

## **SORGHUM - PREEMERGENCE IN FURROW-IRRIGATED BEDDED SORGHUM (AZ AND CA ONLY)**

### General Information

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through [www.atrazine-watershed.info](http://www.atrazine-watershed.info) or 1-866-365-3014. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact ADAMA for a refund.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

Sale, use and distribution of this product in Nassau and Suffolk Counties in the state of New York is prohibited.

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

### GENERAL INFORMATION

This herbicide controls many annual broadleaf and grass weeds in corn, sorghum, sugar cane, and certain other crops specified on this label. This product may be applied before or after weeds emerge.

Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported which cannot be effectively controlled by this and related herbicides. Where this is known or suspected and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of this product in combinations or in sequence with other registered herbicides which are not triazines. If only resistant biotypes are expected to be present, use a registered non-triazine herbicide. Consult your state agricultural extension service for specific recommendations.

Since this product acts mainly through root absorption, its effectiveness depends on moisture to move it into the root zone. If weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control.

This product is noncorrosive to equipment and metal surfaces, is nonflammable, and has low electrical conductivity.

Avoid using near adjacent desirable plants or in greenhouses or injury may occur.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap as crop injury may result.

Where the use directions give a range of rates, use the lower rate in coarse-textured soil and soil low in organic matter; use the higher rate on fine textured soil and soil high in organic matter.

ADAMA does not recommend applications in combination with other herbicides or oils except as specifically described on the label or in literature published by ADAMA.

When tank mixing or sequentially applying atrazine or products containing atrazine to corn or sorghum, the total lbs. of active ingredient per acre must not exceed 2.5 lbs. active ingredient (or 5 pts. of this product) per acre per year.

When tank mixing or sequentially applying atrazine or products containing atrazine to crops other than corn or sorghum, the total pounds of atrazine applied (lbs. a.i. per acre) must not exceed the specific seasonal rate limits as noted in the use directions for each crop. When an adjuvant is to be used with this product, ADAMA suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

#### RESISTANCE MANAGEMENT

Atrazine 4L is a Group 5 Herbicide (contains the active ingredient atrazine).

Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported to which cannot be effectively controlled by this and related herbicides. Where this is known or suspected and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of this product in combinations or in sequence with other registered herbicides which are not solely a Group 5 Herbicide. If only resistant biotypes are expected to be present, use a

registered herbicide which is not solely a Group 5 Herbicide. Consult with your state Agricultural Extension Service for specific recommendations.

## APPLICATION PROCEDURES

Ground application: Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and are the same size. Calibrate sprayer before use and recalibrate at the start of each season and when changing carriers.

Unless otherwise specified, use a minimum of 10 gals. of spray mixture per acre for all preplant incorporated, preplant surface, preemergence, and postemergence applications (with or without oil or surfactant) with ground equipment.

Use a pump with capacity to: (1) maintain 35 - 40 psi at nozzles, (2) provide sufficient agitation in tank to keep mixture in suspension, and (3) to provide a minimum of 20% bypass at all times. Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product.

The pump should provide a minimum of 10 gal./minute/100 gals. tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

Aerial application: Use aerial application only where broadcast applications are specified. Apply in a minimum of 1 qt. of water for each qt. of this product applied per acre. For postemergence treatments on corn and sorghum, apply recommended rate in a minimum of 2 gals. of water per acre.

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

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

Application in water or liquid fertilizer: Nitrogen solution or complete liquid fertilizer may replace all or part of the water as a carrier for preemergence, preplant

incorporated, or preplant surface ground application on corn and sorghum. Check the compatibility of this product with liquid fertilizer and/or nitrogen solution as shown below before use. Do not apply in nitrogen solution or complete liquid fertilizer after corn or sorghum emerges or crop injury may occur.

Compatibility Test: Since liquid fertilizers can vary always check compatibility with herbicide(s) each time before use. Be especially careful when using complete suspension or fluid fertilizers as serious compatibility problems are more likely to occur. Commercial application equipment may improve compatibility in some instances. The following test assumes a spray volume of 25 gals. per acre. For other spray volumes, make appropriate changes on the ingredients. Check compatibility using this procedure:

- Add 1 pt. of fertilizer to each of 2 one-qt. jars with tight lids.
- To one of the jars, add 1/4 tsp. or 1.2 milliliters of a compatibility agent approved for this use such as Compex or Unite (1/4 tsp. is equivalent to 2 pts./100 gals. spray). Shake or stir gently to mix.
- To both jars, add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

Dry herbicides: For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

Liquid herbicides: For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.

- After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix.

Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film in the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) slurry the dry herbicide(s) in

water before addition, or (B) add ½ of the compatibility agent to the fertilizer and the other ½ to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If incompatibility is still observed, do not use the mixture.

Application in water plus emulsifiable oil or oil concentrate: Adding emulsifiable oil (petroleum-derived, petroleum-derived oil concentrate, or single or mixed crop-derived oil concentrate) to postemergence water-based sprays in corn and sorghum may improve weed control. However, under certain conditions, the use of either type of oil may seriously injure the crop. To minimize this possibility, observe the following directions:

Use one of the following properly emulsified:

- A suitable oil concentrate containing a least 1%, but not more than 20% suitable emulsifier or surfactant blend.
- Petroleum-derived oil containing at least 1% suitable emulsifier.

In the event of a compatibility problem when mixing oil with this product and water, a compatibility agent such as Compex or Unite should be used.

Any of the above oils contaminated with water or other materials can cause compatibility problems and/or crop injury.

Mixing Procedures – All Uses: (1) Be sure sprayer is clean and not contaminated with any other materials or crop injury or sprayer clogging may result. (2) Fill tank 1/4 full with clean water, nitrogen solution, or complete liquid fertilizer. (3) Start agitation. (4) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (5) Pour product directly from container into tank. (6) Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. (7) Add emulsifiable oil, oil concentrate, or tank mix herbicide( s) after this product is thoroughly suspended. (8) Finish filling tank. (9) Empty tank as completely as possible before refilling to prevent buildup of oil or emulsifiable concentrate residue. Maintain agitation to avoid separation of materials. (10) If an oil or emulsifiable concentrate film starts to build up in the tank, drain it and clean with strong detergent solution or solvent. (11) Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent.

Rotational Crops – All Uses: (1) Do not rotate to any crop except corn or sorghum

until the following year or injury may occur. (2) If applied after June 10, do not rotate with crops other than corn or sorghum the next year or crop injury may occur. (3) In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use 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. (4) In eastern parts of the Dakotas, KS, western MN, and NE, do not rotate to soybeans if the rate applied to corn or sorghum was more than 4 pts./A or equivalent band application rate or soybean injury may occur. (5) Injury may occur to soybeans planted the year following application on soils having a calcareous surface layer. (6) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following application or injury may occur.

### Limitations, Restrictions, and Exceptions

#### SORGHUM AND SORGHUM-SUDAN HYBRIDS

Preemergence broadleaf weed control in furrow-irrigated bedded sorghum (AZ and CA only): For preemergence control of many broadleaf weeds, broadcast 1.6 – 2.4 pts./A of this product after bed preparation, during or after planting, but before sorghum and weeds emerge and before the first furrow irrigation. Follow with several regular irrigations, making sure to thoroughly wet all soil.

Precautions for preemergence application to furrow-irrigated bedded sorghum in AZ and CA: To avoid possible sorghum injury, do not use on sand or loamy sand soil or on sorghum planted in furrows. Applications to sorghum growing on alkali soils or where cuts, fills, or erosion 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 replanted immediately.

Precautions: For all applications to sorghum:

- 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.

- Application to sorghum growing under stress caused by minor element deficiency or to sorghum growing on highly calcareous soil may result in crop injury.
- Following harvest, plow (moldboard or disk-plow) and thoroughly till soil in fall or spring to minimize possible injury to spring-seeded rotational crops regardless of rate used.
- Injury may occur if both this herbicide, preplant surface, preplant incorporated, or preemergence, and an at-planting systemic insecticide applied in-furrow are used.
- When tank mixing or sequentially applying atrazine or products containing atrazine to corn or sorghum, the total lbs. of active ingredient per acre must not exceed 2.5 lbs. active ingredient (or 5 pts. of this product) per acre per year.
- Do not apply more than 2.5 lbs. active ingredient (or 5 pts. of this product) per acre per calendar year and do not apply more than 2.0 lbs. active ingredient (or 4 pts. of this product) per acre for any single application.
- For all soil applications prior to crop emergence (except for preemergence use on bedded sorghum in AZ and CA), do not apply to coarse-textured soils, i.e., sand, loamy sand, sandy loam, or to medium- and fine-textured soils having less than 1% organic matter or injury may occur.
- For postemergence applications, do not apply to sand or loamy sand or injury may occur.
- For preemergent sorghum forage uses, allow 60 days between the last application and harvest.
- For postemergent sorghum forage uses, allow 45 days between the last application and harvest.
- Postemergence applications to sorghum must be made before crop reaches 12 inches in height.
- Do not graze or feed forage from treated areas for 21 days following application.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

Pre-Harvest Interval

Sorghum: Do not harvest for forage within 60 days of a pre-emergence application and 45 days of a post-emergent application.

Rates

[field rates 0](#)

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Restricted Entry Interval

12 hours

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Timings

[Preemergence \(Crop\)](#)

[Preemergence \(Weed\)](#)