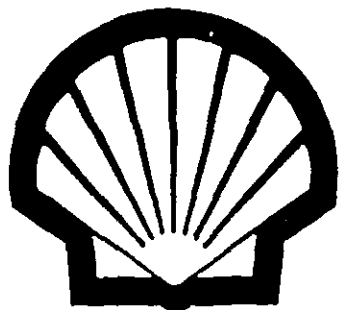


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Shell

Atrazine 80W

Herbicide

ACCEPTED

AUG - 9 1985

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 201-410

FOR SEASON-LONG WEED CONTROL IN CORN AND SORGHUM. FOR WEED CONTROL IN CERTAIN OTHER CROPS; IN NONCROP AREAS; AND INDUSTRIAL SITES.

NOTE CONDITIONS OF SALE AND WARRANTY BEFORE OPENING THIS CONTAINER. IF THEY ARE NOT ACCEPTABLE RETURN UNOPENED PRODUCT.

EPA Est. No. 201-IL-1

EPA Reg. No. 201-410

ACTIVE INGREDIENTS	BY WEIGHT
Atrazine: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine.....	76%
Related compounds.....	4%
INERT INGREDIENTS.....	20%
TOTAL	100%

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KEEP OUT OF REACH OF CHILDREN
CAUTION
SEE BELOW FOR ADDITIONAL PRECAUTIONS.

APPLICATION PROCEDURES

Atrazine 80W is a wettable powder that should be mixed with water and applied as a spray as follows: (1) Fill spray tank 1/2 to 2/3 full of clean water. Be sure tank is clean and not contaminated with 2, 4-D, residual oil or other materials. (2) Start agitation. (3) Pour Atrazine 80W directly from the bag into the tank. Then let it wet and settle into the water. (4) Fill the tank the rest of the way with water. Continue agitation during mixture and application.

Band Application
Use 10-40 gals. of water per acre to assure even coverage unless otherwise specified. For uniform distribution, use 80" gal. fan-type nozzles. Screens in nozzles, as well as those in suction and in-line strainers, should be no finer than 50 mesh.

Use a suitable pump with capacity to deliver (1) the necessary volume to the nozzles at 35-40 psi and (2) an additional volume to maintain the mixture in suspension in the spray tank.

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

Band Width Inches	Row Width Inches	Broadcast rate per acre	Amount Needed Per acre of field
x	x	x	x

Spot Application
Use only where broadcast applications are specified. Apply minimum of 1 gallon of water for each 1 lb to 1 1/2 lbs. of Atrazine 80W to be applied per acre.

For postemergence treatments on corn and sorghum apply recommended rate in a minimum of 2 gallons of water per acre.

PRECAUTIONARY STATEMENTS
HAZARD TO HUMAN AND DOMESTIC ANIMALS — CAUTION

PM 25
352-491

... after handling and before eating or drinking. Avoid inhalation of dust and contamination of food and feed. For 24 hour emergency medical assistance, call (713) 473-9461.

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 water table (groundwater) is close to the surface and where the soils are very permeable. Your local agriculture agencies can provide further information on the type of soil in your area and the location of groundwater.

Atrazine is toxic to aquatic invertebrates. Do not apply directly to water or wetlands. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes. In case of significant spill, call CHEMTREC (800) 424-9300 or (713) 473-9461.

DIRECTIONS FOR USE

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

REENTRY STATEMENTS

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.

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 in this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. (Indicate specific oral warnings which inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure.) 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 Herbicide on (date of application). Do not enter without appropriate protective clothing until sprays have dried. (Insert here actions to take in case of accidental exposure. See STATEMENT OF PRACTICAL TREATMENT for details.)"

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food, or feed by storage or disposal. Do not use or store around the home environment. Avoid contact with water. In case of spill or leak, avoid breathing dust or vapors. Clean up and dispose of wastes in compliance with local, state and Federal regulations.

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: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

Atrazine 80W will control many annual broadleaf and grass weeds in corn, sorghum, sugarcane, pineapple, and certain other crops. It is also effective for control of many annual and many perennial broadleaf and grass weeds in non-crop areas and industrial sites. Atrazine 80W may be applied before or after weeds emerge.

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.

Since Atrazine 80W acts mainly through root absorption, its effectiveness depends on rainfall or irrigation to move it into the root zone. Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control.

Wash sprayer thoroughly after use.

Atrazine 80W is noncorrosive to equipment and metal surfaces, nonflammable, and has low electrical conductivity. Care should be taken to avoid using Atrazine 80W where adjacent desirable trees, shrubs, or plants might be injured.

Application in Liquid Fertilizer:

For preplant and preemergence applications on corn or sorghum, nitrogen solutions or complete liquid fertilizers may replace all or part of the water as a carrier for Atrazine 80W. Do not apply after corn or sorghum has emerged as there is danger of liquid fertilizers causing crop injury.

Check to ensure the compatibility of Atrazine 80W with liquid fertilizer prior to mixing in the spray tank. A convenient method for testing the compatibility of Atrazine 80W with liquid fertilizer follows:

Add one pint of liquid fertilizer or other carrier to be used to two quart jars. Mark one quart jar "with" and the other jar "without".

To the jar marked "with" add 1/4 teaspoon of a suitable compatibility agent. Shake gently for 5 to 10 seconds to mix (1/4 teaspoon/pint = 2 pints/100 gallons).

To each jar mix the number of teaspoons of herbicide shown on the following chart times the number of lbs. per acre of Atrazine 80W to be applied corresponding to the gallons per acre of liquid fertilizer to be used. (For example, if 3 lbs. per acre of Atrazine 80W are to be applied in 20 gallons of liquid fertilizer per acre, then 3 x 1-1/2 teaspoons, or 4-1/2 teaspoons should be mixed with one pint of liquid fertilizer. If more than one herbicide is used, add them separately, wettable powders first, flowables second and emulsifiable concentrates last. Shake gently for 5 to 10 seconds after each addition.

Let stand one-half hour and make observations. If any separation, agglomeration or precipitation has occurred, again shake the jar 10 to 15 seconds.

1. If mixtures appear to be compatible in both jars, the herbicide(s) can probably be used without a compatibility agent.
2. If the mixture in the jar marked "with" is compatible, but the one in the jar marked "without" is incompatible, a compatibility agent should be used.
3. If both mixtures are incompatible, the liquid fertilizer and the herbicide(s) should not be used in the same spray tank.

If a test such as outlined indicates that components of a proposed mix are compatible, materials to be combined in the spray tank should still be added in the sequence according to directions prescribed on the label of the herbicides or pesticides involved.

JAR TEST FOR ATRAZINE 80W COMPATIBILITY WITH LIQUID FERTILIZER

Gal. Liquid Fert/Acre	10	15	20	25	30	40
Teaspoons Atrazine 80W/ 3-1/2		2%	3%	4%	5%	7%
Pint of Fertilizer						

Application in Water Plus Emulsifiable Oil or Oil Concentrate

The addition of oil to Atrazine 80W in water sprays may speed the activity of Atrazine 80W and provide quicker kill of weeds. However, under certain conditions the use of oil may seriously damage corn. To minimize the possibility of damage to corn, follow the directions, procedures and precautions given below.

Use a crop oil containing at least 1 percent suitable emulsifier or a crop oil concentrate containing not more than 20% emulsifier or surfactant blend designated for use with atrazine. Several oils of this type 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: (1) Thoroughly clean sprayer prior to use. Do not use sprayer contaminated with 2,4-D or other materials as crop damage or sprayer clogging may result. (2) Fill spray tank 1/2 - 2/3 full of clean water. (3) Start agitation. (4) Pour Atrazine 80W directly from bag into tank. Let the Atrazine 80W wet and settle into the water. (5) Add emulsifiable oil or oil concentrate after the Atrazine 80W and water are mixed thoroughly. (6) Fill the tank the rest of the way with water. (7) Empty the tank as completely as possible before refilling to prevent a build-up of emulsifiable 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. (8) If an oil film starts to build up in the tank, drain the tank and clean out with a strong detergent solution or solvent. (9) Clean the sprayer thoroughly immediately after use by flushing the system with water containing a detergent.

NET WEIGHT: 10 LBS.

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Continued from Front Panel

Precautions for Applications with Emulsifiable Oil or Oil Concentrate in Water

(1) Do not use 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 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 and oil concentrate 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 per season except as recommended for control of yellow nutsedge and Canada thistle on this label.

Instructions for Safe Handling

Avoid application directly to humans or animals. Although it is unnecessary for flagmen or loaders to wear special protective clothing or equipment, care should be taken to avoid inhalation of dust or spray mist or prolonged contact with skin. Flagmen and loaders should wash thoroughly before eating and at the end of each day's operation.

CORN

One application will control many 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, pigweed, ragweed, nightshade, purslane, and mustard. Atrazine 80W may be applied either before planting, at planting, or after planting using 1.25 - 5 lbs. per acre as indicated below.

Preplant

Broadcast in the spring after plowing at the rate indicated in Table 1. Application may be made before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of Atrazine 80W. Best results have been obtained when Atrazine 80W 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 1.5 inches in height, at the rate indicated in Table 1.

**TABLE 1
BROADLEAF AND GRASS WEED CONTROL IN CORN***

Soil Texture	Rate Per Acre of ATRAZINE 80W Broadcast Rate Per Acre
COARSE SOILS Sands, loamy sands and sandy loams	2.5 lbs
MEDIUM SOILS Silt and clay loams that are low in organic matter	3 lbs
FINE SOILS Silt and clay loams with medium to high organic matter and clays (including the dark prairie soils of the Corn Belt)	3.75 lbs
Peats, mucks, and high organic clays. (Apply postemergence only)	3.75 lbs

*Broadleaf control (Eastern CO, Western KS, Western NE, NW, OK Panhandle, West TX, and Eastern WY). On sand, loamy sand, sandy loam, mild to strongly alkaline soil and all recently leveled soil apply no more than 1.5 lb/A either preplant or preemergence. Controls many broadleaf weeds including pigweed, lambsquarters, nightshades, purslane, and Kochia. On other soils in these areas apply rate in Table 1 for broadleaf and grass control.

Laboratory Treatment

Broadcast 1.25 - 2.5 lbs. per acre in 20-40 gals. of water or sufficient nitrogen solution before weeds are 1.5 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 corn stalks to avoid corn foliage injury. Agitation in the spray tank during application is essential.

Postemergence With Emulsifiable Oil or Oil Concentrate in Water

Ground Application:

Broadcast 2.5 lbs. of Atrazine 80W and 1 gal. of emulsifiable oil or 1 qt. of oil concentrate/acre after emergence but before weeds reach 1.5 inches in height.

Aerial Application:

Broadcast 2.5 lbs. of Atrazine 80W and 0.5 gal. of emulsifiable oil per acre after weed emergence but before weeds reach 1.5 inches in height.

Broadleaf Control:

Broadcast 1.5 lbs. per acre for control of many broadleaf weeds, including annual morningglory, cocklebur, lambsquarters, mustards, pigweed, ragweed, smartweed, and wild buckwheat. Add 1 gal. of emulsifiable oil per acre for ground application and 0.5 gal. per acre for aerial application. Add 1 qt. of oil concentrate per acre for ground application. Apply before pigweed and lambsquarters reach 6 inches in height and before all other weeds reach 4 inches in height. A cultivation may be necessary if all weeds are not controlled or if weeds regrow.

Center Pivot Sprinkler Application:

Continued from Side Panel

**TABLE 2
TANK MIXTURES WITH LASSO ON CORN**

Soil Texture	Broadcast Rate/Acre			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	ATRAZINE 80W	LIASSO	ATRAZINE 80W	LIASSO
COARSE* Sand, loamy sand, sandy loam	1.25 lb	1.5 qt	1.25 lb	1.5 qt
MEDIUM Loam, silt loam, silt	1.25-1.5 lb	1.75 qt	1.5-1.75 lb	2 qt
FINE Silty clay loam, sandy clay loam, silty clay, sandy clay, clay loam, clay	1.5-2 lb	2.25 qt	1.5-2 lb	2.5 qt

*When applied via center pivot irrigation on coarse soils, apply 1.25 lb. of this product and 2 qt. of Lasso/acre.

For preplant incorporated applications, use 0.25 lb. more of Atrazine 80W plus 0.5 qt. of Lasso/acre than indicated in Table 2. Use no more than 1.75 lb. of Atrazine 80W plus 2.5 qt. of Lasso/acre. Broadcast within 7 days before planting and incorporate 2 inches deep.

Apply tank mixture in a minimum of 20 gal. of water/acre. Liquid fertilizer may replace all or part of the water. Add Atrazine 80W to spray tank, thoroughly mix with water, then add Lasso. Follow mixing procedures in the section "Application Procedures" of this label.

Refer to Lasso label for information concerning center pivot irrigation applications and other directions, limitations, and cautions.

Propachlor 65WP: Use as tank mixture for control of many annual broadleaf and grass weeds in corn (field, hybrid seed, silage and sweet corn only), including annual morningglory, annual ryegrass, barnyardgrass (watergrass), 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 1.3-2 lb. of Atrazine 80W plus 3.8-6 lb. of propachlor 65WP/acre on soil surface any time from immediately after planting until after broadleaf and grass weeds reach the 2-leaf stage. Use lower rates on coarse-textured soil low in organic matter. Use higher rates on fine-textured soil high in organic matter.

A minimum of 1.75 lb./acre of Atrazine 80W in the tank mixture will give better control of annual morningglory, velvetleaf, cocklebur, and sunflower.

Apply in a minimum of 20 gal. of water/acre. Liquid fertilizer may replace all or part of the water as a carrier for applications before crop and weeds emerge. Add Atrazine 80W to spray tank and thoroughly mix with water. Then, cut the propachlor 65WP bag and fill with water to fill line. Grasp neck of bag firmly, shake vigorously, and add contents to spray tank.

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

PRINCEP 60W or PRINCEP 4L (Simazine): Use as tank mixture for control of many annual weeds, including carpetweed, crabgrass, fall panicum, foxtail, lambsquarters, morningglory, pigweed, ragweed, and velvetleaf. Apply before planting, at planting or after planting, but before crop and weeds emerge, at rates in Table 3. Use 1:1 ratio for control of broad weeds. Use 1:2 ratio for expected heavy infestations of crabgrass and fall panicum. Apply in a minimum of 20 gal. of water per acre. Cultivate shallowly if weeds develop.

Preplant: Apply in spring during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation. For best results, apply within two weeks before planting.

Preemergence: Apply during or shortly after planting, but before crop and weeds emerge.

Refer to Corn sections of this label and to Princep 60W or Princep 4L label for further directions, limitations, and cautions.

**TABLE 3
TANK MIXTURES WITH PRINCEP ON CORN**

Soil Texture	Broadcast Rate/Acre			
	1:1 RATIO*		1:2 RATIO**	
	ATRAZINE 80W	PRINCEP 60W or PRINCEP 4L	ATRAZINE 80W	PRINCEP 60W or PRINCEP 4L

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weeds emerge, or after corn emergence, but before lay-by (20-30 inches) and before weeds exceed 1 1/2 inches in height. At rates in Table 1. Prepare mixture with minimum ratio of 1 part product to 1 part water. Injecting a larger volume of a more dilute slurry per hour will assure more accurate calibration of metering equipment. Maintain sufficient agitation to keep herbicide in suspension. Meter slurry into irrigation water during entire period. Apply in 0.5-1 inch of water. Use the lower volume on coarser textured soils, the higher volume on finer textured soils. More than 1 inch of water may reduce weed control by moving herbicide below the effective zone in the soil. Inject dilute slurry into system through a positive displacement pump.

Precautions: (1) Apply only through irrigation systems containing antisiphon and check valves to prevent contamination of well during shutdown and overflow of solution tank. (2) Inject ahead of any right angle turn in the main line to insure adequate mixing. (3) Chemical injection pumps and water pumps must have interlocking controls to insure simultaneous shut-off. (4) Application when drift may occur from windy conditions, when system joints and connections are leaking, or when nozzles are not providing uniform distribution may cause crop injury. (5) Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.

Problem Weeds:

Yellow Nutsedge and Canada Thistle: Atrazine 80W will control yellow nutsedge (*Cyperus esculentus*) and Canada Thistle (*Cirsium arvense*) when applied according to directions. For best results apply each year until yellow nutsedge or Canada thistle is eliminated or reaches a level of infestation where neither weed is a problem. If yellow nutsedge or Canada thistle regrow following last application, cultivate once.

Six alternative methods of use for control of yellow nutsedge and Canada thistle are listed below in order of preference. If other weed species including annual grasses are also expected use alternative 2, 3, 5 or 6.

- (1) Broadcast 2.5 lb. plus 1 gal. of emulsifiable oil or 1 qt. of oil concentrate/acre after crop and yellow nutsedge or Canada thistle emerge, but before yellow nutsedge reaches a height of 3 inches or Canada thistle reaches a height of 6 inches. Repeat application before lay-by (20-30 inches) 10-20 days after the first application.
- (2) Broadcast 2.5 lb/acre preplant. Follow with an application of 2.5 lb. plus 1 gal. of emulsifiable oil or 1 qt. of oil concentrate/acre after corn and weeds emerge, but before yellow nutsedge reaches a height of 3 inches (yellow nutsedge control only).
- (3) Broadcast 2.5 lb. during or shortly after planting, but before crop or weed emergence. Follow with an application of 2.5 lb. plus 1 gal. of emulsifiable oil or 1 qt. of oil concentrate/acre after corn and weeds emerge, but before yellow nutsedge reaches a height of 3 inches or Canada thistle reaches a height of 6 inches.
- (4) Broadcast 5 lb. plus 1 gal of emulsifiable oil or 1 qt of oil concentrate/acre after crop emerges, but prior to lay-by (20-30 inches) and after yellow nutsedge and Canada thistle emerge, but before yellow nutsedge is 3 inches tall or Canada thistle is 6 inches tall.
- (5) Broadcast 5 lb /acre preplant (yellow nutsedge control only).
- (6) Broadcast 5 lb /acre during or shortly after planting, but before crop or weed emergence (yellow nutsedge control only).

NOTE: Do not use emulsifiable oil or oil concentrate when corn is wet or under stress, especially when using 5 lb of this product/acre. See "Precautions for applications with emulsifiable oil or oil concentrate in water" for additional directions.

Quackgrass Control on Land Going into Corn Production:

Split application: Broadcast 2.5 lbs. per acre in the fall or spring and plow 1-3 weeks later. Broadcast a second application at the rate of 2.5 lbs. per acre in the spring before, during or after planting but before weeds are 1.5 inches high. This split application will control both quackgrass and most annual broadleaf and grass weeds.

Single application: Broadcast 3.75 lbs. to 5 lbs. per acre in the fall or spring. Plow 1-3 weeks after application.

TANK MIXTURES ON CORN

DUAL BE: Use as tank mixture for control of certain broadleaf and grass weeds in corn. Refer to Dual BE label for all directions, weeds controlled, precautions and limitations.

LASSO or LASSO EC (Ischeier): Use as tank mixture with Lasso for control of many annual broadleaf and grass weeds in corn (field, hybrid seed, silage, sweet, popcorn), including barnyardgrass, carpetweed, crabgrass, fall panicum, Florida pusley, foxtails (giant, green, yellow), goosegrass, limonweed, Kochia, lambsquarters, mustard, nightshade, pigweed, purslane, ragweed, signalgrass (*Brachiaria*), smartweed, and witchgrass. This tank mix will reduce competition from the hard to control annual weeds -- annual morningglory, cocklebur, and velvetleaf (bulltonweed).

For preemergence or early postemergence broadcast application, use rates in Table 2. Apply tank mixture any time from immediately after planting until weeds reach 2-leaf stage and corn is no more than 5 inches tall. On sweet corn, apply before crop and weeds emerge. Application after the 2-leaf weed stage will not give satisfactory control. With postemergence application, occasional corn leaf burn should not affect growth or yield. If applied with liquid fertilizers, spray before crop emerges.

Continued on Back Panel

Sand, loamy sand, sandy loam	1.25 lb	1.25 lb or 2 pt	0.83 lb	1.67 lb or 2.67 pt
Loam, silt loam, silt, clay loam, sandy clay loam, silty clay loam, sandy clay, or silty clay with low organic matter	1.5 lb	1.5 lb or 2.4 pt	1 lb	2 lb or 3.2 pt
Loam, silt loam, silt, clay loam, sandy clay loam, silty clay loam, sandy clay or silty clay with medium to high organic matter and clay (including dark prairie soils of the Corn Belt)	1.8 lb	1.8 lb or 3 pt	1.2 lb	2.4 lb or 3.84 pt

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

weeds develop a shallow cultivation will generally result in better weed control.
Paraquat CL: For control of existing vegetation and residual control where corn will be planted directly into a cover crop, established sod, or in previous crop residues, apply 2.5-3.75 lb. of Atrazine 80W and 1-2 pt. Paraquat CL in 20-30 gal. of water per acre. Add 8 fl. oz. of a nonionic surfactant, such as X-77, per 100 gal. of spray mixture. Add Atrazine 80W to spray tank, thoroughly mix with water, then add the Paraquat CL and surfactant.

Refer to the Paraquat CL label for further directions, limitations, and cautions.
PRINCEP 80W and PARAQUAT CL: Use as tank mixture with Princep 80W and Paraquat CL for kill of existing vegetation and residual weed control where corn will be planted directly into a cover crop, established sod, or in previous crop residues. Dilute this product and Princep 80W in water in spray tank, agitating until thoroughly mixed. Then add Paraquat CL and a nonionic surfactant such as X-77. Continue agitation during application. Apply 1.25-2.5 lb. of this product plus 1.25-2.5 lb. of Princep 80W plus 1-2 pt. Paraquat CL in 20-60 gal. of water per sprayed acre within 3 weeks before, during, or after planting, but before corn crop emerges. Add 8 fl. oz. of a nonionic surfactant, such as X-77, per 100 gal. diluted spray. Use lower rates of this product and of Princep 80W on coarse soil, and higher rates on fine-textured soil. Use the 7 pt. rate of Paraquat CL if existing vegetation is 4-6 inches tall. This mixture will not control weeds taller than 6 inches.

Refer to further limitations and precautions on labels for Atrazine 80W, Princep 80W, and Paraquat CL.

- Precautions for All Applications to Corn:**
- (1) Do not apply more than 5 lbs. Atrazine 80W to corn in any one year.
 - (2) Land treated with Atrazine 80W should not be planted to any crop except corn or sorghum until the following year or injury may occur.
 - (3) Injury may occur in any crop other than corn or sorghum planted the year following treatment.
 - (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-planted crops, regardless of the rate used.
 - (5) To avoid the possibility of injury to following fall or spring-planted crops, use of BLADEX® Herbicide in place of Atrazine 80W is recommended. Follow directions on the BLADEX label.
 - (6) The use of Atrazine 80W on land that is to be rotated the following year to soybeans that will be treated with carbobenzothiazolone (EHCOR or LEXONE) may increase the chance of injury.
 - (7) If Atrazine 80W is applied after June 10, do not rotate with crops other than corn or sorghum the next year or injury may occur.
 - (8) In the High Plains and later mountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use Atrazine 80W to control weeds in corn or sorghum only when corn or sorghum is to follow corn or a crop of untreated corn or sorghum is to precede other rotational crops.
 - (9) Do not graze treated areas or feed treated forage to livestock for 21 days following application.

SORGHUM AND SORGHUM-SUDAN HYBRIDS (Grain and Forage Types)

Apply before planting, at planting, or after planting as indicated in the directions below. See Corn section for weeds controlled.

Preplant (Broadleaf and grass control): Broadcast in spring after plowing at rate in Table 4. Apply before, during, or after final seedbed preparation if soils filled or worked after application. Avoid deep incorporation. For best results, apply within two weeks before planting.

Preemergence (Broadleaf and grass control): Apply during or shortly after planting before weed or crop emergence. At rate in Table 4.

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**TABLE 4
PREPLANT AND PREEMERGENCE BROADLEAF AND
GRASS WEED CONTROL IN SORGHUM***

Soil Texture	Organic Matter	Broadcast Rate/Acre
COARSE Sand, loamy sand, sandy loam, sandy clay loam	Any level	Do Not Use (except for pre-emergent use on bedded sorghum in AZ and CA)
	Less than 1%	
MEDIUM AND FINE Silt loam, loam, clay loam, clay	1-1.5%	2-2.5 lb
	more than 1.5%	2.5-3 lb

*Do not apply preplant in AL, AR, FL, GA, LA, MS, NC, NM, OK, SC, TN, or TX. Do not apply preemergence in NM, OK, or TX, except in northeast OK and the TX Gulf Coast.

In case of planting failure, sorghum may be replanted. Do not make a second broadcast application, as injury may occur. If originally applied in a band and sorghum is replanted in untreated row middles, Atrazine 80W may be applied in a band to the second planting.

Preemergence Broadleaf Weed Control in Furrow Irrigated Bedded Sorghum (AZ and CA only). For preemergence control of many broadleaf weeds, including groundcherry, lambsquarters, morningglory, mustard, pigweed, and purslane, broadcast 1-1.5 lb/acre after bed preparation, during or after planting, but before sorghum and weeds emerge and before the first furrow irrigation. Follow with several regular irrigations to thoroughly wet all soil. Use lower rate in coarse-textured soil and soil low in organic matter, use higher rate on fine-textured soil and soil high in organic matter. **Precautions for Preemergence Application in Furrow Irrigated Bedded Sorghum:** Grow in AZ and CA: To avoid possible sorghum injury, do not use on sand or loamy sand soils or on sorghum planted in furrow. Applications to sorghum growing on alkali soils or where cuts, fills, or erosions have exposed calcareous or alkali subsoils may cause crop injury. In case of crop failure, do not replant sorghum for 8 months following application. Corn may be planted immediately. **Postemergence (Broadleaf and grass control):** Apply at rate in Table 5 before weeds exceed 1.5 inches in height. Apply up to "close-in."

**TABLE 5
POSTEMERGENCE BROADLEAF AND GRASS WEED CONTROL IN SORGHUM**

Soil Texture	Minimum Sorghum Height at Treatment	Broadcast Rate/Acre
Sand or loamy sand		Do Not Use
Sandy loam		See directions for postemergence broadleaf weed control
Silt loam to sandy clay loam	Completely Emerged	2.5-3 lb
Olton and Pullman clay soil	6 inches	2.5-3 lb
Silty clay loam and finer textured soil	Completely Emerged	3-7.5 lb

Postemergence Broadleaf Weed Control with Emulsifiable Oil or Oil Concentrate in Water: Broadcast 1.5 lb/acre for control of many broadleaf weeds, including annual morningglory, cocklebur, lambsquarters, mustard, pigweed, ragweed, smartweed, and wild buckwheat. Apply before pigweed and lambsquarters reach 6 inches in height and before all other weeds reach 4 inches in height. In CO, Western KS, NM, OK, TX and desert regions of AZ and CA, apply when sorghum is 6-10 inches in height but before it reaches boot stage. In all other areas apply after sorghum reaches the 3-leaf stage. Add 1 gal of emulsifiable oil/acre for ground application and 0.5 gal/acre for aerial application. Add 1 qt. of oil concentrate/acre for ground application. A cultivation may be necessary if all weeds are not controlled or if weeds regrow.

Precautions for Applications with Emulsifiable Oil or Oil Concentrate in Water: See "Precautions for applications with emulsifiable oil or oil concentrate in water" in the Application Procedures Section of this label.

Postemergence Broadleaf Weed Control with Surfactant: (CO, Western KS, NM, OK, TX, and Desert Regions of AZ and CA Only): Broadcast 1.5 lb plus 0.75-1.5 pt. of surfactant/acre after sorghum reaches 6 inches in height, but before weeds exceed 1.5 inches in height. Apply only on sandy loam and finer textured soil.

Precautions for All Applications to Sorghum: (1) Heavy rain immediately following application tends to cause excessive concentrations of herbicide in seed furrow, resulting in possible crop injury. Do not apply to furrow-planted sorghum until furrows are leveled (plowed-in). Level deep planter marks or seed furrows before application. (2) Application to sorghum growing under stress caused by minor element deficiency or to sorghum growing on highly calcareous soil may result in crop injury. (3) Injury may occur in any crop other than corn or sorghum planted the year following.

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Warm Season Perennial Range Grasses (Midwest):

Switchgrass: For control of many annual broadleaf and grass weeds including cheatgrass, foxtails (gray, green, and yellow), lambsquarters, pigweed, ragweed, smartweed, and velvetleaf.

For ground application use a minimum of 15 gal of water/acre.

Use only on loam, silt loam, silty clay loam, clay loam, and silty clay soils with at least 1 percent organic matter. **New Seeding:** Apply 2.5 lb/acre after planting but before weeds emerge. Prepare a good firm seedbed. Plant 0.5 inch deep with a grassland drill (preferred method) or a conventional drill. If a conventional drill is used on prepared seedbeds, remove all tension from the disk opener. For best results, cultipack or roll after planting. Clip weeds that escape in July or August. Avoid clipping switchgrass seedlings.

Established Stands: Apply 2.5 lb/acre in April or early May before weed emergence.

Precautions: See "Precautions" in Corn Section.

NOTE: Do not cut for hay. Do not graze treated areas within four months following application at seeding or three months following application to established switchgrass. Treat only once per year.

Perennial Ryegrass Grown for Seed (Pacific Northwest Only):

For the control of annual broadleaf and grass weeds such as annual ryegrass, wild rice, and similar species: Broadcast 1.5 lbs. in 15 gals or more water per acre, after last fall rains.

Precautions:

(1) Apply only to perennial ryegrass stands from which a seed crop has been harvested. (2) Do not apply Atrazine 80W to ryegrass more than 2 years in succession. (3) Do not graze treated land within 10 days of application. (4) Do not plant treated land to other crops for at least 18 months.

SUGARCANE

For control of any nonrhizomatous weeds, such as crabgrass, junglerice, wiregrass, foxtail, amaranths, Flora's paintbrush, fireweed and similar plants: Broadcast 2.5-5 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 directed sprays.

For control of emerged Perilous Weed (artillery weed) - Florida only: Apply 0.5-0.75 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 Atrazine 80W after "close-in". (2) Do not apply more than 12.5 lbs. of Atrazine 80W to any one crop of cane.

For control of alexandergrass, large crabgrass, artillery weed, and spiny amaranth, use one of the following methods at planting or ratooning (Florida only):

- (1) Apply 5 lb. in 20-50 gal. of water per acre, preemergence, broadcast or banded. Follow with one or two broadcast or banded over-the-top applications as needed, postemergence to sugarcane and weeds, at 2.5 lb. in 20-50 gal of water per acre. Treat before weeds exceed 1.5 inches in height.
- (2) Apply 1-3 times as needed, at 2.5 lb. in 20-50 gal. of water per acre either broadcast or banded over-the-top, postemergence to sugarcane and weeds. Treat before weeds exceed 1.5 inches in height.

Turf Grasses for Seed Production (FL, Augustin, Centroya, and Zeyila Grass):

Broadcast 2.5-5 lbs. per acre according to soil type as indicated below. Apply in 20-40 gallons of water per acre for thorough coverage.

Muck or Peat	5 lbs.	Old Beds: Within 2 days after lifting of sod
		New Beds: 3-4 days after sprigging or plugging
Sandy Soils	2.5 lbs.	Old Beds: Within 2 days after lifting of sod
		New Beds: 7-10 days after sprigging or plugging

Apply additional 2.5 lbs. on muck or peat, or 1.25 lbs. on sandy soils, if weed growth recurs.

Precautions:

(1) Do not apply within 30 days of cutting or lifting. (2) Do not apply Atrazine 80W in combination with surfactants or other spray additives, as these combinations may cause injury. (3) Do not use north of North Carolina.

FRUIT AND NUT CROPS

Mecardmia Nut:

For preemergence control of many broadleaf and grass weeds such as crabgrass, foxtail, wiregrass, Flora's paintbrush, Spanish needles, and fireweed:

Broadcast 2.5 lbs. in 50 gals. of water per acre before harvest and just prior to weed emergence. Repeat applications as necessary. Do not spray when nuts are on the ground during the harvest period.

Do not make aerial applications.

Pineapple:

For the control of purslane, Spanish needles, annual grasses, annual bindweed, ageratum, amaranths, rattlesnake, Flora's paintbrush, fireweed, spurge, indigo, papalo, and other similar weed species:

Make an initial application of up to 6 lbs. per acre as a blanket coverage.

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treatment. (4) Following harvest, plow (moldboard or disk-plow) and thoroughly till soil in fall or spring to minimize possible injury to rotational spring-seeded crops, regardless of rate used. (5) Injury may occur if both this herbicide, or preemergence, and an at-planting systemic insecticide are used.

NOTE: Do not graze or feed forage from treated areas for 21 days following application.

Additional Precautions: See "Precautions for all applications to corn" in Corn section of this label.

Wheat-Sorghum-Fallow
To control annual broadleaf and grass weeds following wheat harvest and continuing into the following sorghum crop when grown under minimum tillage

Broadcast 3.75 lbs. per acre to the wheat stubble immediately following wheat harvest. Use 10-40 gals. of water per acre to assure thorough coverage. If weeds are present, remove them with a sweep plow or other suitable implement after application.

NOTE: (1) Sorghum should be planted into the wheat stubble the spring following treatment with minimum disturbance of the soil. Use a surface planter or a planter leveling a shallow furrow. If weeds are present at planting, remove them with a sweep plow or other suitable implement before planting. Do not apply following sorghum harvest.

Precautions:
(1) Use only on a silt loam or heavier soil. (2) Wheat-sorghum-fallow cropping sequence must be followed. (3) Do not graze treated area or feed treated forage to livestock. (4) Do not plant treated area to any crop other than those on this label within 18 months following treatment.

Wheat-Corn-Fallow (KS, NE)
Atrazine 80W controls cheatgrass (downy brome, chess), Kochia, mustards, pigweed, Russian thistle, wild lettuce, wild sunflower, and volunteer wheat during period after wheat harvest. Weed control may extend into following corn crop grown under minimum tillage.

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

Wheat-Fallow-Wheat (CO, KS, MT, NE, ND, SD, and WY)
For preemergence control of cheatgrass (downy brome, chess), common lambsquarters, field pennycress, Kochia, mustard, Russian thistle, wild lettuce, and suppression of volunteer wheat during fallow period of a wheat-fallow-wheat rotation, apply 0.6-1.25 lbs. in 10-40 gal. of water per acre for ground application, or in a minimum of 5 gal. of water per acre for aerial application, on all soils except those listed under "Precautions." For control of pigweed and wild sunflower, use the higher rate. Apply to stubble ground. Treat only once during same fallow period.

If weeds are present at application, a tank mix with Paraquat CL may be used. Broadcast 0.8-1.25 lbs. of Atrazine 80W plus 1-2 pt. of Paraquat CL in 20-60 gal. of water per acre by ground equipment. Add 0.5-1 pt. of a nonionic surfactant, such as X-77, per 100 gal. of spray mixture. Add Atrazine 80W to spray tank first and thoroughly mix with water. Then add Paraquat CL, followed by surfactant. Use the 2 pt. rate of Paraquat CL if weeds are 4-8 inches tall. This mixture will not control weeds taller than 6 inches. Apply to stubble ground. Treat only once during same fallow period. Refer to Paraquat CL label for further directions, precautions, and limitations.

If weeds are present at application and this product is used alone, use either an approved contact herbicide before or after treatment, or tillage after treatment.

Use tillage to control weeds which escape during fallow period. Till before planting. For Atrazine 80W applied alone or in tank mixture with Paraquat CL, plant at least 2 inches deep and 12 months or more after application.

Precautions: (1) Do not use on sand soil. (2) Do not treat eroded hillsides, caliche and rocky outcroppings, or exposed calcareous subsoil. (3) Do not treat soils of the Rosebud and Canyon Series in Western NE and adjoining counties in CO and WY. (4) Do not treat soils with calcareous surface layers. (5) Avoid spray overlap.

NOTE: Do not graze treated areas within 6 months after application.

RANGELAND

To control certain weeds, including cheatgrass (downy brome, chess), tumble mustard, sagewort, and annual or common broomweed, use lower rate on areas where cheatgrass is the major problem weed; use higher rate to control other weeds.

For ground applications, use a minimum of 10 gals. of water per acre.
For aerial applications, use a minimum of 5 gals. of water per acre.

See "Application Procedures" for additional information.
Establishment of Perennial Range Grasses (CA, ID, NV, OR, UT, WA): Apply 1-1.25 lb. per acre in fall after rains begin, but before ground freezes. Perennial range grass may be seeded when rain begins the next fall following treatment. Plant in deep furrows such as those made by a deep furrow rangeland drill. Treated areas may be grazed 7 months after seeding, never, to provide sufficient time for establishment of desirable range grasses. Treated areas should not be grazed until following seeding.

Existing Stands of Perennial Range Grasses:
(CO, KS, MT, ND, NE, SD, WY) Apply 1-1.25 lbs. per acre in fall before ground freezes.
(OK, TX) Apply 1.25 lbs. per acre in spring before April 30.
(A) Do not graze areas to be treated for six months prior to application. Apply 0.6-0.9 lbs. per acre before the ground freezes.
Grass may be injured by this product at recommended rates.
Do not graze treated areas until wheatgrasses. Do not cut or feed range grass hay. Do not graze treated areas application or three months following spring application. Apply only once per year.

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needed, prior to differentiation. Applications should be made in 20-40 gals. of water per acre to assure thorough coverage.

Precautions:
(1) Do not apply more than 37.5 lbs. Atrazine 80W per acre per cycle. (2) Do not apply within 45 days of fruit harvest, or forage harvest if forage is to be fed to livestock. (3) Repeated monthly applications to plant foliage may slow plant growth and delay fruiting.

FORESTS AND CHRISTMAS TREE PLANTATIONS

Douglas Fir, Grand Fir, Noble Fir, White Fir, Lodgepole Pine, Ponderosa Pine and Scotch Pine
Annual broadleaf and grass weed control: Broadcast 2.5-5 lbs. in 20-40 gals. of water per acre to assure thorough coverage. Apply between fall and early spring while trees are dormant or soon after transplanting and before weeds are 15 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 1.5 inches high.

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

Apply Atrazine 80W at rates recommended below, before or soon after weeds begin growth. Postemergence applications should be made when weeds are young and actively growing. Use the higher rates on heavy clay and muck soils.

Atrazine 80W can be used to provide 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.

Use sufficient water to assure thorough coverage. Use at least 1 gal. of water for each pound of Atrazine 80W, more if practical.

To control many annual broadleaf and grass weeds (such as barnyardgrass, cheatgrass, crabgrass, lambsquarters, foxtail, ragweed, puncturevine, and turkey mullein): Broadcast 6-12.5 lbs. per acre.

To control hard-to-kill annual and many perennial broadleaf and grass weeds (such as bluegrass, burdock, Canada thistle, dogfennel, orchardgrass, plantain, quackgrass, purple top, redtop and smooth brome): Broadcast 12.5-25 lbs. per acre.

To control 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, 4.5 oz. per 1,000 sq. ft. is equivalent to 12.5 lbs. per acre.

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