.

ATRAZINE 4 L acts mainly through root absorption so rainfall or irrigation is needed to move it into the root zone. Should weeds develop, a shallow or rotary hoeing will generally result in better weed control.

Avoid using ATRAZINE 4 L near adjacent desirable trees, shrubs, or plants, or injury may occur.

NOTE: Helena Chemical Company does not recommend ATRAZINE 4 L in combination with other herbicides or oils except as specifically described on the label.

APPLICATION PROCEDURES:

ATRAZINE 4 L, a liquified formulation, should be mixed with water or liquid fertilizer and applied as a spray. Pour ATRAZINE 4 L 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.

GROUND APPLICATION: Apply ATRAZINE 4 L in 10-40 gallons of water per acre to assure even coverage unless otherwise specified. Use TeeJet 8002, 8003, or 8004 fan type or other appropriate nozzles with equal or greater size openings for broadcast applications. Use TeeJet 8002-E, 8003-E, or 8004-E or similar nozzles for band applications. Screens in nozzles and in suction and inline strainers should be no finer than 50-mesh. Use a pump with capacity sufficient to maintain 35-40 psi operating pressure.

AERIAL APPLICATION: Use only where broadcast applications are specified. Apply a minimum of 1 gallon of water for each 2 pints of ATRAZINE 4 L to be applied per acre. Do not apply where uniform coverage cannot be obtained or where excessive spray 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.

POSTEMERGENCE WEED CONTROL WITH ATRAZINE 4 L PLUS EMULSIFIABLE OIL IN WATER: The addition of oil to ATRAZINE 4 L in water sprays may speed the activity of ATRAZINE 4 L 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, procedures, and precautions given below.

For combining with ATRAZINE 4 L, use a crop oil designated for use with ATRAZINE 4 L containing at least 1% suitable emulsifier. Oils contaminated with water or other materials can cause compatibility problems and/or injury.

EQUIPMENT PROCEDURES FOR ATRAZINE 4 L AND EMULSIFIABLE OIL: 1. Thoroughly clean sprayer prior to use. Do not use sprayer contaminated with 2,4-D or other materials as crop damage or spray clogging may result. 2. Fill the spray tank with water, allowing for the addition of the ATRAZINE 4 L. 3. With the agitation system in operation, add the ATRAZINE 4 L. 4. Add the emulsifiable oil last. 5. 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 use by flushing the system with water containing a detergent.

NOTE: 1) Do not use oil in ATRAZINE 4 L 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 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 4 L and emulsifiable oil in water per season. 6) All return lines to the tank must discharge below liquid level.

CORN

One application will control most broadleaf and grass weeds such as barnyardgrass, witchgrass (*Panicum capillare*), yellow foxtail, green foxtail, wild oats, large (hairy) crabgrass, giant foxtail, velvet-leaf, morningglory, lambsquarters, pigweed, ragweed, nightshade, purslane, and mustard.

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

For preplant and preemergence applications, nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier of ATRAZINE 4 L. 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 below.

Apply before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of ATRAZINE 4 L. Best results have been obtained when ATRAZINE 4 L is applied within two weeks prior to planting.

PREEMERGENCE:

Apply during or shortly after planting prior to weed emergence at the rate indicated below:

POSTEMERGENCE:

Apply before weeds exceed 1 1/2 inches in height at the rate indicated below:

Soil Texture	Rate per acre of ATRAZINE 4 L		
	Broadcast In 10-40 gals. of water/A	20-inch band * In 5-20 gals. of water/A	13-inch band * In 4-14 gals. of water/A
Light soils: Sands, loamy sands and sandy loams	4 pints	2 pints	1 1/4 pints
Medium soils: Silt and clay loams that are low in organic matter	4 3/4 pints	2 1/2 pints	1 1/2 pints
Heavy soils: Silt and clay loams with medium to high organic matter and clays	6 pints	3 pints	2 pints
Peats, muck, and high organic clays (Apply postemergence only)	6 pints	3 pints	2 pints

*Based on 40-inch row spacing. For other band or row widths, adjust the rate in proportion to the area actually treated.

NORTHERN NUTGRASS OR YELLOW NUTSEDGE (Cyperus Esculentus) CONTROL:

Broadcast 8 pts. per acre preplant, preemergence, or postemergence before nutgrass is more than 1 1/2 inches high. If applied before nutgrass begins growth, cultivate within 2-3 weeks. If applied after nutgrass has emerged, cultivate within 10-14 days.

QUACKGRASS CONTROL ON LAND GOING INTO CORN PRODUCTION:

Split Application: Broadcast 4 pts. per acre in the fall or spring and plow 1-3 weeks later. Broadcast a second application at the rate of 4 pts. per acre in the spring before, during or after planting, but before weeds are 1 1/2 inches high.

Single Application: Broadcast 6-8 pts. per acre in the fall or spring.
Plow 1-3 weeks after application.

Postemergence weed control with ATRAZINE 4 L plus emulsifiable oil in water:

GROUND APPLICATION: Broadcast 4 pts. of ATRAZINE 4 L and 1 gal. of emulsifiable oil in 20-40 gals. of water per acre after emergence but before weeds reach 1 1/2 inches in height.

AERIAL APPLICATION: Broadcast 4 pts. of ATRAZINE 4 L in 1/2 gal. of emulsifiable oil in no less than 5 gals. of water per acre after weed emergence but before weeds reach 1 1/2 inches.

PRECAUTIONS: 1) Do not apply more than 8 pts. of ATRAZINE 4 L to corn in any one year. 2) Land treated with ATRAZINE 4 L should not be planted to any crop except corn until the following year or injury may occur. 3) Following harvest of a treated crop, plow (moldboard or diskplow) and thoroughly till the soil in fall or spring to minimize possible injury to rotational spring-seeded crops, regardless of the rate used. 4) If ATRAZINE 4 L is applied after June 10, do not rotate with crops other than corn or sorghum the next year or injury may occur. 5) If ATRAZINE 4 L is used at a broadcast rate higher than 6 pts. per acre (or comparable rates in a band application), a crop of untreated corn or sorghum should precede the next rotational crop. 6) In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use ATRAZINE 4 L 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. 7) In western Minnesota and eastern parts of the Dakotas, Nebraska and Kansas, corn treated with ATRAZINE 4 L 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. 8) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following ATRAZINE 4 L application or injury may occur. 9) Do not graze treated area or feed treated forage to livestock for 21 days following application.

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

PREPLANT OR PREEMERGENCE (EASTERN AND CENTRAL NEBRASKA AND NORTHEAST KANSAS ONLY)

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

PREPLANT: Broadcast in the spring after plowing at the rate indicated in the table below. Application may be made before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of ATRAZINE 4 L. Best results have been obtained when ATRAZINE 4 L is applied within two weeks prior to planting.

PREEMERGENCE: Apply during or shortly after planting prior to weed emergence at the rate indicated in the table below.

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. 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 (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, flush eyes or skin with plenty of water. If irritation persists, consult a physician. Contaminated clothing should be washed before reuse.'

STORAGE AND DISPOSAL

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

PESTICIDE DISPOSAL: Wastes resultin- from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: 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.

GENERAL INFORMATION

HELENA BRAND ATRAZINE HERBICIDE will control most annual broadleaf and grass weeds in corn, sorghum, sugarcane, and certain other crops. It is also effective for control of most annual and many perennial broadleaf and grass weeds in noncrop areas and industrial sites. HELENA BRAND ATRAZINE may be applied before or after weeds emerge.

Since HELENA BRAND ATRAZINE acts mainly through root absorption, its effectiveness depends on rainfall or irrigation to move it into root zone. Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control.

HELENA BRAND ATRAZINE is a wettable powder that should be mixed with water and applied as a spray. Make a slurry by adding HELENA BRAND ATRAZINE to water. Pour the slurry into the spray tank during or after filling. Sufficient hydraulic (jet) or mechanical agitation must be provided during mixing and application to keep the material in suspension.

Wash sprayer thoroughly after use.

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

Store HELENA BRAND ATRAZINE in a dry place.

In each case where a range of rates is given, the lower rate should be used on light soils and soils low in organic matter; the higher rate should be used on heavy soils and soils high in organic matter.

GROUND APPLICATION: For uniform distribution in broadcast applications, TeeJet 8003 or 8004 fan type or similar nozzles with openings of equal or greater size should be used. For band applications, use TeeJet 8003-E or 8004-E or similar type nozzles. Screens in nozzles as well as those in suction and in-line strainers should be no finer than 50 mesh size. A suitable pump with capacity to deliver 10-12 gpm should be used and operating pressure should be 35-40 psi. Use 20-40 gals. of water per acre to assure even coverage unless otherwise specified.

AERIAL APPLICATION: Use only where broadcast applications are specified. Apply a minimum of 1 gallon of water for each 1 lb. to 1 1/2 lbs. of HELENA BRAND ATRAZINE to be applied per acre.

Avoid application under conditions where uniform coverage cannot be obtained or where excessive-spray drift may occur.

INSTRUCTIONS FOR SAFE HANDLING - Avoid application directly to humans or animals.

*For combining with HELENA BRAND ATRAZINE, use a crop oil designated for use with Atrazine containing at least 1 percent 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. Observe all cautions and limitations on labeling of all products used in mixtures.

PROCEDURES: 1) Thoroughly clean sprayer prior to use. Do not use sprayer contaminated with 2,4-D or other materials as corn damage or sprayer clogging may result. 2) In a separate container, make a thin slurry of HELENA BRAND ATRAZINE in water, thoroughly wetting the Atrazine. 3) Fill the spray tank with water, allowing for the addition of the HELENA BRAND ATRAZINE. 4) With the agitation system in operation, add the Atrazine slurry. 5) Add the emulsifiable oil last. 6) 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 separation of the oil from the water in the spray mixture still remaining in the tank. 7) If an oil film starts to build up in the tank drain the tank and clean out with a strong detergent solution or solvent. 8) Clean the sprayer THOROUGHLY immediately after use by flushing the system with water containing a detergent.

NOTE: 1) Do not use oil in Atrazine sprays when corn is under stress from prolonged cold, wet weather, poor fertility, or other factors, or when corn is wet and succulent from recent rainfall as crop injury may occur. 2) Do not use oil in 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 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 HELENA BRAND ATRAZINE and emulsifiable oil in water per season.

NORTHERN NUTGRASS OR YELLOW NUTSEDGE (*Cyperus esculentus*) CONTROL: Broadcast 5 lbs. per acre preplant, pre-emergence, or post-emergence before nutgrass is more than 1 1/2 inches high. If applied before nutgrass begins growth, cultivate within 2-3 weeks. If applied after nutgrass has emerged, cultivate within 10-14 days.

QUACKGRASS CONTROL ON LAND GOING INTO CORN PRODUCTION: Split application: Broadcast 2 1/2 lbs. per acre in the fall or spring and plow 1-3 weeks later. Broadcast a second application at the rate of 2 1/2 lbs. per acre in the spring before, during or after planting but before weeds are 1 1/2 inches high. This split application will control both quackgrass and most annual broadleaf and grass weeds.

Single application: Broadcast 3 3/4 lbs. to 5 lbs. per acre in the fall or spring. Plow 1-3 weeks after application.

PRECAUTIONS: 1) Do not apply more than 5 lbs. of HELENA BRAND ATRAZINE to corn in any one year. 2) Land treated with HELENA BRAND ATRAZINE should not be planted to any crop except corn until the following year or injury may occur. 3) Following harvest of a treated crop, plow

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(moldboard or diskplow) and thoroughly till the soil in the fall or spring to minimize possible injury to rotational spring-seeded crops, regardless of the rate used. 4) If HELENA BRAND ATRAZINE is applied after June 10 do not rotate with crops other than corn or sorghum the next year or injury may occur. 5) If HELENA BRAND ATRAZINE is used at a broadcast rate higher than 3 3/4 lbs. per acre (or comparable rates in a band application), a crop of untreated corn or sorghum should precede the next rotational crop. 6) In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use HELENA BRAND ATRAZINE 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. 7) In Western Minnesota and eastern parts of the Dakotas, Nebraska and Kansas, corn treated with HELENA BRAND ATRAZINE should not be followed with soybeans if the broadcast rate applied was more than 2 1/2 lbs. per acre (or comparable rate in a band) or injury may occur. 8) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following HELENA BRAND ATRAZINE application or injury may occur. 9) Do not graze treated area or feed treated forage to livestock for 21 days following application.

NOTICE TO USER

The Federal Food and Drug Administration has set tolerances for residues of atrazine on certain raw agricultural commodities as follows:

15.00 ppm in or on corn forage or fodder (including field corn, sweet corn, and popcorn) perennial ryegrass, sorghum fodder and forage.

0.25 ppm in or on fresh corn including sweet corn (kernels plus cobs with husks removed), corn grain (includes popcorn), sorghum grain, sugarcane, sugarcane fodder and forage.

0.02 ppm in eggs, milk, meat, fat and meat by-products of cattle, goats, hogs, horses, poultry and sheep.

Consult the Federal Food and Drug Administration for changes and additions.

The marketing of raw agricultural commodities having residues in excess of their permitted tolerances, or marketing those for which no tolerances have been set, and bearing residues, will violate Federal Law when shipped in interstate commerce and may violate State Law.

SUGARCANE

For control of most nonrhizomatous weeds, such as crabgrass, junglerice, wiregrass, foxtail, amaranths, Florida's paintbrush, fireweed and similar plants: Broadcast 2 1/2-5 lbs. per acre in 20-50 gals. of water for adequate coverage of the soil surface at time of planting or ratooning, but before the cane emerges. One additional application may be made over the cane as it emerges, and two additional applications may be made interline after emergence, as a directed spray.

For control of emerged Pellitory Weeds (artillery weed) (Florida only): Apply 1/2 to 3/4 lb. per acre in at least 40 gals. of water per acre as a directed spray. Add 2 qts. of surfactant for each 50 gals. of spray and be sure weed foliage is thoroughly covered.

PRECAUTIONS: (1) Do not apply HELENA BRAND ATRAZINE after "close-in". (2) Do not apply more than 12 1/2 lbs. of HELENA BRAND ATRAZINE to any one crop of cane.

FORREST AND CHRISTMAS TREE PLANTATIONS

Douglas Fir, Grand Fir, Noble Fir, White Fir., Lodgepole Pine, Ponderosa Pine and Scotch Pine (Pacific Northwest-west of Cascades only).

Annual broadleaf and grass weed control: Broadcast 2 1/2-5 lbs. in 20-40 gals. of water per acre to assure thorough coverage. For band applications, reduce the rate of HELENA BRAND ATRAZINE and volume of water in proportion to the area treated. For example, when treating a 4-foot band over trees planted in rows 8 feet apart, apply 1 1/4-2 1/2 lbs. per acre. Apply between fall and early spring while trees are dormant or soon after transplanting and before weeds are 1 1/2 inches high.

Quackgrass control: Broadcast 5 lbs. per acre in 20-40 gals. of water for adequate coverage. Apply in fall or early spring while trees are dormant and before weed seedlings are more than 1 1/2 inches high. This application will also control most annual broadleaf and grass weeds.

PRECAUTIONS: (1) Do not graze treated areas. (2) Do not apply to seedbeds. (3) Do not make more than one application per year.

NONSELECTIVE WEED CONTROL ON NONCROP LAND

For use on fence rows and around utility poles. Apply HELENA BRAND ATRAZINE at rates recommended below, before or soon after weeds begin growth. Post-emergence applications should be made when weeds are young and actively growing. Use the higher rates on heavy clay and muck soils. Do not contaminate domestic or irrigation water supplies. Do not apply to water drainage areas where runoff or flooding will contaminate ponds, lakes or streams. Use sufficient water to assure thorough coverage. Use at least 1 gal. of water for each lb. of HELENA BRAND ATRAZINE, more if practical. Mechanical bypass or jet agitation is necessary to keep HELENA BRAND ATRAZINE in suspension during application.

Most annual broadleaf and grass weeds: Broadcast 6-12 1/2 lbs. per acre.

Hard-to-kill annual and many perennial broadleaf and grass weeds: Broadcast 12 1/2-25 lbs. per acre.

Hard-to-kill biennial and perennial weeds such as bull thistle and sowthistle: Broadcast 25-50 lbs. per acre.

For longer residual control in regions of high rainfall and a long growing season: Broadcast 25-50 lbs. per acre.

For small areas, 4 1/2 oz. per 1,000 sq. ft. is equivalent to 12 1/2 lbs. per acre.

SORGHUM AND SORGHUM-SUDAN HYBRIDS (Grain and Forage Types): HELENA BRAND ATRAZINE may be used to control many annual broadleaf and grass weeds in sorghum.

Apply at the rate indicated in the tables below. Weeds should not be more than 1 1/2 inches high at time of application. When making band applications, reduce the broadcast rate per acre in proportion to the area treated.

PREPLANT ** AND PRE-EMERGENCE APPLICATION (in eastern and central Nebraska and northeast Kansas only).

BROADLEAF AND
GRASS WEED CONTROL

RATE PER ACRE OF HELENA BRAND ATRAZINE

Soil Texture	Broadcast in 20-40 gals. of water per acre	20-inch Band* In 10-20 gals. of water per acre	13-inch Band* In 7-14 gals. of water per acre
Sand to sandy loam, eroded slopes and soils low in organic matter		DO NOT USE	
Other soils (shallow incorpora- tion may improve control)	2 1/2-3 lbs.	1 1/4-1 1/2 lbs.	13 oz. 1 lb.

*Based on 40-inch row spacing. **See pre-plant recommendations for corn. Non-pressure nitrogen solutions or complete liquid fertilizers may be substituted for all or part of the water as a carrier for HELENA BRAND ATRAZINE. Do not apply nitrogen solutions or fertilizers after crop emergence as damage may result.

POST-EMERGENCE APPLICATION

RATE PER ACRE OF ATRAZINE

Weeds to be controlled and soil texture	Stage or height of sorghum at treatment	Broadcast In 20-40 gals. of water A	20" Band** In 10-20 gals. of Water A	13" Band** In 7-14 gals. of Water A
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BROADLEAF AND GRASS WEEDS

Sand or loamy sand

DO NOT USE

Sandy loam

SEE BROADLEAF WEEDS BELOW

Silt loam to sandy clay loam	Completely emerged	2 1/2-3 lbs.	1 1/4-1 1/2 lbs.	13 oz.-1 lb.
Olton and Pullman clay soils	At least 6 inches high	2 1/2-3 lbs.	1 1/4-1 1/2	13 oz.-1 lb.

BROADLEAF WEEDS

Sandy loams and heavier soils in Okla., N.M., Tex., West Kans., Colo., and desert regions of Ariz. and Calif. only

At least 6 inches high	1 1/2 lbs. plus 3/4-1 1/2 plus surfactant	3/4 lb. plus 3/8-3/4 pt. surfactant	1/2 lb. plus 1/4-1/2 pt. surfactant
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CORN

One application will control most annual broadleaf and grass weeds such as barnyardgrass, witchgrass: (*Panicum capillare*, yellow foxtail, wild oats, large (hairy) crabgrass, giant foxtail, velvetleaf, morningglory, lambsquarter, pigweed, ragweed, nightshade, purslane, and mustard. HELENA BRAND ATRAZINE may be applied either before planting, at planting, or after planting, using 2 1/2-5 lbs. per acre as indicated below.

For preplant and pre-emergence applications, nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier for HELENA BRAND ATRAZINE. Do not apply after corn has emerged as there is danger of liquid fertilizers causing crop injury.

PREPLANT: Broadcast in the spring after plowing at the rate indicated in the table below. Application may be made before, during, or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of HELENA BRAND ATRAZINE. Best results have been obtained when HELENA BRAND ATRAZINE is applied within two weeks prior to planting.

PRE-EMERGENCE: Apply during or shortly after planting prior to weed emergence at the rate indicated in the table below.

POST-EMERGENCE: Apply before weeds exceed 1 1/2 inches in height, at the rate indicated in the table below.

NOTE: For band applications, reduce the broadcast rate of HELENA BRAND ATRAZINE in proportion to the area treated.

RATE PER ACRE OF HELENA BRAND ATRAZINE			
Broadcast In 20-40 gals. of water per acre	20-inch Band * In 10-20 gals. of water per acre	13-inch Band * In 7-14 gals. of water per acre	
Soil Texture			
Light soils:			
Sands, loamy sands and sandy loams.	2 1/2 lbs.	1 1/4 lbs.	13 oz.
Medium Soils:			
Silt and clay loams that are low in organic matter	3 lbs.	1 1/2 lbs.	1 lb.
Heavy Soils:			
Silt and clay loams with medium to high organic matter and clays	3 3/4 lb.	1 lb. 14 oz.	1 1/4 lbs.
Peats, mucks, and high organic clays (Apply post-emerge ce only)			
	3 3/4 lbs.	1 lb. 14 oz.	1 1/4 lbs.

*Based on 40-inch row spacing. For other brand or row widths, adjust the rate in proportion to the area actually treated.

LAYBY TREATMENT: Broadcast 1 1/4 - 2 1/2 lbs. per acre in 20-40 gals. of water, or sufficient nitrogen solution before weeds are 1 1/2 inches high. Apply when corn is 20-30 inches high. 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.

POST-EMERGENCE WEED CONTROL WITH HELENA BRAND ATRAZINE AND EMULSIFIABLE OIL IN WATER: The addition of oil to HELENA BRAND ATRAZINE in water sprays may speed the activity of HELENA BRAND ATRAZINE and provide quicker kill of weeds.

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GROUND APPLICATION: Broadcast 2 1/2 lbs. of HELENA BRAND ATRAZINE and 1 gal. of emulsifiable oil* in 20-40 gals. of water per acre after emergence but before weeds reach 1 1/2 inches in height.

AERIAL APPLICATION: Broadcast 2 1/2 lbs. of HELENA BRAND ATRAZINE and 1/2 gal. of emulsifiable oil* in no less than 5 gals. of water per acre after weed emergence but before weeds reach 1 1/2 inches in height.

****Based on 40-inch row spacing.**

POST-EMERGENCE BROADLEAF WEED CONTROL WITH HELENA BRAND ATRAZINE AND EMULSIFIABLE OIL IN WATER (New Mexico, Oklahoma, and Texas only): The addition of oil to post-emergence Atrazine in water sprays may speed the activity of Atrazine and provide quicker kill of annual broadleaf weeds. However, under certain conditions, the use of oil may seriously damage sorghum. To minimize the possibility of damage to sorghum, follow the directions and procedures given below.

GROUND APPLICATION: Broadcast 1 1/2 lbs. of HELENA BRAND ATRAZINE and 1 gal. of emulsifiable oil* in 20-40 gals. of water per acre when sorghum is 8 to 10 inches in height and before it reaches the boot stage. Treat before broadleaf weeds reach 6 inches in height.

AERIAL APPLICATION: Broadcast 1 1/2 lbs. of HELENA BRAND ATRAZINE and 1/2 gal. of emulsifiable oil* in no less than 5 gals. of water per acre when sorghum is 6 to 10 inches in height and before it reaches boot stage. Treat before broadleaf weeds reach 6 inches in height.

*For combining with Atrazine, use a crop oil designed for use with Atrazine containing at least 1 percent 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.

PROCEDURES: 1) Thoroughly clean sprayer prior to use. Do not use sprayer contaminated with 2,4-D or other materials as sorghum damage or spray clogging may result. 2) In a separate container make a thin slurry of HELENA BRAND ATRAZINE in water, thoroughly wetting the Atrazine. 3) Fill the spray tank with water, allowing for the addition of the Atrazine..... 4) With the agitation system in operation, add the HELENA BRAND ATRAZINE : : : slurry. 5) Add the emulsifiable oil last. 6) 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. 7) If an oil film starts to build up in the tank, drain the tank and clean out with a strong .. detergent solution or solvent. 8) Clean the sprayer thoroughly immediately... after use by flushing the system with water containing a detergent. : :

NOTE: 1) Do not use oil in HELENA BRAND ATRAZINE sprays when sorghum is under stress from 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 HELENA BRAND ATRAZINE 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 HELENA BRAND ATRAZINE and emulsifiable oil in water per season.

PRECAUTIONS: 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 (plowed-in). Deep planter marks or seed furrows should 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 plant any rotational crops other than those specified in the Suggestions for Rotational Crops section below for 18 months following application. 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 fall or spring to minimize possible injury to rotational spring-seeded crops, regardless of the rate used.

SUGGESTIONS FOR ROTATIONAL CROPS: 1) Sorghum or corn may be planted the year following treatment. 2) All other rotational crops may be planted 18 months after application. 3) When the broadcast rate used does not exceed 1 1/2 lbs. per acre, fall wheat may be planted 15 months after application.

WARRANTY AND LIMITATION OF DAMAGES. Helena Chemical Company 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. Helena Chemical Company makes no other expressed or implied warranty, including any other expressed or implied warranty of FITNESS or of MERCHANTABILITY, and no agent of Helena Chemical Company 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 value, etc.

