



ATRAZINE 4L

For Season-long Weed Control in Corn and Sorghum

Contains 4 pounds active ingredient per gallon.

ACTIVE INGREDIENTS:	43%
Atrazine (2-chloro-4-ethylamino-6-isopropylamino-s-triazine)	40.8%
Related compounds	2.2%
INERT INGREDIENTS:	57%

E.P.A. Registration No. 444-482-AA

CAUTION

**KEEP OUT OF REACH OF CHILDREN
HARMFUL OR FATAL IF SWALLOWED • DO NOT GET
IN EYES • AVOID CONTACT WITH SKIN, INHALATION
OF VAPORS OR SPRAY MIST AND CONTAMINATION
OF FOOD AND FEED**

Do not contaminate domestic or irrigation water supplies or lakes, streams, or ponds.

Do not reuse container. Destroy when empty.

GENERAL INFORMATION

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

Avoid using Atrazine near adjacent desirable trees, shrubs or plants, or injury may occur.

Note: Dow does not recommend Atrazine 4L in combination with other herbicides or oils except as specifically described on the label.

Atrazine 4L is non flammable.

APPLICATION PROCEDURES

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

Ground Application: Apply Atrazine 4L 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 in line

strainers should be no finer than 50-mesh. Use a pump with capacity sufficient to maintain 35-40 psi operating pressure.

Aer. 1 Application: Use only where broadcast applications are specified. Apply a minimum of 1 gallon of water for each 2 pints of Atrazine 4L 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.

Post-emergence Weed Control with Atrazine plus Emulsifiable Oil in Water: The addition of oil to Atrazine in water sprays may speed the activity of Atrazine and provide quicker kill of weeds. However, under certain conditions the use of oil may seriously damage corn or sorghum. To minimize the possibility of damage, follow the directions, procedures, and precautions given below.

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

Equipment Procedures for Atrazine 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 sprayer clogging may result.
2. Fill the spray tank with water, allowing for the addition of the Atrazine.
3. With the agitation system in operation, add the Atrazine.
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 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 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 annual broadleaf and grass weeds such as barnyardgrass, witchgrass (*Panicum capillare*), yellow foxtail, green foxtail,

wild oat, large (hairy) crabgrass, pigweed, ragweed. Atrazine 4L may be applied at the rate indicated below. For preplant and pre-emergence liquid fertilizers may require Atrazine 4L. Do not apply after corn causing crop injury. Preplant: Broadcast in the Apply before, during, or worked after application. have been obtained when A Pre-emergence: Apply during the rate indicated below. Post-emergence: Apply before indicated below.

Soil texture

Light soils:
Sands, loamy sands, and sandy loams

Medium soils:
Silt and clay loams that are low in organic matter

Heavy soils:
Silt and clay loams with medium to high organic matter and clays

Peats, mucks, and high organic clays (Apply post emergence only)

Based on 40-inch row spacing in proportion to the area. Northern Nutgrass or Yellow-cast 8 pints per acre. Nutgrass is more than 1 1/2 inches cultivate within 23 weeks within 10-14 days.

Quackgrass Control on corn: Broadcast 4 pints per acre during, or after planting.

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SPECIMEN LABEL

ATRAZINE 4L HERBICIDE

For Season-long Weed Control in Corn and Sorghum

strainers should be no finer than 30 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 4L 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 leaders 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.

Post-emergence Weed Control with Atrazine plus Emulsifiable Oil in Water: The addition of oil to Atrazine in water sprays may speed the activity of Atrazine and provide quicker kill of weeds. However, under certain conditions the use of oil may seriously damage corn or sorghum. To minimize the possibility of damage, follow the directions, procedures, and precautions given below.

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

Equipment Procedures for Atrazine 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 sprayer clogging may result.
2. Fill the spray tank with water, allowing for the addition of the Atrazine.
3. With the agitation system in operation, add the Atrazine.
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 sprays when corn or sorghum is under stress from prolonged cold, wet weather, poor fertility, weather 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 pesticides, 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 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 annual broadleaf and grass weeds such as barnyardgrass, witchgrass (*Panicum capillare*), yellow foxtail, green foxtail,

wild oats, large (hairy) crabgrass, giant foxtail, ~~spotted~~, morningglory, lambs quarters, pigweed, ragweed, nightshade, purslane, and mustard.

Atrazine 4L may be applied either before planting, at planting or after planting at the rate 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 of Atrazine 4L. 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 below. 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 is applied within two weeks prior to planting.

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

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

Soil texture	Rate per acre of Atrazine 4L		
	Broadcast in 10-40 gal of water/A	20-inch band in 5-20 gal of water/A	13-inch band in 4-14 gal of water/A
Light soils. Sands, loamy sands, and sandy loams	4 pints	2 pints	1 1/2 pints
Medium soils Silt and clay loams that are low in organic matter	4 1/2 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, mucks, and high organic clays (Apply post emergence 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 pints 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 4 pints per acre in the fall or spring and plow 1-3 weeks later. Broadcast a second application at the rate of 4 pints per acre in the spring before during, or after planting, but before weeds are 1 1/2 inches high.

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Single Application: Broadcast 6 1/2 pints per acre in the fall or spring. Plow 1-3 weeks after application.

Post-emergence weed control with Atrazine plus emulsifiable oil in water:

Ground Application: Broadcast 4 pints of Atrazine and 1 gal of emulsifiable oil in 20-40 gal of water per acre after emergence but before weeds reach 1 1/2 inches in height.

Aerial Application: Broadcast 4 pints of Atrazine and 1/2 gal of emulsifiable oil in no less than 5 gal of water per acre after weed emergence but before weeds reach 1 1/2 inches.

PRECAUTIONS

- Do not apply more than 8 pints of Atrazine 4L to corn in any one year.
- Land treated with Atrazine should not be planted to any crop except corn until the following year or injury may occur.
- 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.
- If Atrazine is applied after June 10, do not rotate with crops other than corn or sorghum the next year or injury may occur.
- If Atrazine 4L is used at a broadcast rate higher than 6 pints per acre (or comparable rates in a band application), a crop of untreated corn or sorghum should precede the next rotational crop.
- In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, 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.
- In western Minnesota and eastern part of the Dakotas, Nebraska, and Kansas, corn treated with Atrazine should not be followed with soybeans if the broadcast rate applied was more than 4 pints per acre (or comparable rate in a band) or injury may occur.
- Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following Atrazine application or injury may occur.
- 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 pre-emergence (Eastern and Central Nebraska and Northeast Kansas Only):

For preplant and pre-emergence applications, nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier for Atrazine 4L. 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 4L. Best results have been obtained when Atrazine 4L 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.

Preplant and Pre-emergence Application (In Eastern and Central Nebraska and Northeastern Kansas Only)

Soil texture	Rate per acre of Atrazine 4L		
	Broadcast in 10-40 gal of water/A	20-inch band in 5-20 gal of water/A	13-inch band in 4-14 gal of water/A
Sand to sandy loam, eroded slopes and soils low in organic matter	Do not use		
Other soils (shallow incorporation may improve control)	4 3/4 pints	2 2/2 pints	1 1/2 pints

Based on 40-inch row spacing. When making band applications, reduce the broadcast rate per acre in proportion to the area treated.

Post-emergence: For the control of broadleaves and grasses, apply post-emergence applications of Atrazine 4L in a less than ten gallons of water per acre at the rate indicated in the table below. Weeds should not exceed 1 1/2 inches in height at application.

Weeds to be controlled and soil texture	Stage or height of sorghum at treatment	Rate per acre of Atrazine 4L		
		Broadcast in 10-40 gal of water/A	20-inch band in 5-20 gal of water/A	13-inch band in 4-14 gal of water/A
Post-emergence Application (weeds should not be more than 1 1/2 inches high)				
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	4 1/2 pints	2 2/2 pints	1 1/2 pints
Oilon and Pullman clay soils	At least 5 inches high	4 1/2 pints	2 2/2 pints	1 1/2 pints
Silty clay loams and heavier soils	Completely emerged	6 pints	3 pints	2 pints

Weeds to be controlled and soil texture	Stage height sorghum at treat
Sandy loam and heavier soils in Oklahoma, New Mexico, Texas, West Kansas, Colorado, and desert regions of Arizona and California only	At least inches

Based on 40-inch row spacing. Up to "close in".
Post-emergence broadcast in water (New Mexico, OK 6-10 inches high and before reach 6 inches.
Ground Application: Broadcast 4 pints of Atrazine and 1 gal of emulsifiable oil in 20-40 gal of water per acre.
Aerial Application: Broadcast 4 pints of Atrazine and 1/2 gal of emulsifiable oil in no less than 5 gallons.

Based on 40-inch row spacing. Up to "close in".

Post-emergence broadcast in water (New Mexico, OK 6-10 inches high and before reach 6 inches.

Ground Application: Broadcast 4 pints of Atrazine and 1 gal of emulsifiable oil in 20-40 gal of water per acre.
Aerial Application: Broadcast 4 pints of Atrazine and 1/2 gal of emulsifiable oil in no less than 5 gallons.

- Heavy rains immediately after application may cause injury. Applications in furrows are leveled (p also be leveled before).
- Application made to soil in deficiency or to sorghum crop injury.
- Do not plant any rotational crop for rotational crops.
- Do not graze or feed application.
- Following harvest of a treated crop, plow or thoroughly till the soil in spring seeded crops.

Suggestions For Rotation

- Sorghum or corn may be planted 15 days after application.
- All other rotational crops may be planted 15 days after application.
- When the broadcast rate is used, sorghum may be planted 15 days after application.

NOTICE: Seller warrant and is reasonably fit for use with directions on label instructions, or in any other warranty. **PURPOSE,** express or implied, is not reasonably foreseeable to the buyer.

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(BACK)

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

Preplant and Pre-emergence Application
(In Eastern and Central Nebraska and Northeastern Kansas Only)

Broadleaf and grass weed control

Soil texture	Rate per acre of Atrazine 4L		
	Broadcast in 10-40 gal of water/A	20-inch Band in 5-20 gal of water/A	13-inch band in 4-14 gal of water/A
Sand to sandy loam, eroded slopes and soils low in organic matter	Do not use		
Other soils (shallow in corporation may improve control)	4 1/4 pints	2 1/2 pints	1 1/2 pints

Based on 40-inch row spacing. When making band applications, reduce the broadcast rate per acre in proportion to the area treated.

Post-emergence: For the control of broadleaves and grasses, apply post-emergence applications of Atrazine 4L in a less than ten gallons of water per acre at the rate indicated in the table below. Weeds should not exceed 1 1/2 inches in height at application.

Post-emergence Application
(weeds should not be more than 1 1/2 inches high)

Weeds to be controlled and soil texture	Stage or height of sorghum at treatment	Rate per acre of Atrazine 4L		
		Broadcast in 10-40 gal of water/A	20-inch band in 5-20 gal of water/A	13-inch band in 4-14 gal of water/A
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	4 1/4 pints	2 1/2 pints	1 1/2 pints
Olton and Pullman clay soils	At least 6 inches high	4 1/4 pints	2 1/2 pints	1 1/2 pints
Silty clay loams and heavier soils	Completely emerged	6 pints	3 pints	2 pints

Post-emergence Application
(weeds should not be more than 1 1/2 inches high)

Weeds to be controlled and soil texture	Stage or height of sorghum at treatment	Rate per acre of Atrazine 4L		
		Broadcast in 10-40 gal of water/A	20-inch band in 5-20 gal of water/A	13-inch band in 4-14 gal of water/A
Broadleaf weeds				
Sandy loams and heavier soils in Oklahoma, New Mexico, Texas, West Kansas, Colorado, and desert regions of Arizona and California only	At least 6 inches high	2 1/2 pints plus 1/4 1 1/2 pint surfactant	1 1/4 pints plus 3/8 1/2 pint surfactant	3/4 pint plus 1/4 1/2 pint surfactant

Based on 40 inch row spacing
Up to "close in"

Post-emergence broadleaf weed control with Atrazine plus emulsifiable oil in water (New Mexico, Oklahoma, and Texas only): Apply when sorghum is 6-10 inches high and before boot stage. Treat broadleaf weeds before they reach 6 inches.

Ground Application: Broadcast 2 1/2 pints of Atrazine and 1/2 gal of emulsifiable oil in 20-40 gal of water per acre.

Aerial Application: Broadcast 2 1/2 pints of Atrazine and 1/2 gal of emulsifiable oil in no less than 5 gallons of water per acre.

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 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 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 2 1/2 pints per acre, fall wheat may be planted 15 months after application.

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions or under abnormal conditions or under conditions not reasonably foreseeable to seller and buyer, assumes the risk of any such use.

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THE DOW CHEMICAL COMPANY

AND SUBSIDIARIES
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