

TECHNICAL BULLETIN

RESTRICTED USE PESTICIDE
(GROUND WATER CONCERN)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

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

TECHNICAL BULLETIN FOR
USE OF ATRAZINE 90 DF
DRY FLOWABLE
HERBICIDE

FOR SEASON LONG WEED CONTROL IN CORN AND SORGHUM

FOR WEED CONTROL IN CERTAIN OTHER CROPS, IN NONCROP AREAS AND INDUSTRIAL SITES

ACTIVE INGREDIENT

| | |
|--|--------|
| Atrazine: 2-chloro-4-ethylamino-6-isopropylamino -s-triazine..... | 85.5% |
| Related Triazines..... | 4.5% |
| Inert Ingredients | 10.0% |
| TOTAL | 100.0% |

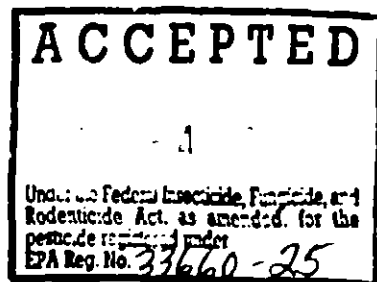
ATRAZINE 90 DF CONTAINS 4.25 LBS ACTIVE INGREDIENT PER GAL.

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA EST. No.: 33660-IT-1

EPA REG. No: 33660-25



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PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Avoid contact with eyes, skin or clothing. Users are required to wear long sleeve shirts and long pants or equivalent, chemical resistant gloves, and boots (waterproofed). In addition, persons involved in mixing/loading operations are required to use chemical resistant rubber or neoprene gloves and a face shield or goggles. Wash thoroughly after handling and before eating or smoking. Remove and wash contaminated clothing before reuse.

Statement of Practical Treatment

If swallowed - Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

If inhaled - Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

If on skin - Wash with plenty of soap and water. Get medical attention.

If in eyes - Flush eyes with plenty of water. Get medical attention if irritation persists.

Note to Physician: There is no specific antidote for atrazine. If this product is ingested, induce emesis or lavage stomach. The use of aqueous slurry of activated charcoal may be considered.

Environmental Hazards

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water or wetlands. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. Atrazine can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply Atrazine to sand and loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

This product may not be mixed/loading, or used within 30 feet of all wells including abandoned wells, drainage wells, and sink holes.

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DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING.

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

Storage and Disposal

Storage: Store in original container in well ventilated and dry storage area. Keep in shaded area and away from excessive heat.

Pesticide disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water, food or feed by storage or disposal.

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 90 DF controls many annual broadleaf and grass weeds in corn, sorghum, sugarcane and other crops listed in the label. It is also effective for long-term control of many annual broadleaf and grass weeds in noncrop areas and industrial sites.

The product may be applied before or after weeds emerge. Rates are given according to soil texture: lower rates should be used on coarse soils and soils poor in organic matter, higher rates should be used on fine soils and soils rich in organic matter.

The herbicide acts mainly through root absorption, therefore rainfall or irrigation is necessary to move it into the root zone after application.

Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control.

Atrazine 90 DF is non-corrosive to equipment and metal surfaces, non-flammable and has low electrical conductivity.

This product may not be mixed/loaded, or used within 30 feet of all wells, including abandoned wells, drainage wells, and sink holes.

Avoid the use of this product where adjacent desirable trees, shrubs or plants may be injured.

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APPLICATION PROCEDURES

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

GROUND APPLICATION

Uniform distribution is essential for best results. To assure thorough coverage, use 10-4 gallons of water per acre, unless otherwise specified. Use 80 flat fan-type nozzles; screens in nozzle, in suction and in-line, should be no finer than 50 mesh. Suitable pumps should have the capacity to maintain 35-40 psi operating pressure.

Calculate amount of product per acre for band application as follows:

$$\frac{\text{Band width (Inches)}}{\text{Row width (Inches)}} \times \text{broadcast rate/A} = \text{band rate/A of field}$$

AERIAL APPLICATION

Use only where specified, in a minimum of 1 gallon of water for each 1-1.5 lbs/A. For postemergence treatments on corn and sorghum apply in a minimum of 2 gallons of water/A.

Avoid application when uniform coverage is not obtainable or when excessive drift may occur.

Avoid application that would result in direct contact with humans or animals.

Flagmen or loaders should wear long sleeve shirts and long pants, or equivalent, chemical resistant rubber or neoprene gloves, boots (waterproofed) and a face shield or goggles.

They should avoid inhaling spray mist and should wash thoroughly at the end of operations.

APPLICATION IN LIQUID FERTILIZER

Nitrogen solutions or complete liquid fertilizers may be used as carriers for Atrazine 90 DF for preplant or preemergence applications in corn or sorghum.

Prior to mixing in the spray tank, check the compatibility of the mixture. Do not apply postemergent or injury may occur to the crop.

APPLICATION IN WATER PLUS EMULSIFIABLE OIL OR OIL CONCENTRATE

Emulsifiable oils or oil concentrates may be added to Atrazine 90 DF in water sprays; the mixture may speed activity of the herbicide and provide quicker kill of weeds.

Under certain conditions, however, the use of oils may injure corn; follow directions and precautions given.

Use a crop oil containing at least 1% suitable emulsifier or a crop oil concentrate containing not more than 20% emulsifier or surfactant designated for use with Atrazine.

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Products contaminated with water or other materials can cause damage to the crop.

Mixing procedures

- Use a thoroughly clean sprayer: contamination with 2,4 D or other materials may injure crop.
- Fill spray tank 1/2-2/3 full of clean water.
- Start agitation: be sure that agitation system is working properly.
- Pour Atrazine 90 DF directly from bag into the tank.
- Add, if applicable, emulsifiable oil, oil concentrate or tank mixed herbicides.
- Completely fill the tank with water.
- Empty the tank as completely as possible before refilling and keep the agitation system in operation to avoid separation from oil/water in the tank.
- Drain the tank and clean out with strong detergent solution or solvent.
- Clean the sprayer immediately after use, flushing with water containing a detergent.

CORN

For the control of annual broadleaf and grass weeds such as: barnyardgrass, witchgrass (*Panicum capillare*), yellow foxtail, green foxtail, wild oats, large crabgrass, giant foxtail, velvetleaf, morningglory, lambsquarters, pigweed, ragweed, nightshade, purslane, mustard.

Apply either before planting, at planting or after planting.

The maximum application rate for corn is 3 lbs. active ingredient per acre per calendar year (i.e., 3.3 lbs Atrazine 90 DF per acre per calendar year). Application for quackgrass suppression in corn is restricted to spring application only. No fall application is permitted.

Preplant: broadcast in the spring after plowing; apply before, during or after seedbed preparation. If soil is tilled avoid deep incorporation. For best results apply within two weeks prior to planting.

Preemergence: apply during or shortly after planting prior to weed emergence.

Postemergence: Postemergence application to corn must be made before corn reaches 12 inches. Apply before weeds exceed 1.5 inches.

Broadcast rate/Acre

Coarse soils
(sand, loamy sand, sandy loam) 2.2 lbs.

Medium soils
(silt and clay loams with low organic matter) 2.6 lbs.

Fine soils
(silt and clay loams with medium and high
organic matter) 3.3 lbs.

Peats, mucks and high organic clays
(in post emergence only) 3.3 lbs.

For broadleaf control in Western KS, Eastern CO, NM, OK,
Panhandle, West TX, Eastern WY on sandy loam, mild to
strongly alkaline soils and all recently leveled soils,
apply no more than 1.3 lbs/A preplant or preemergence.

Postemergence with emulsifiable oil or oil concentrate

- For broadleaf and grass control: apply 2.2 lbs/A, after weed emergence but before weeds reach 1.5 inches high. Add 1 gallon of emulsifiable oil/A for ground application and 0.5 gallons/A for aerial application. Add 1 qt. of oil concentrate/A for ground application.
- For broadleaf control: apply 1.5 lbs/A. Add 1 gallon of emulsifiable oil/A for ground application and 0.5 gallons/A for aerial application. Add 1 qt. of oil concentrate for ground application. Apply before pigweed and lambsquarters reach 6 inches.

If weeds are not controlled or if weeds regrow, a cultivation may be necessary.

Precautions

- Do not apply when crop is under stress from prolonged cold, wet weather, poor fertility or other factors, or when crop is wet from recent rainfall.
- Do not use when treating inbred lines or any breeding stock.
- Do not use with other insecticides, herbicides, liquid fertilizers or other materials.
- Store and handle emulsifiable oil or oil concentrate carefully.
- Do not make more than one application per season except as recommended for the control of yellow nutsedge and Canada thistle.

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PROBLEM WEED SUPPRESSION (Yellow nutsedge and Canada thistle)

Atrazine 90 DF suppresses (partially controls) yellow nutsedge and Canada thistle when used according to directions. For best results apply each year until weeds are eliminated or reach a level of infestation where neither weed is a problem. If weeds regrow after last application, cultivate once.

Some methods for the control of above weeds are listed, in order of preference.

1. Broadcast 1.6 lbs plus 1 gallon of emulsifiable oil or 1 qt. of oil concentrate/A, after crop and yellow nutsedge or Canada thistle emerge, but before yellow nutsedge is 3 inches tall or Canada thistle is 6 inches tall. Repeat application before corn is 12 inches tall.
2. Broadcast 1.6 lbs/A, preplant. Follow with an application of 1.6 lbs plus 1 gallon of emulsifiable oil or 1 qt. of oil concentrate/A, after corn and weeds emerge but before yellow nutsedge is 3 inches tall and before corn is 12 inches tall.
3. Broadcast 1.6 lbs/A, during or shortly after planting, but before crop or weeds emerge. Follow with an application of 1.6 lbs plus 1 gallon emulsifiable oil or 1 qt. oil concentrate/A, after corn and weeds emerge, but before yellow nutsedge is 3 inches tall or Canada thistle is 6 inches tall and before corn is 12 inches tall.
4. Broadcast 3.3 lbs plus 1 gallon emulsifiable oil or 1 qt. oil concentrate/A, after crop emerges but before corn is 12 inches tall, and after yellow nutsedge and Canada thistle emerge, but before yellow nutsedge is 3 inches tall and Canada thistle is 6 inches tall.
5. Broadcast 3.3 lbs/A, preplant (yellow nutsedge control only).
6. Broadcast 3.3 lbs/A, during or shortly after planting, but before crop or weeds emerge (yellow nutsedge control only).

Note: Use 2,3,5 or 6 when other weed species are expected.

- Do not use emulsifiable oil or oil concentrate (1,2,3 or 4) when corn is wet or under stress.

QUACKGRASS SUPPRESSION ON LAND GOING INTO CORN PRODUCTION

Application for quackgrass suppression in corn is restricted to spring application only. No fall application is permitted.

- Split application: broadcast 1.6 lbs/A in spring. Plow 2-3 weeks later. Follow with another application at 1.6 lbs/A before, during or after planting, but before weeds are 1.5 inches tall and before corn is 12 inches tall. This application will also control most annual broadleaf and grass weeds.

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- Single application: broadcast 3.3 lbs/A in spring. Plow 1-3 weeks later.

TANK MIXTURES ON CORN

Atrazine 90 DF may be tank mixed with other herbicides to broaden its spectrum of activity on corn.

Mixtures can be done with:

METOLACHLOR

For control of certain broadleaf and grass weeds. Follow Metolachlor label directions for application.

ALACHLOR

For control of many annual broadleaf and grass weeds such as: barnyardgrass, carpetweed, crabgrass, fall panicum, Florida pusley, foxtails (giant, green, yellow), goosegrass, Jimsonweed, kochia, lambsquarters, mustard, nightshade, pigweed, purslane, ragweed, signalgrass, smartweed, witchgrass.

This tank mixture will reduce competition from the hard to control annual weeds such as: annual morningglory, cocklebur and velvetleaf.

Apply at 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 stage will not give satisfactory control.

With postemergence application occasional corn leaf burn may occur, but this should not affect growth or yield.

If applied with liquid fertilizers spray before crop emerges.

Follow mixing procedures in "Application Procedures".

Broadcast rate/acre

| | Less than 3% organic matter | | 3% or more organic matter | |
|--------------|--------------------------------|------------------|------------------------------|------------------|
| Soil texture | Atrazine DF - (EC) | Alachlor (EC) | Atrazine 90 DF - (EC) | Alachlor (EC) |
| Coarse | 1.1 lb. | 1.5 qt. | 1.1 lb. | 1.5 qt. |
| Medium | 1.1-1.3 lbs. | 1.75 qt. | 1.3-1.5 lbs. | 2.0 qt. |
| Fine | 1.3-1.75 lbs. | 2.25 qt. | 1.3-1.75 lbs. | 2.5 qt. |

Use in a minimum of 20 gallons of water/A

PROPACHLOR

For the control of many annual broadleaf and grass weeds such as: annual morningglory, annual ryegrass, barnyardgrass (watergrass), velvetleaf, carpetweed, cocklebur, crabgrass, fall panicum, Florida pusley, giant foxtall, green foxtall, yellow foxtall, goosegrass, groundsel, Jimsonweed, lambsquarters, mustard, nightshade, pigweed, purslane, ragweed, smartweed, sunflower.

Broadcast at 1.1-1.7 lbs/A Atrazine 90 DF + 3.6-6 lbs/A Propachlor (65WP) on soil surface any time from immediately after planting until broadleaf and grass weeds reach the 2 leaf-stage, in a minimum of 20 gallons of water/A. Use lower rate on coarse soils low in organic matter and higher rate on fine soils high in organic matter.

SIMAZINE

For the control of many annual weeds such as: carpetweed, crabgrass, fall panicum, foxtall, lambsquarters, morningglory, pigweed, ragweed, velvetleaf.

Apply before planting, at planting or after planting but before crop and weeds emerge. Use 1:1 ratio for control of above weeds and 1:2 ratio for heavy infestations of crabgrass and fall panicum.

Broadcast rate/acre

| Soil texture | 1:1 ratio | | 1:2 ratio | |
|--------------|---------------------|-------------------|---------------------|-------------------|
| | Atrazine - 90 DF | Simazine 80 WP | Atrazine - 90 DF | Simazine 80 WP |
| Coarse | 1.1 lbs | 1.25 lbs | 0.73 lbs | 1.6 lbs |
| Medium | 1.3 lbs | 1.5 lbs | 0.88 lbs | 2.0 lbs |
| Fine | 1.6 lbs | 1.8 lbs | 1.07 lbs | 2.4 lbs |

Use a minimum of 20 gallons of water/A.

Preplant: apply in spring during or after final seedbed preparation; for best results apply within two weeks before planting.

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

SIMAZINE AND PARAQUAT

For the control of existing vegetation and residual weed control where corn will be planted directly into a cover crop, established sod or in previous crop residue.

Apply within 3 weeks before, during or after planting, but before crop emerges at 1.1-2.2 lbs/A of Atrazine 90 DF plus 1.25-2.5 lbs/A of Simazine 80 WP plus 1-2 pt/A of Paraquat CL in 20-60 gallons of water/A. Add 8 fl. oz of nonionic surfactant/100 gallons of diluted spray. Use lower rate on coarse soil and higher rate on fine soil.

Precautions for all applications to corn

- Do not apply more than 3.3 lbs Atrazine 90 DF per *ACRE PER* calendar year.
- Land treated with Atrazine 90 DF should not be planted with any crop except corn or sorghum until the following year, or injury may occur.
- Following harvest of treated crop, plow and thoroughly till the soil in the fall or spring to minimize possible injury to rotational spring-seeded crops.
- If applied after June 10, do not rotate with crops other than corn or sorghum the next year.
- In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use only when corn or sorghum is to follow corn or sorghum or when a crop of untreated corn or sorghum is to precede other rotational crops.
- In eastern parts of the Dakotas, KS, Western MN, NE, do not rotate to soybeans if the rate applied to corn or sorghum was higher than 2.2 lbs/A, or equivalent for band application.
- Do not graze treated area or feed treated forage to livestock for 21 days following application.

SORGHUM AND SORGHUM HYBRIDS (GRAIN AND FORAGE TYPES)

For the control of broadleaf and grass weeds.

Apply before planting, at planting or after planting.

The maximum application rate on sorghum is 3 lbs. active ingredient per acre per calendar year (i.e. 3.3 lbs. Atrazine 90 DF per acre per calendar year). Application for quackgrass suppression in sorghum is restricted to a spring application only. No fall application is permitted.

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Preplant: broadcast in spring after plowing. Apply before, during or after 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 before weed or crop emergence.

| | <u>Broadcast rate/acre</u> | | |
|--------------|--|--------------|-------------|
| | % Organic matter | | |
| | <1% | 1-1.5% | >1.5% |
| Soil Texture | | | |
| Coarse | Do not use (except for preemergent use on bedded sorghum in AZ and CA) | | |
| Medium | - | 1.7-2.2 lbs. | 2.2-2.6 lbs |

Do not apply preplant in AL, ARK, FL, GA, LA, MS, ND, OK, SC, TN, TX
 Do not apply preemergence in NM, OK, TX except in northeast OK and the TX Gulf.

Preemergence broadleaf weed control in furrow irrigated bedded sorghum in AZ and CA: for the control of ground cherry, lambs-quarters, morningglory, mustard, pigweed, purslane, apply 0.9-1.3 lbs/A after bed preparation, during or after planting, but before sorghum and weeds emerge and before the first furrow irrigation. Follow with several regular furrow irrigations to thoroughly wet all soil. To avoid possible sorghum injury do not use on sand or loamy sand soils or on sorghum planted in furrow. Applications to sorghum growing in alkaline soils or where cuts, fills or erosions have exposed calcareous or alkali subsols may cause injury to the crop.

Postemergence: Postemergence application to sorghum must be made before sorghum reaches 12 inches in height. Apply before weeds exceed 1.5 inches, up to "close in".

| | <u>Broadcast rate/acre</u> | |
|------------------------------------|----------------------------|------------------------------------|
| Silt loam to sandy clay loam soils | 2.2 - 2.6 lbs | when sorghum is completely emerged |
| Olton and Pulman clay soil | 2.2 - 2.6 lbs | when sorghum is 6 inches tall |
| Silty clay loam and finer soils | 3.3 lbs | when sorghum is completely emerged |

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For postemergence broadleaf weed control with emulsifiable oil or oil concentrate in water, broadcast 1.3 lbs/A for the control of annual morningglory, cocklebur, lambsquarters, mustard, pigweed, ragweed, smartweed, wild buckwheat.

Apply before pigweed and lambsquarters reach 6 inches and before all other weeds reach 4 inches.

In CO, Western KS, NM, OK, TX and desert region of AZ and CA, apply when sorghum is 6-10 inches high. In all other areas apply after sorghum reaches the 3-leaf stage.

Add 1 gallon/A of emulsifiable oil for ground application and 0.5 gallons/A for aerial application.

Add 1 qt. of oil concentrate/A for ground application.

A cultivation may be necessary if all weeds are not controlled or if weeds regrow. Follow precautions for applications with emulsifiable oil or oil concentrate in corn section.

For postemergence weed control with surfactants in CO, Western KS, NM, OK, TX and desert regions of AZ and CA, broadcast 1.3 lbs plus 0.75-1 pt of surfactant/A after sorghum reaches 6 inches high, but before weeds exceed 1.5 inches and apply only to sandy loam and finer textured soils.

Precautions for all applications to sorghum

- If heavy rain following application causes excessive concentration of herbicide in seed furrow, crop injury may result.
- Do not apply to furrow planted sorghum until furrows are leveled: level deep planter marks or seed furrows before application.
- Application to sorghum growing under stress or to sorghum growing on highly calcareous soil may result in crop injury.
- Injury may occur in any crop other than corn or sorghum planted the year after treatment.
- After harvesting, plow in fall or spring to minimize possible injury to rotational spring seeded crops.
- Injury may occur if both this herbicide, preplant or preemergence, and an at-planting systemic insecticide are used.
- Do not graze or feed forage from treated areas for 21 days following application.

QUACKGRASS SUPPRESSION ON LAND GOING INTO SORGHUM PRODUCTION

Application for quackgrass suppression in sorghum is restricted to spring application only. No fall application is permitted.

- Split application: broadcast 1.6 lbs/A in spring. Plow 1-3 weeks later. Follow with another application at 1.6 lbs/A before, during or after planting, but before weeds are 1.5 inches tall and before sorghum is 12 inches tall. This application will also control most annual broadleaf and grass weeds.

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- Single application: broadcast 3.3 lbs/A in spring. Plow 1-3 weeks later.

CHEMICAL FALLOW

WHEAT-SORGHUM-FALLOW

To control annual broadleaf and grass weeds following wheat harvest and into following sorghum crop when grown under minimum tillage, broadcast 3.3 lbs/A to wheat stubble immediately following wheat harvest. If weeds are present, remove with a sweep plow. Plant sorghum into wheat stubble the following spring with minimum soil disturbance. Use a surface planter or a planter leaving a shallow furrow. If weeds are present at planting remove with a sweep plow.

Precautions

- Use only on silt loam or finer textured soils.
- Wheat sorghum-fallow cropping sequence must be followed.
- Do not apply following sorghum harvest.
- Do not graze or feed forage from treated area to livestock.
- Do not plant any crop other than those on this label within 18 months.

WHEAT-CORN-FALLOW

To control cheatgrass, kochia, mustard, pigweed, Russian thistle, wild lettuce, wild sunflower, volunteer wheat during period after wheat harvest.

Apply with ground equipment only, following directions given for wheat-sorghum-fallow.

Weed control may extend into following corn crop grown under minimum tillage.

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

To control, in preemergence: cheatgrass, common lambsquarters, field pennycress, kochia, mustard, Russian thistle, wild lettuce, and to suppress volunteer wheat during fallow period of a wheat-fallow-wheat rotation, apply at 0.5 lbs/A in 10-40 gallons of water for a ground application or a minimum of 5 gallons of water for aerial application. For the control of pigweed and wild sunflower use the higher rate. Treat only once during same fallow period.

If weeds are present at application, use either a contact herbicide before or after treatment, or tillage after treatment or use a tank mix with Paraquat plus a nonionic surfactant at 0.5-1.1 lbs Atrazine 90 DF plus 1-2 pt of Paraquat CL in 20-60 gallons of water plus 0.5-1 pt of a nonionic surfactant per 100 gallons of water.

Use tillage to control weeds which escape during fallow period.

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Precautions

- Do not use on sandy soil.
- Do not treat eroded hillsides or exposed calcareous subsoil.
- Do not treat soils of the Rosebud and Canyon Series in Western NE and adjacent counties in CO and WY.
- Avoid spraying overlap.
- Do not graze treated areas within 6 months after application.

SUGARCANE

For the control of many annual broadleaf and grass weeds such as crabgrass, junglerice, wiregrass, foxtails, amaranths, Flora's paintbrush, fireweed and similar plants.

Apply at time of planting or ratooning, but before cane emerges, providing adequate coverage of the soil surface.

Broadcast rate/acre

2.2 - 4.4 lbs in 20-50 gallons of water

One additional application may be made over the cane as it emerges, and two additional applications may be made interline after emergence, as directed spray.

For the control of emerged pellitory weed (artillery weed) (FL only), apply 0.4-0.6 lbs/A in at least 40 gallons of water as directed spray. Add 2 qts of surfactants and provide adequate coverage of foliage.

Precautions

- Do not apply after close-in.
- Do not apply more than 11 lbs/A.

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

1. Apply 4.4 lbs/A in 20-50 gallons of water, preemergence, broadcast or banded, followed by one or two broadcast or banded over-the-top applications postemergence at 2.2 lbs/A in 20-50 gallons of water. Treat before weeds exceed 1.5 inches.

2. Apply 1-3 times, as needed, at 2.2 lbs/A in 20-50 gallons of water, broadcast or banded over-the-top postemergence to sugarcane and weeds. Treat before weeds exceed 1.5 inches.

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TURF GRASSES FOR SOD PRODUCTION
(St. Augustine, Centipede, Zoysia Grass)

Apply in 20-40 gallons of water/A for thorough coverage at the following rates:

| | <u>Broadcast rate/acre</u> | |
|-------------------|----------------------------|--|
| Muck or peat soil | 4.4 lbs | In old beds: within 2 days after lifting sod In new beds: 3-4 days after sprigging or plugging |
| Sandy soils | 2.2 lbs | In old beds: within 2 days after lifting sod In new beds: 7-10 days after sprigging or plugging |

If weeds regrow apply an additional 2.2 lbs/A on muck or peat or 1.1 lbs/A on sandy soils.

MACADAMIA NUTS

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

Apply before harvest and just before weeds emerge at 2.2-4.4 lbs/A in 50 gallons of water. Repeat as necessary.

Precautions

- Do not spray when nuts are on ground during harvest period.
 - Do not apply by air.
-

FOREST AND CHRISTMAS TREE PLANTATION

Douglas Fir, Grand Fir, Noble Fir, White Fir, Lodgepole Pine,
Ponderosa Pine, Scotch Pine

For the control of annual broadleaf and grass weeds, apply 2-4.4 lbs/A in 20-40 gallons of water, between fall and early spring, while trees are dormant, or apply soon after transplanting before weeds are 1.5 inches tall.

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For the control of quackgrass, apply 4.4 lbs/A in fall and early spring, while trees are dormant and before quackgrass is more than 1.5 inches tall.

Precautions

- Do not graze treated areas.
- Do not apply to seedbeds.
- Apply only once a year.

NONSELECTIVE WEED CONTROL ON NONCROP AREAS

For long-term weed control on industrial sites, highway medians and shoulders, railroad rights-of-way, lumberyards, petroleum tank farms, noncrop areas of farms, equipment and fuel storage areas, along fences and lanes.

Apply before or soon after weeds begin growth.

Postemergence applications should be made when weeds are young and actively growing.

Application rates to non-crop land for industrial weed control cannot exceed a maximum of 10 lbs. active ingredient per acre per calendar year (i.e., 11.1 lbs Atrazine 90 DF per acre per calendar year).

Apply at 5.3 - 11.1 lbs/A* for the control of barnyardgrass, cheatgrass, crabgrass, lambsquarters, foxtails, ragweed, puncturevine, turkey mullein

* Use higher rate on fine clay and muck soils.

Use sufficient water to provide adequate coverage: at least 1 gallon of water for each pound of product.

For small areas 4 oz. per 1,000 sq. ft. is equivalent to 11.1 lbs/A.

CONDITION OF SALE

The label instructions and directions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, soil composition, type of vegetation, presence of other materials, or the manner of use or application, all of which are beyond the control of I.P.C.I.

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ALL SUCH RISKS ARE ASSUMED BY THE BUYER.

LIMITED WARRANTY AND DISCLAIMER

I.P.I.C.I. warrants that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use. I.P.I.C.I. makes NO OTHER warranty of any kind with respect to the product.

The warranty does not extend to use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to I.P.I.C.I., and buyer assumes the risk of any such use.

READ THE LABEL BEFORE USING.

I.P.I.C.I. expressly disclaims all implied warranties of merchantability or fitness for a particular purpose, and no such warranties shall be implied or inferred.

Neither I.P.I.C.I. nor any seller of this product makes, and their employees and agents are not permitted to make, any representations or warranties, express or implied by law, not specifically set forth herein.

Buyer assumes the risk to persons or property arising from the use or handling of this product, and ACCEPTS THE PRODUCT ON THAT CONDITION.

LIMITATIONS OF LIABILITY AND DAMAGES.

The liability of I.P.I.C.I. and any other seller for any loss or injury, whether based on negligence, breach of warranty, strict liability in tort, or any other cause of action, shall be limited to the purchase price of the product. Prompt notice of any claim must be given by the buyer to I.P.I.C.I. within ninety days after the application of the product or ninety days after the first planting, whichever is later. Notification to I.P.I.C.I. should be at this address: Industria Prodotti Chimici, S.p.A., Via F. Beltrami, 11, 20026 Novate Milanese, Italy.

I.P.I.C.I. and any other seller of the product shall not be liable, and any and all claims against I.P.I.C.I. and any other seller are waived, for special, indirect, incidental, or consequential damages or expenses of any nature, including, but not limited to, loss of profits or income, and crop or property loss or damage, whether or not based on negligence, breach of warranty, strict liability in tort or any other cause of action.

I.P.I.C.I. OFFERS THIS PRODUCT AND THE BUYER AND USER ACCEPT IT SUBJECT TO THE FOREGOING CONDITIONS OF SALE AND LIMITATIONS OF WARRANTY, LIABILITY AND DAMAGES, WHICH MAY BE VARIED ONLY BY AGREEMENT IN WRITING SIGNED BY A DULY AUTHORIZED REPRESENTATIVE OF I.P.I.C.I.

5/28/90

USES WITH OTHER PRODUCTS (TANK MIXES)

This product is not to be used in combination with any other product except as specifically recommended in writing by I.P.I.C.I., and I.P.I.C.I. (and any other seller) shall have no liability for any loss, damage or injury arising out of its use in any such combination not so specifically recommended. If used in a combination recommended by I.P.I.C.I., the liability of I.P.I.C.I. (and any other seller) shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the I.P.I.C.I. product in such combination use and in any event shall be limited to return of the amount of the purchase price of the product.

5/28/90

LABEL

RESTRICTED USE PESTICIDE
(GROUND WATER CONCERNS)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

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

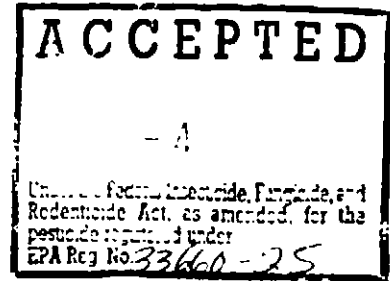
A T R A Z I N E 90 DF

DRY FLOWABLE

HERBICIDE

FOR SEASON LONG WEED CONTROL IN CORN AND SORGHUM

FOR WEED CONTROL IN CERTAIN OTHER CROPS, IN NONCROP AREAS AND INDUSTRIAL SITES



ACTIVE INGREDIENT

| | | |
|--|-------|---------------|
| Atrazine: 2-chloro-4-ethylamino-6-isopropylamino | | |
| -s-triazine..... | 85.5% | |
| Related Triazines..... | 4.5% | |
| Inert Ingredients | 10.0% | |
| | TOTAL | <u>100.0%</u> |

ATRAZINE 90 DF CONTAINS 4.25 LBS ACTIVE INGREDIENT PER GAL.

KEEP OUT OF REACH OF CHILDREN

C A U T I O N

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA EST. No. 33660-IT-1

EPA REG. No: 33660-25

NET CONTENTS

I.P.I.C.I. - INDUSTRIA PRODOTTI CHIMICI, S.p.A. - NOVATE MILANESE

ITALY

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PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Avoid contact with eyes, skin or clothing. Users are required to wear long sleeve shirts and long pants or equivalent, chemical resistant gloves, and boots (waterproofed). In addition, persons involved in mixing/loading operations are required to use chemical resistant rubber or neoprene gloves and a face shield or goggles. Wash thoroughly after handling and before eating or smoking. Remove and wash contaminated clothing before reuse.

Statement of Practical Treatment

If swallowed - Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of Ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

If inhaled - Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

If on skin - Wash with plenty of soap and water. Get medical attention.

If in eyes - Flush eyes with plenty of water. Get medical attention if irritation persists.

Note to Physician: There is no specific antidote for atrazine. If this product is ingested, induce emesis or lavage stomach. The use of aqueous slurry of activated charcoal may be considered.

Environmental Hazards

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water or wetlands. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. Atrazine can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply Atrazine to sand and loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

This product may not be mixed/loaded, or used within 50 feet of all wells including abandoned wells, drainage wells, and sink holes.

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DIRECTIONS FOR USE

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

See accompanying Technical Bulletin for Use of Atrazine 90 DF for complete directions. READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING.

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

Storage and Disposal

Storage: Store in original container in well ventilated and dry storage area. Keep in shaded area and away from excessive heat.

Pesticide disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water, food or feed by storage or disposal.

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.