

# RESTRICTED USE PESTICIDE

This product is a restricted use herbicide due to reproductive and ground and surface water concerns. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for Cyanazine to reach ground and surface water.

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.

ACCEPTED

NOV - 4 1993

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 352-470



# BLADEX® 4L

## Herbicide

### LIQUID

Contains 4 lbs. active ingredient per gallon.

#### ACTIVE INGREDIENTS

#### BY WEIGHT

Cyanazine: 2[[4-chloro-6-(ethylamino)-s-triazin-2-yl]amino]-2-methylpropionitrile ..... 43%

INERT INGREDIENTS ..... 57%

TOTAL ..... 100%

EPA Reg. No. 352-470

### KEEP OUT OF REACH OF CHILDREN

## WARNING

## AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

### STATEMENT OF PRACTICAL TREATMENT

**IF SWALLOWED**, call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**IF IN EYES**, flush with plenty of water. If irritation persists, call a physician

**IF ON SKIN**, wash immediately with plenty of soap and water.

**IF INHALED**, remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth and get medical attention.

For medical emergencies involving this product, call toll free 1-800-441-3637.

### PRECAUTIONARY STATEMENTS

#### HAZARD TO HUMANS AND DOMESTIC ANIMALS

**WARNING!** May be fatal if swallowed. Harmful if inhaled or absorbed through the skin. Causes temporary eye injury.

This product may be hazardous to your health. This product is classified "Restricted Use" because, at doses which caused serious maternal illness in laboratory animals, birth defects were present. Use of protective clothing and equipment and following the precautions below can reduce risk. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Do not get in eyes or on clothing.

Keep out of reach of domestic animals, particularly cattle. Consumption of this product, spray solutions, or water contaminated with product can result in serious illness or possible death of bovines.

### PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

Long-sleeved shirt and long pants

Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or polyvinyl chloride or viton or neoprene rubber.

Chemical-resistant footwear plus socks

Protective eyewear

Chemical-resistant apron when cleaning equipment, mixing or loading.

(continued on next page)

## PRECAUTIONARY STATEMENTS (continued)

### PERSONAL PROTECTIVE EQUIPMENT (continued)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### ENGINEERING CONTROL STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticide: [40 CFR part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### USER SAFETY RECOMMENDATIONS

**USERS SHOULD:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning equipment or disposal of wastes. Cyanazine, the active ingredient in BLADEX has been detected in surface waters that receive run-off from treated areas. To minimize cyanazine run-off, follow the Best Management Practices outlined in the Directions For Use section of this label.

Cyanazine is a chemical which can move (seep or travel) through soil and can contaminate groundwater which may be used as drinking water. Cyanazine has been found in groundwater as a result of agricultural use. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material. Users are advised not to apply BLADEX where the water table (groundwater) is close to the surface and where the soils are very permeable (i.e., well drained soils such as loamy sands). Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

### DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls.

Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or polyvinyl chloride or viton or neoprene rubber.

Shoes plus socks.

## **BEST MANAGEMENT PRACTICES FOR GROUND AND SURFACE WATER PROTECTION**

This product may not be mixed or loaded within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes, and reservoirs. This product may not be mixed, loaded or used within 50 feet of all wells, including abandoned wells, drainage wells, and sinkholes.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash-water, and rain-water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain, at a minimum, 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof or sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

States may have in effect additional requirements regarding well-head setbacks and operational area containment.

This product may not be applied aerially or by ground within 66 feet of the points where field surface water run-off enters perennial or intermittent streams and rivers or within 200 feet of natural or impounded lakes and reservoirs. This product may only be applied to highly erodible land if the 66 foot buffer or set-back from run-off points is planted to crop or seeded with grass.

**Cyanazine Rate Limits:** One quart of BLADEX 4L contains 1.0 lb cyanazine active ingredient (a.i.). Adhere to the use rate recommendations in this or other label. In addition:

- a. Do not apply more than 6.5 lbs. total cyanazine a.i. (all sources) per acre per year to any land.
- b. On highly erodible land, as defined by the Soil Conservation Service, if plant residue cover is less than 30%, do not apply more than 3.0 pounds total cyanazine a.i. (all sources) per acre per year.

Where there are state/local requirements regarding cyanazine use (including lower maximum rates and/or higher setbacks) which are different from the label, the more restrictive/protective requirements apply.

## **GENERAL INFORMATION**

BLADEX 4L Herbicide is a selective herbicide for the control of annual grasses and broadleaved weeds in field corn, popcorn, sweet corn, cotton and grain sorghum.

Consult your local Agricultural Extension Agent for help in determining soil texture, organic matter content, and the most appropriate herbicide rate for local conditions.

Do not apply this product in irrigation water with any kind of irrigation system.

Do not apply this product with aerial application equipment.

BLADEX 4L is not effective when used preemergence on peat or muck soils. Do not use BLADEX 4L on sands or loamy sands (soils consisting of more than 70% sand) containing less than 1% organic matter.

**Weather Effects:** As a preemergence herbicide, BLADEX 4L is active mainly through the roots, and therefore, its effect on weeds is dependent on adequate rainfall or sprinkler irrigation to move the herbicide into the root zone. Moisture should be sufficient to thoroughly wet the soil throughout the zone where weed seeds may germinate and enough to make the soil too wet to cultivate. Rotary hoeing or shallow cultivation is recommended for those applications which are not incorporated at the time of treatment, if adequate rainfall or sprinkler irrigation has not occurred within about ten days after application of BLADEX 4L.

Heavy rainfall between planting and crop emergence may cause crop injury or stand loss. Rainfall tends to cause excessive concentrations of herbicide in the seed furrow, resulting in possible crop injury. Level deep planter marks or seed furrows before application.

Under conditions which delay weed germination, such as low temperatures, lack of soil surface moisture, or when germination extends over a long period, the effectiveness of the herbicide may be impaired. Rotary hoeing, shallow cultivation or a postemergence herbicide treatment may be of benefit under these circumstances.

If the crop is cultivated, tillage should be shallow to minimize herbicide dilution in the soil. Should the crop stand be lost due to adverse weather conditions, insects, etc., the field can be replanted the same season to corn or sorghum.

To enhance weed control in areas of less than 25 inches of rainfall or where long dry periods are common, these treatments may require shallow incorporation with a tool such as a field cultivator operated from 5-7 mph. Incorporation should not be more than three inches deep to keep from burying the herbicide. A spike-toothed harrow, deep tillage disk or rolling basket device is not recommended for incorporating BLADEX.

When applied as a post-emergence herbicide, BLADEX 4L is also active through foliage as well as through the roots. Yellowing and/or stunting of the crop may result from this treatment, particularly if cold, adverse growing conditions occur after application. Extended or extreme cold and wet conditions may reduce stands. Do not apply BLADEX postemergence to a crop that is damaged or growing under stress.

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**OBSERVE ALL CAUTIONS AND LIMITATIONS ON LABELING OF ALL PRODUCTS USED IN MIXTURES.**

**Triazine Resistant Weeds:** In fields where triazine resistant biotypes of weeds have been identified, BLADEX should be used in combination with or in sequence with other registered non-triazine herbicides. (Triazine resistant biotypes of kochia and pigweed have been identified in some fields in the Western Great Plains and triazine resistant biotypes of pigweed and lambsquarters have been identified in some fields in various states.) Consult with appropriate state agricultural extension service representatives for specific recommendations.

**APPLICATION DIRECTIONS**

**GENERAL MIXING AND SPRAYING INSTRUCTIONS**

This product may not be applied by means of chemigation or aerial application.

Use sufficient agitation to ensure that the BLADEX 4L is completely dispersed and in uniform suspension prior to application or tank mixing with other formulations.

The following general mixing instructions are recommended when using this or any other liquid suspension formulation.

**I. GENERAL**

- 1. Unless otherwise specified, use at least 7.5 gallons of water per acre for soil applications and at least 15 gallons of water per acre for foliar applications for all applications with ground equipment.

**NOTE:** Sufficient carrier must be used to assure uniform application. Follow label requirement of all products used in tank mix combinations.

- 2. A nitrogen solution or complete liquid fertilizer may replace all or part of the water as a carrier for preemergence or preplant application. Do not apply fertilizer mixtures after crop emerges, because injury may occur.
- 3. Always check the tank mix compatibility (TMC) of this or any other formulation before mixing with liquid fertilizer carriers or other formulations. A simple but generally reliable TMC evaluation procedure has been provided for your use in step II of these mixing instructions.
- 4. Start with thoroughly clean equipment. (See the label of previous compound used for cleaning instructions.)
- 5. Fill tank 1/2 full with carrier. Start and maintain consistent agitation through all mixing and spraying procedures. Make sure that the agitation system is working properly and creates a rippling or rolling action on the liquid surface.
- 6. Add the BLADEX 4L to the tank with agitation.
- 7. Fill tank to 75 percent capacity with carrier. Filling and bypass lines should be kept below liquid surface. Increase tank agitation if necessary to maintain surface action.
- 8. When desired, appropriate emulsible oil, oil concentrate, or other tank mix formulations should be added at this time. Pre-slurry these added ingredients before addition, if the compatibility test shows it to be necessary.

- 9. Complete filling tank maintaining sufficient agitation at all times to ensure surface action. This applies to both spray and nurse tanks.
- 10. Tank mixtures should always be applied immediately after preparation. If for any reason this is not possible, assure that sufficient agitation has been provided to re-mix all products and check for complete resuspension prior to application.
- 11. Empty tank as completely as possible before refilling to prevent buildup of oil or emulsible concentrate residues when tank mixing with these formulations. Always maintain agitation to avoid separation.
- 12. If an oil or emulsible concentrate film starts to build up after using these formulations, drain and clean the tank with strong detergent solution or appropriate solvent.
- 13. It is recommended that the sprayer be thoroughly cleaned by flushing with a detergent solution at the end of each work day when any emulsible oil, oil concentrate, or other emulsible formulation has been used either alone or in tank mix combinations with other pesticide formulations, even if no obvious problems have been encountered. This precaution will ensure a clean sprayer and continued trouble-free operation.

**II. TANK MIX COMPATIBILITY EVALUATION PROCEDURE**

- 1. Add one pint of carrier liquid to each of two one-quart jars. Mark one quart jar "with" and the other "without."
- 2. Add 1/4 teaspoon of a suitable tank mix compatibility agent (1/4 teaspoon/pint = 2 pints/100 gallons of carrier) to the jar marked "with," cap the jar, and shake gently for five to ten seconds to mix.
- 3. Add the appropriate amount of herbicide to both jars, cap each jar, and shake gently for five to ten seconds to mix. If problems are encountered in mixing wettable powder or dry flowable formulations into a liquid fertilizer, then pre-slurry these formulations in water prior to their addition to the liquid fertilizer and proceed with the test. The following chart has been provided to assist you in selecting the appropriate BLADEX 4L use rate for this evaluation. If more than one herbicide is to be used in the tank mixture, each should be added separately as follows: water solubles first, wettable powders or dry flowables second, liquid flowables third, and emulsible concentrate or oil formulations last, with each jar capped and gently shaken for five to ten seconds for each addition.

**JAR TEST FOR "BLADEX" 4L COMPATIBILITY**

Gallons of Liquid		4	7.5	15	20	25	30	40
Carrier per Acre	4	7.5	15	20	25	30	40	
Teaspoons of								
BLADEX 4L		6.0	3.2	1.6	1.2	1.0	0.8	0.6
per Pint of								
Liquid Carrier								

This chart is based on one quart of BLADEX 4L (1 pound active ingredients) per acre in the indicated carrier volumes. Intended field use rates are achieved by varying the amount of BLADEX 4L; i.e., for a field use rate of 2.5 quarts of BLADEX 4L in 15 gallons of carrier per acre, add 4 teaspoons of BLADEX 4L to the quart jar.

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containing one pint of carrier. Calculation: For 2.5 quarts of BLADEX 4L/15 gallons of carrier per acre, multiply 2.5 X 1.6 to get 4 teaspoons of BLADEX 4L per pint of carrier.

4. Let each jar stand one-half hour and make observations. If any separation, agglomeration, or precipitation has occurred, shake the jar again for 10 to 15 seconds, and note whether any of the following occur: a. Separated phases do not re-mix uniformly. b. Screen/nozzle plugging lumps do not disperse. c. Precipitate does not re-suspend readily. d. Precipitate sticks tenaciously to the glass.
5. If none of the above problems occur in either jar, then the herbicides can, in most cases, be safely used without a compatibility agent.
6. If problems 4.a or 4.b occur in the jar marked "without" but do not occur in the jar marked "with," the compatibility agent should be used.
7. If problems 4.a or 4.b are seen in both jars, then the herbicides and carrier mixture are incompatible and should not be used in the same spray tank. Alternatively, a different tank mix compatibility agent can be evaluated.
8. If problems 4.c or 4.d occur in the jar marked "without" but do not occur in the jar marked "with," the compatibility agent should be used unless constant, thorough agitation can be maintained and immediate clean-out of spray system is performed.
9. If problems 4.c and 4.d are seen in the jar marked "with," the user proceeds with mixing and application at his own risk should agitation in the system be insufficient or curtailed.
10. Those mixtures defined as compatible in this test should then be mixed for use as indicated in steps 1-12 of the general mixing instructions listed above.

If a test such as outlined indicates that components of a proposed mix are compatible, the applicator still has the responsibility of combining materials in sequence to the spray tank in accordance with directions prescribed on the label of the herbicides or pesticides involved.

Tests have indicated that compatibility agents, noted below by the various tank mix combinations, may give improved compatibility in liquid fertilizers.

Tank Mix Combination	Compatibility Agents
"BLADEX" 4L /"LASSO" (Liquid Fertilizer Grade)	Probably not needed in 28-0-0, 10-34-0. "Complex" may help in others.
"BLADEX" 4L /"SUTAN+" 6.7E	Probably not needed in 28-0-0. Incompatible in 10-34-0. "Unite", "Spray-Mate", "Kem-Link", may help in others.
"BLADEX" 4L /"DUAL" 8E	Probably not needed in 28-0-0. "Unite", "Spray-Mate", "Ivory Liquid" may help in others.

### III. APPLICATION EQUIPMENT

1. Use application equipment fitted with nozzles that provide accurate and uniform coverage. Be certain that nozzles are uniformly spaced and the same size. Calibrate sprayer before use and recheck frequently during use whenever possible.
2. Use a pump with capacity to:
  - a. Maintain 35-40 psi at nozzles.
  - b. Provide sufficient agitation in tank to keep mixture in suspension.
  - c. Provide a minimum of 20 percent bypass at all times.
3. Use centrifugal pumps which provide sufficient shear action for dispersing and mixing this product. The pump should provide a minimum of 10 gallons/minute/100-gallon tank size circulated through the jets of a correctly-positioned sparger tube.
4. Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on suction side of pump should be 10 to 16 mesh. Do not place a screen in the recirculation line. Use a 40- to 50-mesh screen between the pump and boom and, where required, 50-mesh screens at the nozzles. Check your equipment manufacturer's literature for specific recommendations.

### FERTILIZER IMPREGNATION

BLADEX 4L Herbicide may be applied when coated on or impregnated in dry granular fertilizer for early preplant, preemergence or preplant incorporated weed control in field corn. All recommendations, cautions and special precautions on this label must be followed along with state regulations relating to dry bulk fertilizer blending, impregnating and labeling. Also, follow the precautions on the label of any product mixed with this product.

#### General Blending Directions

BLADEX 4L may be coated on or impregnated in dry bulk fertilizers using tower blenders, rotary drum blenders or blending augurs or conveyors. **DO NOT** impregnate BLADEX or tank mixes containing BLADEX on or in fertilizers containing Ammonium Nitrate, Potassium Nitrate, or Sodium Nitrate. Do not use on straight limestone since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated when using BLADEX alone. Use a minimum of 200 lbs. and a maximum of 450 lbs. per acre of dry fertilizer.

Use equipment that will give a uniform distribution of the herbicide throughout each batch of impregnated fertilizer. Non-uniform impregnation can cause crop injury or unsatisfactory performance.

- A. BLADEX 4L may be used as the only herbicide for impregnation.
  1. Add BLADEX 4L when at least 1/2 the total fertilizer volume required is in the mixer. A minimum of 200 lbs per acre of an approved fertilizer should be used.
  2. BLADEX 4L can be moved from the chemical holding tank to the mixer by using an air system or a liquid pump with a hose at least 1 inch in diameter.

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3. Position the spray nozzles to achieve uniform coverage of the BLADEX 4L on the dry fertilizer without spraying the walls of the mixer.
4. Flush the spray lines with water and spray onto the dry fertilizer.
5. Add remaining fertilizer, plus drying agents when necessary, and blend thoroughly for at least three minutes.
6. Add 2-5% of a suitable drying agent to insure a herbicide/fertilizer mixture that will spread through air spreaders. The need for a drying agent is determined by the wetness of the fertilizer batch. Wetness can change with humidity, nitrogen content, fertilizer rates and herbicide rates.

**B. BLADEX 4L may be used in tank mixes with other herbicides.**

1. While fertilizer is blending, add the BLADEX 4L first and the tank mix fertilizer last.
2. Add any necessary drying agent to insure a spreadable herbicide/fertilizer mixture and blend thoroughly for at least three minutes.
3. Follow the other appropriate use instructions found in Section A for use with BLADEX 4L tank mixes.

(For more information on Drying Agents, Application Equipment, Calibration Guide and variations of these methods, see Du Pont Bulletin on "Fertilizer Impregnation").

**CLEAN OUT:**

Equipment used to impregnate or apply fertilizer impregnated with BLADEX or combinations including BLADEX must be cleaned out by running at least 1,000 lbs. of fertilizer not impregnated with BLADEX through the impregnation equipment and application equipment, if the next batch of material is to be applied to a crop for which BLADEX or a combination herbicide is not registered.

**APPLICATION:**

Uniform application of BLADEX 4L which has been impregnated in or coated on dry fertilizer is essential for satisfactory weed control and crop safety. Accurate calibration of the fertilizer applicator is necessary. Applying while turning at the ends of the fields may result in excessive application rates causing crop injury. Do not double apply across the ends or sides of the field.

Crop injury and/or poor weed control may occur where the impregnated fertilizer is not uniformly applied. Air flow or auger metered application equipment is preferred (one pass application). If other equipment is used, the recommended method of application is to apply 1/2 the recommended rate and overlap 50 percent to double apply by splitting the middles to obtain the best distribution pattern.

Apply immediately after impregnation. Impregnated fertilizer may become lumpy and difficult to spread if stored.

**RATES AND TIMING:**

Use the application rates and timing shown in the appropriate sections of this label. Follow the precautions on the labels of all products used.

**CORN**

**WEEDS CONTROLLED BY BLADEX 4L ALONE AND IN COMBINATION WITH OTHER HERBICIDES ON CORN**

**Grasses**

Annual bluegrass	Bullgrass	Junglerice
Annual fescues	Crabgrass	Stinkgrass
Annual (Italian) ryegrass	Fall panicum	(Indian lovegrass)
Annual sedge	Giant foxtail	Witchgrass
Barnyardgrass(1)	Goosegrass	Yellow foxtail
	Green foxtail	

**Broadleaves**

Annual groundcherry	Florida pusley	Ragweed (Common)
Annual morningglory	(Florida purslane)	Russian thistle
Black mustard	Hedge mustard	Shepherdspurse
Buffalobur	Jimsonweed(1)	Smallflower galinsoga
Buttercup (annual)	Kochia	Smartweed
Carperweed	Ladysthumb	(Pennsylvania)
Cocklebur(2)	Lambsquarters	Sunflower(2) (wild, annual, common)
Common chickweed	Mayweed	Tarweed cuphea
Common groundsel	Nightshade (annual)	(Gumweed)
Common mallow	Pigweed(1)	Velvetleaf(1)
Common purslane	Pineappleweed	Wild buckwheat
Corn spurry	Plantain	Wild mustard
Curly dock (seedling)	Poorjoe	Wild radish
Fiddleneck	Prickly sida (teaweed)	Wild turnip
	Prostrate knotweed	
	Prostrate spurge	

(1) Under conditions such as low temperatures, lack of soil surface moisture or other factors that may cause delay in germination of the seeds, the effectiveness of BLADEX may be impaired against these weeds.

(2) The degree of control will be reduced is soil moisture and temperature conditions cause deep germination of the seed.

**CORN**

**PREEMERGENCE-  
PREPLANT INCORPORATED**

Apply BLADEX treatments just before, at or after planting but before crop has emerged. Avoid removal of treated soil from seedrow prior to or during the planting operation.

BLADEX may also be applied early prior to planting or in a split application if pre-season weed control is desired. For split applications, do not exceed the total amount of BLADEX for the soil texture and organic matter shown in Table 1. If BLADEX is applied early, more than 15 days before planting, a split application of BLADEX or some other herbicide treatment may be necessary at or after planting to provide additional length of weed control. For further information see "Early Preplant" recommendations in the Conservation Tillage section of this label.

Rotary hoeing is recommended for preemergence applications which do not receive adequate rainfall or sprinkler irrigation to wet the top 2 inches of soil or depth of germinating weeds within about 10 days after application.

BLADEX alone or in tank mix combinations should not be incorporated more than three inches deep to keep from burying the herbicide. Single or two pass incorporation with a tool such as a field cultivator operated at 5-7 mph is acceptable. A spike-toothed harrow, deep tillage disk or rolling basket device is not recommended for incorporating BLADEX.

### BLADEX Applied Alone

Use the proper rate for the soil texture and organic matter indicated in Table 1. Any rotational crop may be planted in the fall or spring following this treatment.

### BLADEX COMBINATIONS

#### BLADEX plus Atrazine

Use BLADEX 4L plus atrazine at the proper rate for soil texture and organic matter indicated in Tables 2 and 3. These tables provide rates for generally weedy conditions. The ratio of the amounts of each herbicide may be adjusted as necessary for particular weed conditions as long as the combined rate of the two products does not exceed the combined rate for the soil shown in Table 2 or 3. For grassier conditions use a ratio that contains higher levels of BLADEX (3:1). For fields with more broadleaves use a ratio that contains higher levels of atrazine (1:1).

Rotational Crops:(1) Plant only corn, peanuts, sorghum, or soybeans the year following the use of this mixture. (2) If soybeans are to be planted, injury may occur due to the carryover of atrazine. (3) If applied after June 10, do not rotate with crops other than corn or sorghum the next year or injury may occur. (4) 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 be planted the following year, or a crop of corn or sorghum not treated with atrazine is to precede other rotational crops. (5) Small grains may be planted 15 months following treatment. (6) All other crops may be planted 18 months after application.

For all states except Kentucky, Missouri, Tennessee and Kansas east of Highway 99 use Table 2.

In Kentucky, Missouri, Tennessee and Kansas east of Highway 99 use Table 3.

**TABLE 1**

#### PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR "BLADEX" 4L APPLIED ALONE ON CORN

Soil Texture Description	Quarts of BLADEX 4L** Percent Organic Matter in Soil*					
	Less than 1%	1%	2%	3%	4%	5% & Over
Sand, Loamy sand	DO NOT USE	1.25	1.5	2.25	2.75	3.25
Sandy loam	1.25	1.75	2.0	2.5	3.0	3.5
Loam, Silt loam, Silt	1.5	2.0	2.5	3.0	3.5	4.0
Sandy clay loam, Clay loam, Silty clay loam	2.0	2.5	3.0	3.5	4.0	4.5
Sandy clay, Silty clay, Clay	2.75	3.0	3.5	4.0	4.5	4.75
Peat or Muck	NOT RECOMMENDED					

\*For organic matter content between those listed, adjust the rate proportionately.

\*\* Maximum rate limit per acre per year for all applications is 6.5 lbs. cyanazine (6.5 quarts BLADEX 4L) except on highly erodible land with less than 30% plant residue cover, the rate limit is 3.0 lbs. cyanazine (3.0 quarts BLADEX 4L).

**TABLE 2**

#### PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR TANK-MIX COMBINATIONS OF "BLADEX" 4L PLUS ATRAZINE 4L ON CORN

FOR USE IN ALL STATES EXCEPT KENTUCKY, MISSOURI, TENNESSEE AND KANSAS EAST OF HIGHWAY 99

Soil Texture Description	Quarts of BLADEX 4L*** + Quarts of Atrazine 4L** Percent Organic Matter in Soil*					
	Less than 1%	1%	2%	3%	4%	5% & Over
Sand, Loamy sand	DO NOT USE	0.8+0.5	1.0+0.5	1.5+0.5	1.8+0.8	2.25+1.0
Sandy loam	0.8+0.5	1.0+0.5	1.5+0.5	1.8+0.8	2.25+1.0	2.75+1.25
Loam, Silt loam, Silt	1.0+0.5	1.5+0.5	2.0+0.8	2.25+1.0	2.75+1.25	3.25+1.25
Sandy clay loam, Clay loam, Silty clay loam	1.5+0.5	2.0+0.8	2.25+1.0	2.75+1.25	3.25+1.25	3.50+1.25
Sandy clay, Silty clay, Clay	2.0+0.8	2.25+1.0	2.75+1.25	3.25+1.25	3.5+1.25	3.75+1.5
Peat or Muck	NOT RECOMMENDED					

\*For organic matter content between those listed, adjust the rate proportionately.

\*\*If Atrazine 80W is used, multiply rates shown by 1.25 to equal pounds of Atrazine 80W. If Atrazine 90% is used, multiply rates shown by 1.11 to equal pounds of Atrazine 90%.

\*\*\* Maximum rate limit per acre per year for all applications is 6.5 lbs. cyanazine (6.5 quarts BLADEX 4L) except on highly erodible land with less than 30% plant residue cover, the rate limit is 3.0 lbs. cyanazine (3.0 quarts BLADEX 4L).

**TABLE 3****PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE  
FOR TANK-MIX COMBINATIONS OF "BLADEX" 4L PLUS ATRAZINE 4L ON CORN****FOR USE ONLY IN ALL KENTUCKY, MISSOURI, TENNESSEE AND KANSAS EAST OF HIGHWAY 99**

Soil Texture Description	Quarts of BLADEX 4L*** + Quarts of Atrazine 4L**					
	Percent Organic Matter in Soil*					
	Less than 1%	1%	2%	3%	4%	5% & Over
Sand, Loamy sand	DO NOT USE	0.8+0.5	1.0+0.5	1.5+0.6	1.8+0.8	2.25+1.0
Sandy loam	0.8+0.5	1.4+0.7	1.6+0.8	1.8+0.9	2.2+1.1	2.8+1.3
Loam, Silt loam, Silt	1.4+0.7	2.0+1.0	2.2+1.1	2.4+1.2	2.8+1.3	3.25+1.3
Sandy clay loam, Clay loam, Silty clay loam	1.6+0.8	2.2+1.1	2.4+1.2	2.8+1.3	3.25+1.3	3.5+1.4
Sandy clay, Silty clay, Clay	2.0+1.0	2.4+1.2	2.8+1.3	3.25+1.3	3.5+1.4	3.75+1.5
Peat or Muck	NOT RECOMMENDED					

\*For organic matter content between those listed, adjust the rate proportionately.

\*\*If Atrazine 80W is used, multiply rates shown by 1.25 to equal pounds of Atrazine 80W. If Atrazine 90% is used, multiply rates shown by 1.11 to equal pounds of Atrazine 90%.

\*\*\* Maximum rate limit per acre per year for all applications is 6.5 lbs. cyanazine (6.5 quarts BLADEX 4L) except on highly erodible land with less than 30% plant residue cover, the rate limit is 3.0 lbs. cyanazine (3.0 quarts BLADEX 4L).

**BLADEX plus LASSO 4EC**

Use BLADEX 4L at the proper rate for the soil texture and organic matter shown in Table 4 plus 2 quarts per acre of LASSO. (Use 2.5 quarts of Lasso on clay soils containing 5 percent organic matter and over.) Any rotational crop may be planted the fall or spring following this treatment.

**BLADEX plus Sutan+ 6.7E or ERADICANE 6.7E**

Use BLADEX 4L at the proper rate for the soil texture and organic matter shown in Table 4 plus 1.8 quarts per acre of SUTAN+ or ERADICANE for control of many annual grasses and broadleaf weeds. (Use 2.4 quarts of SUTAN+ or ERADICANE on loam soils containing 5 percent or more organic matter, and on clay loams and clays containing 4 percent or more organic matter.) Do not use on sands and loamy sands having less than 1 percent organic matter in the

light sandy soils of eastern coastal states. Do not use on corn seed stock.

Apply before planting. Incorporate the mixture immediately after application using power-driven cultivation equipment set for 2-3 inches in depth, or a tandem disc set to cut to a depth of about 4 inches while operating at 4-6 mph. For thorough mixing, disc in two directions (cross disc), and follow with a harrow, drag, or other leveling device. Prior to the second disking, readjust the disc to prevent cutting deeper than 4 inches. BLADEX 4L may be applied preemergence as an overlay over previously incorporated SUTAN+ or ERADICANE. Any rotation crop may be planted in the fall or spring following these treatments.

Existing stands of quackgrass, purple and yellow nutsedge must be turned under and thoroughly chopped up prior to chemical

**TABLE 4****PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR "BLADEX" 4L USED IN TANK-MIX COMBINATIONS WITH "LASSO", "SUTAN+", "ERADICANE", OR "DUAL" ON CORN**

Soil Texture Description	Quarts of BLADEX 4L***					
	Percent Organic Matter in Soil*					
	Less than 1%	1%	2%	3%	4%	5% & Over
Sand, Loamy sand	0.6**	0.75	1.25	1.5	1.75	2.0
Sandy loam	0.75	1.25	1.5	1.75	2.0	2.25
Loam, Silt loam, Silt, Sandy clay loam,	1.25	1.5	1.75	2.0	2.25	2.5
Clay loam, Silty clay loam	1.5	1.75	2.0	2.25	2.5	2.75
Sandy clay, Silty clay, Clay	1.75	2.0	2.25	2.5	2.75	3.0
Peat or Muck	NOT RECOMMENDED					

\*For organic matter content between those listed, adjust the rate proportionately.

\*\*Do not use in the light sandy soils of the Atlantic Coastal Plain.

\*\*\* Maximum rate limit per acre per year for all applications is 6.5 lbs. cyanazine (6.5 quarts BLADEX 4L) except on highly erodible land with less than 30% plant residue cover, the rate limit is 3.0 lbs. cyanazine (3.0 quarts BLADEX 4L).



TABLE 5

**PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR "BLADEX" 4L PLUS ATRAZINE 4L USED IN TANK-MIX COMBINATIONS WITH "LASSO", "SUTAN+", "ERADICANE", OR "DUAL" ON CORN**

Soil Texture Description	Quarts of BLADEX 4L + Quarts of Atrazine 4L**					
	Percent Organic Matter in Soil*					
	Less than 1%	1%	2%	3%	4%	5% & Over
Sand, Loamy sand	0.4+0.2**	0.5+0.25	0.75+0.5	1.0+0.5	1.25+0.5	1.25+0.75
Sandy loam	0.5+0.25	0.75+0.5	1.0+0.5	1.25+0.5	1.25+0.75	1.5+0.75
Loam, Silt loam, Silt	0.75+0.5	1.0+0.5	1.25+0.5	1.25+0.75	1.5+0.75	1.75+0.75
Sandy clay loam, Clay loam, Silty clay loam	1.0+0.5	1.25+0.5	1.25+0.75	1.5+0.75	1.75+0.75	2.0+0.75
Sandy clay, Silty clay, Clay	1.25+0.5	1.25+0.75	1.5+0.75	1.75+0.75	2.0+0.75	2.0+1.0
Peat or Muck	NOT RECOMMENDED					

\*For organic matter content between those listed, adjust the rate proportionately.

\*\*Do not use in the light sandy soils of the Atlantic Coast Plain.

\*\*\*If Atrazine 90% is used, multiply rates shown by 1.11 to equal quarts of Atrazine 4L. If Atrazine 80W is used, multiply rates shown by 1.25 to equal pounds of Atrazine 80W.

treatments. Additional weeds controlled by SUTAN+ or ERADICANE combinations:

**Grasses:**

Sandbur	Shattercane (Wild Cane)*
Texas Panicum	Quackgrass (ERADICANE only)
	Wild Proso Millet* (ERADICANE only)

**Perennial Weeds:**

Yellow Nutsedge (Nutgrass)	Purple Nutsedge (Nutgrass)
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\*Suppression only - refer to SUTAN+ or ERADICANE label for appropriate supplemental cultural and tillage practices.

For fields with moderate to heavy infestations of these weeds refer to the SUTAN+ or ERADICANE label for appropriate higher rates.

**BLADEX plus DUAL 8E**

Use BLADEX 4L at the proper rate for soil texture and organic matter shown in Table 4. Use DUAL as follows:

SOIL TEXTURE	BROADCAST RATE PER ACRE FOR "DUAL"
<b>Coarse</b>	
Sand, Loamy sand, Sandy loam	1.25 - 1.5 pints
<b>Medium</b>	
Loam, Silt loam, silt	1.5 - 2.0 pints
<b>Fine</b>	
Sandy clay loam, Silty clay loam, Clay loam, Sandy clay, Silty clay, Clay	1.5 - 2.5 pints

The low end of the rate range should be used for lowest organic matter soils and the rate increased as organic matter increases to a point that soils containing 4 percent organic matter or more require the highest rate shown for that soil texture. Refer to the DUAL label for precautions on rotational crops.

**BLADEX plus Atrazine plus LASSO, SUTAN+, ERADICANE, or DUAL**

Use BLADEX 4L plus atrazine at the proper rate for soil texture and organic matter shown in Table 5. Use LASSO, SUTAN+, ERADICANE, or DUAL according to rates shown in "BLADEX Combinations" in this section of the label. Rotational Crops: Refer to Rotational Crops section of "BLADEX plus Atrazine" in this section of the label.

**CONSERVATION TILLAGE WEED CONTROL**

**Early Preplant (EPP)**

BLADEX 4L may be used for Early Preplant or Preemergence weed control for land going into production of corn under conservation tillage programs. Complete any planned early spring tillage prior to application. Apply herbicide treatment before weeds germinate or before weed seedlings are more than 3 inches tall. Tillage after application may reduce the effectiveness of the herbicide treatment. A nitrogen solution or complete fertilizer solution may replace all or part of the water as a carrier. The spray gallonage and spray boom design must be adequate to give thorough uniform coverage of the weed foliage. Follow label requirements of all products used in tank mix combinations.

**BLADEX alone or in combination with atrazine:** Apply 15 to 30 days prior to planting. Use the proper rate for soil texture and organic matter indicated in Table 1, 2 or 3. Where heavy crop residues exist, the rates shown in Tables 1, 2 or 3 should be increased by 25%.

**BLADEX 4L plus PRINCEP 4L or PRINCEP CALIBER 90 or BLADEX 4L plus Atrazine plus PRINCEP 4L or PRINCEP CALIBER 90:** Apply 30 days or more prior to planting. Use the proper rate of BLADEX 4L or of BLADEX 4L plus Atrazine for the soil texture and organic matter as shown in Table 1, 2 or 3 and add 1 quart/acre of PRINCEP 4L or 1.11 pounds/acre of PRINCEP CALIBER 90.

### **Burndown of Existing Weeds:**

**Combinations with 2,4-D:** Where broadleaf weeds are present at the time of application, add 2,4-D LV Ester at 1-1/3 - 2 pts./A. (6 lbs./gal.) or 2-3 pts./A. (4 lbs./gal.) (or 2,4-D Amine at recommended rates) plus nonionic surfactant at 1 qt./100 gals. of diluted spray, or other suitable surfactant at its recommended rate.

**Combinations with Paraquat Products:** When grasses are present and/or when existing weeds exceed 3 inches in height add 1-2 pts./A. (2 lbs./gal.) or 1.3-2.7 pts./A. (1.5 lbs./gal.) of paraquat. Well established weeds 6 inches tall or taller may not be well controlled.

Apply BLADEX 4L in at least 20 gal./A. of carrier by ground sprayer. (The volume of carrier and the application equipment must be adequate to give a uniform application.) Add Ortho. surfactant at 1-2 qts./100 gals. of diluted spray (or other suitable surfactant at recommended rates) where paraquat is used. Crop oil concentrate or emulsible vegetable oil are not needed where paraquat is used.

Depending upon weather conditions following the EPP application, a postemergence treatment of BLADEX or some other herbicide treatment may be necessary at or after planting to provide additional length of weed control. If desired, 1-1/2-2 pts./A. of DUAL 8E or 2 qts./A. of LASSO 4EC may be tank-mixed with the BLADEX EPP treatment or applied preemergence at planting.

**Rotational Crops:** Refer to Rotational Crops section for each treatment in the Preemergence section of the label.

### **At Planting**

BLADEX 4L applied alone or in combination with atrazine and/or LASSO or DUAL according to the following directions will kill most existing small weeds and suppress many emerged perennial weeds when corn is planted into no-till stalk ground (corn, sorghum), stubble ground (soybean, small grains), and any minimum-till situation. This treatment then provides residual control of annual weeds as in conventional tillage.

Apply BLADEX 4L alone or with other products according to the directions for those treatments in the Preemergence section of the label. Where heavy crop residues exist, the BLADEX rate shown in Tables 1 through 5 should be increased by 25%. Add 0.5-1.0 pt./A. of 2,4-D LV (6 lbs./gal.) or 0.75 to 1.5 pts./A. (4 lbs./gal.) (or 2,4-D Amine at recommended rates). Add the 2,4-D to the spray tank last.

Use a minimum of 15 gals./A. of carrier. Complete spray coverage of the weeds is essential for best performance. Nitrogen solutions and complete liquid fertilizers are the preferred carriers for this treatment because they aid in the burndown of existing weeds. Add nonionic surfactant at 1-2 qts. per 100 gals. of diluted spray, or other suitable surfactant at its recommended rate. If water is used as a carrier, crop oil concentrate may be used as a surfactant. Apply before weeds exceed 3 inches in height. For control of existing alfalfa add 1/3 - 1/2 pt./A. of Banvel to the spray mixture. Apply before the alfalfa exceeds 6 inches in height.

For fields with existing sod grasses such as orchardgrass, bromegrass, rye or timothy, or when very dry conditions exist, or when existing weeds exceed 3 inches in height, add paraquat to the tank mix. Use 2 pts./A. (2 lbs./gal.) or 1.3

pts./A. (1.5 lbs./gal.) of paraquat in combination with BLADEX as described above in this section, except the 2,4-D may be omitted, if desired, and the gallonage should be increased to 20-40 gals./acre to give thorough coverage of the weed growth. Do not apply paraquat in suspension type liquid fertilizer.

### **POSTEMERGENCE**

Under warm, sunny, dry conditions of low humidity and the absence of dew formation at night, BLADEX 4L may be applied postemergence on field corn only. Do not use a surfactant, crop oil, or any other adjuvant. Addition of a surfactant, EV oil, or fertilizer solution is not recommended because moderate to severe injury, including stand loss, may occur.

Do not apply this treatment under cold, wet weather conditions or to corn growing under stress caused by weather, insects, disease, etc. Yellowing of the corn, stunting or stand loss may result from this treatment, particularly if high rainfall or cold, adverse growing conditions occur after application. Do not apply postemergence on popcorn, sweet corn or corn grown for seed.

### **BLADEX Applied Alone**

Use BLADEX 4L at the proper rate for the soil texture and organic matter shown in Table 6 or 7. Use rates shown in Table 6 if BLADEX or EXTRAZINE II have not been applied to the soil this season. Use rates shown in Table 7 if BLADEX or EXTRAZINE II have been applied to the soil this season. This treatment may be used on peat or muck soils for burndown and suppression of existing weeds but will not provide residual control. Apply from crop emergence through the four-leaf stage of corn growth but before weeds exceed about 1-1/2 inches in height. Do not apply over the top of corn if the fifth leaf is visible. Apply in water only. Do not spray emerged corn plants with BLADEX in a liquid fertilizer carrier or in tank mix combinations with EC formulation herbicides.

Any rotational crop may be planted the fall or spring following this treatment.

### **BLADEX COMBINATIONS**

#### **BLADEX plus Atrazine**

Apply as directed in "Postemergence-BLADEX Applied Alone" section of this label. Use an amount of BLADEX 4L plus Atrazine equal to the rate shown in Table 6 or 7 for the proper soil texture and organic matter. To determine the amount of BLADEX 4L to use, multiply the rate in Table 6 or 7 by 0.6. To determine the amount of Atrazine 4L to use, multiply the rate indicated in Table 6 or 7 by 0.4. (Multiply by 0.5 for pounds of Atrazine 80W.) (For the 2.0 qts./A. rate shown in Table 6 or 7, use 1.2 qts./A. of BLADEX 4L plus 0.8 qts./A. of Atrazine 4L or 1.0 lbs./A. of Atrazine 80W.)

**Rotational Crops:** See Rotational Crops section in the "Preemergence-BLADEX plus Atrazine" section of this label.

**TABLE 6**

**POSTEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR "BLADEX" 4L ON FIELD CORN  
NO PRIOR APPLICATION OF "BLADEX", OR "EXTRAZINE" II**

Soil Texture	Quarts of BLADEX 4L			
	Percent Organic Matter in Soil*			
	Less than 1%	1%	2%	Over 2%
Sand, Loamy sand	DO NOT USE	1.1	1.5	2.0
Sandy loam	1.1	1.5	2.0	2.0
Loam, Silt loam, Silt	1.5	2.0	2.0	2.0
All other textures	2.0	2.0	2.0	2.0

\*For organic matter content between those listed, adjust the rate proportionately.

**TABLE 7**

**POSTEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR "BLADEX" 4L ON FIELD CORN  
"BLADEX", OR "EXTRAZINE" II USED IN PRIOR APPLICATION**

Soil Texture	Quarts of BLADEX 4L***			
	Percent Organic Matter in Soil*			
	Less than 1%	1%	2%	Over 2%
Sand, Loamy sand	DO NOT USE	DO NOT USE	1.3	1.3
Sandy Loam	DO NOT USE	DO NOT USE	1.5	1.8
Loam, Silt loam, Silt	DO NOT USE	1.3	1.8	1.8
All other textures	DO NOT USE	1.8	1.8	2.0

\*For organic matter content between those listed, adjust the rate proportionately.

\*\* Maximum rate limit per acre per year for all applications is 6.5 lbs. cyanazine (6.5 quarts BLADEX 4L) except on highly erodible land with less than 30% plant residue cover, the rate limit is 3.0 lbs. cyanazine (3.0 quarts BLADEX 4L).

**SWEET CORN**

BLADEX 4L may be applied preemergence or preplant incorporated for the control of annual grasses and broadleaved weeds in sweet corn.

NOTE: BLADEX may cause injury or stand loss on new or "super sweet" varieties of sweet corn. Consult with Agricultural Extension Agencies and sweetcorn seed suppliers about the sensitivity of new varieties to potential injury.

Apply BLADEX treatments just before, at or after planting but before crop has emerged. Avoid removal of treated soil from seedrow prior to or during the planting operation. Do not apply postemergence to sweet corn. Rotary hoeing is recommended for preemergence applications which do not receive adequate rainfall or sprinkler irrigation to wet the top 1 1/2 to 2 inches of soil within about 10 days after application. If a BLADEX mixture is to be incorporated, except as noted, single or two pass incorporation is acceptable. Care should be taken to incorporate the BLADEX mixture no deeper than the top two inches of soil.

**BLADEX plus Atrazine**

Apply BLADEX 4L at the proper rate for soil texture and organic matter indicated in Table 8. Table 8 provides rates for generally weedy conditions. The ratio of the amounts of each herbicide may be adjusted as necessary for particular weed conditions as long as the combined rate of the two products does not exceed the combined rate for the soil shown in Table 8. For grassier conditions use a ratio that contains higher levels of BLADEX (3:1). For fields with more broadleaves use a ratio that contains higher levels of atrazine (1:1).

**Rotational Crops:** (1) Plant only corn, sorghum or soybeans the year following the use of this mixture. (2) If soybeans are to be planted, injury may occur due to the carryover of Atrazine. (3) If applied after June 10, do not rotate with crops other than corn or sorghum the next year or injury may occur. (4) Small grains may be planted 15 months following treatments. (5) All other crops may be planted 18 months after application.

**BLADEX plus LASSO 4EC**

Use BLADEX 4L at the proper rate for the soil texture and organic matter shown in Table 9 plus 2 quarts per acre of LASSO (Use 2.5 quarts LASSO on clay soils containing 5 percent organic matter and over.) Any rotational crop may be planted the fall or spring following this treatment.

**BLADEX plus SUTAN+ 6.7E or ERADICANE 6.7E**

Use BLADEX 4L at the proper rate for the soil texture and organic matter shown in Table 9 plus 1.8 quarts per acre of SUTAN+ or ERADICANE for control of many annual grasses and broadleaf weeds. (Use 2.4 quarts of SUTAN+ or ERADICANE on loam soils containing 5 percent or more organic matter, and clay loams and clays containing 4 percent or more organic matter.) Do not use on sands and loamy sands having less than 1 percent organic matter nor on the light sandy soils of eastern coastal states. Do not use on corn grown for seed.

Apply before planting. Incorporate the mixture immediately upon application using power-driven cultivation equipment set for 2-3 inch depth, or tandem disc set to cut about 4 inches deep while operating at 4-6 mph. For thorough mixing, disc in two directions (cross disc), and follow with a harrow, drag, or other

TABLE 8

**PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE  
FOR TANK-MIX COMBINATIONS OF "BLADEX" 4L PLUS ATRAZINE 4L ON SWEET CORN**

Soil Texture Description	Quarts of BLADEX 4L*** + Quarts of Atrazine 4L** Percent Organic Matter in Soil*					
	Less than 1%	1%	2%	3%	4%	5% & Over
Sand, Loamy sand	DO NOT USE	0.8+0.4	1.1+0.4	1.3+0.7	1.5+0.9	2.2+1.1
Sandy loam	DO NOT USE	1.1+0.4	1.3+0.7	1.5+0.9	2.0+1.1	2.8+1.3
Loam, Silt loam, Silt	DO NOT USE	1.3+0.7	1.5+0.9	2.0+1.1	2.5+1.3	3.2+1.3
Sandy clay loam, Clay loam,						
Silty clay loam	DO NOT USE	1.5+0.9	1.8+1.1	2.5+1.3	3.2+1.3	3.4+1.6
Sandy clay, Silty clay loam	DO NOT USE	1.8+1.1	2.8+1.3	3.2+1.3	3.4+1.6	3.6+1.8
Peat or Muck	NOT RECOMMENDED					

\*For organic matter content between those listed, adjust the rate proportionately.

\*\*If 90% Atrazine is used, multiply Atrazine rates shown by 1.11 to equal lbs. of 90% Atrazine products. If Atrazine 80W is used, multiply rates shown by 1.25 to equal lbs. of Atrazine 80W.

\*\*\* Maximum rate limit per acre per year for all applications is 6.5 lbs. cyanazine (6.5 quarts BLADEX 4L) except on highly erodible land with less than 30% plant residue cover, the rate limit is 3.0 lbs. cyanazine (3.0 quarts BLADEX 4L).

TABLE 9

**PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR "BLADEX" 4L USED IN TANK MIX COMBINATIONS  
WITH "LASSO", "SUTAN+", "ERADICANE" OR "DUAL" ON SWEET CORN**

Soil Texture Description	Quarts of BLADEX 4L Percent Organic Matter in Soil*					
	Less than 1%	1%	2%	3%	4%	5% & Over
Sand, Loamy sand	DO NOT USE	0.8	1.2	1.4	1.6	2.0
Sandy loam	DO NOT USE	1.2	1.4	1.6	2.0	2.2
Loam, Silt loam, Silt	DO NOT USE	1.4	1.6	2.0	2.2	2.6
Sandy clay loam,						
Clay loam, Silty clay loam	DO NOT USE	1.8	2.0	2.2	2.6	2.8
Sandy clay, Silty clay loam	DO NOT USE	2.0	2.2	2.6	2.8	3.0
Peat or Muck	NOT RECOMMENDED					

\*For organic matter content between those listed, adjust the rate proportionately.

\*\*Do not use in the light sandy soils of the Atlantic Coastal Plain.

leveling device. Prior to the second discing, readjust the disc to prevent cutting deeper than 4 inches. BLADEX 4L may be applied preemergence as an overlay over previously incorporated SUTAN+ or ERADICANE, if desired. Any rotation crop may be planted in the fall or spring following these treatments. Existing stands of quackgrass, purple and yellow nutsedge must be turned under and thoroughly chopped up prior to chemical treatments.

Additional weeds controlled by SUTAN+ or ERADICANE combinations:

**Grasses:**

Sandbur	Shattercane (Wild Cane)*
Texas Panicum	Quackgrass (ERADICANE only)
	Wild Proso Millet* (ERADICANE only)

**Perennial Weeds:**

Yellow Nutsedge (Nutgrass)	Purple Nutsedge (Nutgrass)
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\*Suppression only - refer to SUTAN+ or ERADICANE label for appropriate supplemental cultural and tillage practices.

For fields with moderate to heavy infestations of these weeds refer to the SUTAN+ or ERADICANE labels for appropriate higher rates.

**TABLE 10**

**PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR "BLADEX" 4L PLUS ATRAZINE 4L USED IN TANK-MIX COMBINATIONS WITH "LASSO", "SUTAN+", "ERADICANE" OR "DUAL" ON SWEET CORN**

Soil Texture Description	Quarts of BLADEX 4L + Quarts of Atrazine 4L**					
	Percent Organic Matter in Soil*					
	Less than			5% & Over		
	1%	1%	2%	3%	4%	Over
Sand, Loamy sand	DO NOT USE	0.6+0.2	0.9+0.4	1.0+0.5	1.0+0.6	1.4+0.6
Sandy loam	DO NOT USE	0.8+0.4	1.0+0.5	1.1+0.6	1.4+0.6	1.6+0.6
Loam, Silt loam, Silt	DO NOT USE	1.0+0.5	1.2+0.6	1.4+0.6	1.6+0.6	1.8+0.9
Sandy clay loam,						
Clay loam, Silty clay loam	DO NOT USE	1.2+0.6	1.4+0.6	1.6+0.6	1.8+0.9	2.0+0.9
Sandy clay, Silty clay loam	DO NOT USE	1.4+0.6	1.6+0.9	1.8+0.9	2.0+0.9	2.0+1.1
Peat or Muck	NOT RECOMMENDED					

\*For organic matter content between those listed, adjust the rate proportionately.

\*\*If a 90% Atrazine is used multiply Atrazine rates shown by 1.11 to equal lbs. of 90% Atrazine products. If Atrazine 80W is used, multiply rates shown by 1.25 to equal lbs. of Atrazine 80W.

**BLADEX plus DUAL 8E**

Use BLADEX 4L at the proper rate for soil texture and organic matter shown in Table 9. Use DUAL as follows:

SOIL TEXTURE	BROADCAST RATE PER ACRE FOR "DUAL"
<b>Coarse</b>	
Sand, Loamy sand, Sandy loam	1.25 - 1.5 pints
<b>Medium</b>	
Loam, Silt loam, silt	1.5 - 2.0 pints
<b>Fine</b>	
Sandy clay loam, Silty clay loam, Clay loam, Sandy clay, Silty clay, Clay	1.5 - 2.5 pints

The low end of the rate range should be used for lowest organic matter soils and the rate increased proportionately as the organic matter increases. Soils containing 4 percent organic matter or more require the highest rate shown for that soil texture. Refer to the DUAL label for precautions or rotational crops.

**BLADEX plus ATRAZINE plus LASSO, SUTAN+, ERADICANE or DUAL**

**NOTE:** Do not use combinations with SUTAN+ or ERADICANE in New Jersey. Use BLADEX 4L plus Atrazine at the proper rate of soil texture and organic matter shown in Table 10. Use LASSO, SUTAN+, ERADICANE or DUAL according to rates shown in BLADEX combinations in this section of the label.

**Rotational Crops:** Refer to Rotational Crops section of BLADEX plus Atrazine in this section of the label.

**COTTON**

**IDLE SEASON EARLY PREPLANT WEED CONTROL (CALIFORNIA ONLY)**

**Weeds Controlled**

**Grasses**

Annual Bluegrass	Rabbitsfoot Grass
Annual Ryegrass	Volunteer Small Grains
Barnyardgrass*	(suppression)
Bristly Foxtail	Wild Oat*
	Yellow Foxtail

**Broadleaves**

Annual henbit	Lambsquarters
Black nightshade	London rocket
Parclover	Pineapple weed
Cheeseweed*	Prickly lettuce
Chickweed	Shepherdspurse
Fiddleneck	Sowthistle
Groundsel	Wild mustard
Knotweed	Wild radish
Marestail	
Miners lettuce	

\*Under soil moisture conditions favoring deep germination, these species may not be completely controlled.

BLADEX may be used for burndown of small existing annual weeds and residual control of weeds during the winter and early spring season prior to planting cotton in California only. Complete any planned tillage prior to application. Apply herbicide treatment before weeds germinate or before weed seedlings are more than 3 inches tall. Tillage after application may reduce the effectiveness of the herbicide treatment.

Apply BLADEX at least 30 days prior to planting. Apply the proper rate for the soil texture, organic matter and time interval between application and planting indicated in the Table 11. Where existing weeds are present, add crop oil concentrate, surfactant, or emulsible vegetable oil at its recommended rate to aid in the burndown of small weeds.

Where existing weeds are greater than 3 inches in height, when very dry conditions exist or where volunteer grains are a major problem, tank-mix BLADEX with 1-2 pts./A. (7 lbs./gal.) or 1.3-2.7 pts./A. (1.5 lbs./gal.) of paraquat. Well established weeds 6 inches tall or taller may not be well controlled.

Apply BLADEX 4L in at least 20 gal./A. of carrier by ground sprayer. (The volume of carrier and the application equipment must be adequate to give a uniform application.) Add nonionic surfactant at 1-2 qts./100 gals. of diluted spray (or other suitable surfactant at recommended rates) where paraquat is used. Crop oil concentrate or emulsible vegetable oil are not needed where paraquat is used.

BLADEX can also be tank-mixed with TREFLAN or PROWL and incorporated for fall listed cotton beds instead of surface applied as described above. Precautions: 1). Failure to wait the recommended time interval between application and planting may result in crop injury. 2). At least one inch of rainfall or an equivalent irrigation that waters the surface of the soil after application must precede planting. 3). The use of this treatment on calcareous or caliche soil outcroppings may result in crop injury. 4). Do not graze or feed foliage from treated areas to livestock. 5). Do not apply BLADEX to cotton land in irrigation water.

### PREEMERGENCE

Apply preemergence on cotton only in the states of Alabama, Arkansas, Louisiana and Mississippi.

#### Weeds Controlled

Annual morningglory	Prickly sida (Teaweed)
Cocklebur	Spurge

BLADEX 4L is a selective preemergence herbicide for early season weed control in cotton. Supplemental practices (such as BLADEX applied directed postemergence) may be necessary to control late season weeds. BLADEX 4L can be used in a tank-mix combination with ZORIAL RAPID 80.

Carefully match the BLADEX rate with the soil texture. Do not use on fields where the soil texture changes from coarse to fine. Avoid overlapping the spray pattern or overdosing the field with BLADEX 4L. Application rates above those recommended for

the soil texture can result in yellowing or stunting of the crop and may result in stand reduction.

While cotton exhibits tolerance to BLADEX 4L, adverse growing conditions such as excessive rains, standing water or cold weather may result in stand reduction.

**DO NOT GRAZE OR FEED FOLIAGE FROM TREATED AREAS TO LIVESTOCK.**

### BLADEX plus ZORIAL RAPID 80.

Apply BLADEX 4L plus ZORIAL RAPID 80 at the proper rate for the soil texture shown in Table 12. The soil must contain at least 1.0 percent organic matter. Seed placement should be 1/2-3/4 inch from the soil surface. Plant only cotton within six months after the last application of ZORIAL RAPID 80 or injury may occur.

### DIRECTED POSTEMERGENCE - LAYBY

#### Weeds Controlled

Annual morningglory*	Palmer amaranth
Bristly starbur	Pigweed (redroot and spiny)
Cocklebur	Prickly sida (Teaweed)
Crotalaria	Sicklepod
Jimsonweed	Spurge
Lambsquarters	Tropic croton
Nightshade (annual)	Wright groundcherry

\*The degree of preemergence control from a layby treatment will be reduced if soil moisture and temperature conditions cause deep germination of the seed.

BLADEX 4L and tank-mix combinations may be applied directed postemergence or layby to cotton and either preemergence to weeds or postemergence to weeds in all cotton growing States.

Apply before weeds are more than 2 inches tall. Apply the directed postemergence treatment after the cotton has attained the minimum height of 6 inches. For layby treatment, apply BLADEX 4L after the cotton has attained the height of 12 inches or more.

The spray mixture should be directed to the soil around the base of the cotton plants. Care should be taken to prevent the spray from striking the cotton leaves as injury will occur. The use of leaf lifters or shields on application equipment is recommended to avoid spraying the cotton foliage.

**TABLE 11**

**BROADCAST APPLICATION RATES PER ACRE OF "BLADEX" 4L FOR IDLE SEASON OR EARLY PREPLANT TREATMENT ON COTTON**

Soil Texture Description	Days Prior To Planting*					
	30 Days		60 Days		90 Days	
	Qts. of BLADEX 4L**		Qts. of BLADEX 4L**		Qts. of BLADEX 4L**	
	Organic Matter		Organic Matter		Organic Matter	
	Under 2%	Over 2%	Under 2%	Over 2%	Under 2%	Over 2%
Sands, Loamy sands	1.5	2.0	2.5	3.0	3.0	3.5
All other Soils	2.0	2.5	3.0	3.5	3.5	4.0

\*For time intervals between those listed, adjust the rates proportionately.

\*\* Maximum rate limit per acre per year for all applications is 6.5 lbs. cyanazine (6.5 quarts BLADEX 4L) except on highly erodible land with less than 30% plant residue cover. If the limit is 3.0 lbs. cyanazine (3.0 quarts BLADEX 4L).

**TABLE 12****PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR "BLADEX" 4L + "ZORIAL RAPID 80" ON COTTON**

Soil Texture*	Quarts/Acre		Pounds/Acre	
	BLADEX 4L	+	ZORIAL RAPID 80	
<b>Coarse Soils**</b>				
Sandy loam	0.5	+	0.8	
<b>Medium Soils</b>				
Silt and Silt loam	0.6	+	1.3	
Loam, Clay loam, Sandy clay loam.				
Sandy clay	0.9	+	1.3	
<b>Fine Soils</b>				
Silty clay loam, Silty clay, Clay	1.2	+	1.6	

\* THE SOIL MUST CONTAIN AT LEAST 1% ORGANIC MATTER.

\*\*DO NOT USE ON COARSE SOILS (SANDS AND LOAMY SANDS) CONTAINING MORE THAN 70% SAND.

BLADEX may be applied directed postemergence and/or layby following a preemergence application of BLADEX. Apply no more than two directed postemergence and one preemergence application to the same crop in any one year. If BLADEX is not used preemergence, apply no more than three directed postemergence applications including layby to the same crop in any one year. (In California, apply no more than two directed postemergence applications including layby.)

When applied as a layby treatment before weeds emerge, the effectiveness of BLADEX 4L depends on rainfall or irrigation to move it into the soil. When irrigation water activation is used, every row must be watered and for skip row cotton all treated soil must be irrigated.

Any rotational crop may be planted the fall or spring following any of the treatments in this section providing the soil is plowed or deep-disked prior to planting the rotation crop.

Do not apply BLADEX to cotton in irrigation water.

**DO NOT GRAZE OR FEED FOLIAGE FROM TREATED AREAS TO LIVESTOCK.**

**BLADEX Applied Alone**

Apply BLADEX 4L directed-postemergence at the rate shown in Table 13. Apply at layby at the rates for the soil texture indicated in Table 14. Add a nonionic agricultural surfactant suitable for use on growing cotton at the rate of 2 quarts per 100 gallons of spray mixture (or as directed by the manufacturer).

**BLADEX plus MSMA**

Apply a tank-mix combination of BLADEX 4L plus MSMA plus surfactant after the cotton is 6 inches tall but before it reaches the bloom stage. Apply no more than two applications of this mixture before the first bloom stage. Tank-mix BLADEX plus MSMA at the rates indicated in Table 15. Add a nonionic surfactant at the rate of 2 qts./100 gals of spray mixture (or as directed by the manufacturer).

**TABLE 13****DIRECTED POSTEMERGENCE APPLICATION RATES PER ACRE FOR "BLADEX" 4L ON COTTON**

<i>Banded 38" Row</i>		
Broadcast	12" Band	19" Band
0.6 - 1.0 qt.	0.2 - 0.3 qt.	0.3 - 0.5 qt.

Use the maximum rate when dry or arid conditions exist.

**TABLE 14****LAYBY APPLICATION RATES PER ACRE FOR "BLADEX" 4L ON COTTON**

Height of Cotton	Soil Texture		Broadcast Rates
12 inches or more	Coarse	Sandy loam	0.8 qt.
	Medium	Silt and Silt loam, Loam, Clay loam,	1.2 qt.
		Sandy clay loam, Sandy clay	
Fine	Silty clay loam, Silty clay and Clay		1.6 qt.

**TABLE 15****DIRECTED POSTEMERGENCE APPLICATION RATES PER ACRE "BLADEX" 4L + MSMA ON COTTON**

<i>Product</i>	<i>Broadcast</i>	<i>Banded 38" Row</i>	
		<i>12" Band</i>	<i>19" Band</i>
BLADEX 4L	0.6 - 1.0 qt.	0.2 - 0.3 qt.	0.3 - 0.5 qt.
+	+	+	+
MSMA (4 lb/gal)	4 pints	1.3 pints	2 pints
or	or	or	or
MSMA (6.6 lb/gal)	2.4 pints	0.8 pint	1.2 pints

**GRAIN SORGHUM (MILO)**

(See the GENERAL INFORMATION section of this label)

Tank-mix combinations of BLADEX 4L plus atrazine, metolachlor (DUAL), alachlor (LASSO), or propachlor (RAMROD) may be used for selective preemergence weed control in grain sorghum. In addition, BLADEX 4L may be used in tank-mix combinations with atrazine, DUAL or LASSO for the control of weeds in early spring, early preplant, 14 to 35 days or more prior to planting grain sorghum. BLADEX 4L in tank mix combinations may be applied preemergence or early preplant on grain sorghum grown under conventional or conservation tillage systems.

Do not use on forage sorghums. See the appropriate sections of the label for geographic distribution restrictions.

**WEEDS CONTROLLED BY "BLADEX" 4L IN TANK-MIX OR SEQUENTIAL COMBINATIONS WITH OTHER HERBICIDES ON GRAIN SORGHUM (MILO)**

**Grasses**

Cheatgrass	Stinkgrass
Green foxtail	(Indian lovegrass)
Crabgrass	Volunteer wheat (2)
Downy brome	Yellow foxtail

**Broadleaves**

Annual Morningglory	Prickly lettuce
Carpetweed	Ragweed (Common)
Cocklebur (1)	Redroot pigweed
Common purslane	Russian thistle
Horseweed (marestail)	Shepherdspurse
Kochia	Sunflower (1)
Lambsquarters	Tansy and other
Pennsylvania smartweed	mustards
Prostrate pigweed	Velvetleaf

(1) Under soil moisture and temperature conditions favoring deep germination or other factors that may cause delayed germination, these species may not be completely controlled.

(2) When the herbicide treatment is applied two weeks or more before planting, weed control of these species may break early if heavy rainfall occurs between application and planting.

**General Directions For Use On Grain Sorghum**

BLADEX used in tank-mixes with the products listed above should be applied only once per crop season or in split dosage treatments. If replanting of grain sorghum is necessary, it may be planted in soil previously treated with these mixtures. Apply BLADEX 4L in these tank-mix combinations before the crop has emerged.

**Precautions:** Do not make an additional application of BLADEX or any product containing cyanazine or crop injury may occur. Heavy rainfall between planting and crop emergence may cause crop injury or stand loss. Rainfall tends to cause excessive concentrations of herbicide in seed furrow, resulting in possible crop injury. Level deep planter marks or seed furrows before application. Do not apply to furrow-planted sorghum.

Sorghum growing under stress caused by minor element deficiency, cold, wet weather or sorghum growing on highly calcareous soil (high pH) may suffer in injury including stand reduction. Sorghum subjected to high winds, sand cutting, hail damage, or cold temperatures may be more susceptible to injury from the chemical treatment with possible stand loss. Where crop residues are pressed into the planter slot or any other factor keeps the slot from closing, crop injury or stand reduction may occur, caused by herbicides coming into direct contact with the seed from the spray or by being washed into the slot after a heavy rain.

When using DUAL on sorghum, only CONCEP II. safened seed may be used. When using LASSO on sorghum, only SCREEN safened seed may be used.

Early preplant treatments will require a preemergence herbicide treatment other than BLADEX 90DF or 4L at planting, and/or postemergence herbicide in the growing crop to provide required weed control, if the early preplant application is made more than 35 days prior to planting, or if weeds are present at planting time.

**Wheat/Sorghum/Fallow Rotation**

For sorghum grown under a wheat/sorghum/fallow rotation, BLADEX 4L plus atrazine may be applied early preplant or preemergence. If an early preplant application with BLADEX 4L plus atrazine is used, it should be used in conjunction with either a residual herbicide after wheat harvest the previous year, a preemergence herbicide treatment at planting, and/or a postemergence herbicide treatment in the growing crop. The total rate of atrazine permitted in conjunction with a sorghum crop (postharvest plus early preplant plus preemergence) is limited to 3.0 lbs. active ingredient per acre. Even this or lower rates may carry over to injure rotational crops.



**Rotational Crops:** (1) Plant only corn, sorghum, or soybeans the year following the use of this mixture. (2) If soybeans are to be planted, injury may occur. (3) If applied after June 10, do not rotate with crops other than corn or sorghum the next year or injury may occur. (4) 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 be planted the following year, or a crop of corn or sorghum not treated with this mixture or atrazine is to precede other rotational crops. (5) Small grains may be planted 15 months following treatment. (6) All other crops may be planted 18 months after application.

### **CONSERVATION TILLAGE**

For grain sorghum grown under conservation tillage, any of the herbicide treatments listed above may be tank-mixed with paraquat, and/or 2,4-D where weeds and grasses are present at the time of application exceeding two inches in height.

If volunteer wheat or cheatgrass is over 2 inches tall, heavily tillered, and/or growing in a dense mat, or if the wheat stubble has been tilled (undercut or disc) or grazed and seed is buried, complete control may not be achieved. Control of volunteer and other weeds is usually better in complete no-till situations than were prior tillage "planted" the seed and allowed extensive root development.

Complete spray coverage of the weeds is essential for best performance. Apply the desired treatment in 15 to 30 gallons of spray mixture per acre by ground rig. When using paraquat in a tank-mix, apply the desired rates in 20 to 40 gallons of spray mixture per acre. Use the higher volumes where there are heavy crop residues on the soil surface. Nitrogen solutions are the preferred carriers for these treatments as they aid in the burndown of existing weeds. In addition, crop oil or a nonionic surfactant may be added to the tank-mix as they aid in the burndown of existing weeds.

When tank-mixing with 2,4-D to control broadleaf weeds 14-35 days prior to planting, use 1 to 3 pints per acre of 4 pounds ai per gallon, 2,4-D LV (2/3 to 2 pints of 6 pounds ai per gallon 2,4-D LV) (or 2,4-D Amine at recommended rates). Use the higher rates where overwintering weeds are present or when directed on the 2,4-D label for the control of specific hard-to-kill weed species, such as perennials.

**CAUTION:** Use only these 2,4-D product with properly registered labels that permit such use and application rates.

When tank-mixing with paraquat to control grass and broadleaf weeds at the time of planting, use an approved nonionic adjuvant at the rate of 1 quart per 100 gallons of dilute spray. Use 1-2 pints of paraquat (2 lbs./gal) or 1.3-2.7 pints (1.5 lbs./gal) per acre. Use the higher rate when weed growth is heavy or over 4 inches tall or when dry weather conditions prevail. Established weeds 6 inches tall or taller may not be completely controlled with paraquat.

**OBSERVE ALL CAUTIONS AND LIMITATIONS ON LABELING OF ALL PRODUCTS USED IN MIXTURES.**

### **EARLY PREPLANT**

BLADEX 4L in tank-mix combinations with other herbicides may be applied Early Preplant on grain sorghum only in the states of Kansas, Nebraska and South Dakota. The tank-mixes may be applied on grain sorghum grown under conventional or conservation tillage systems. Do not use on forage sorghum.

### **BLADEX plus ATRAZINE**

BLADEX 4L plus atrazine provides control of weeds listed on this label in the Weeds Controlled section for BLADEX 4L on grain sorghum. Precautions: Crop injury can occur if the soil stays dry between application and planting. Delay planting until at least 10 days after a soaking rain after treatment (soaks the soil to a depth of 4 inches or more). Heavy rains between planting and emergence can cause crop injury or stand loss. Rotational Crops: Refer to the General Information section of the label. Fields treated with this tank-mix may be planted only to corn or grain sorghum within 12 months after this treatment. Other crops should not be planted for 18 months following this treatment.

Use BLADEX 4L plus atrazine 4L at the proper rate for soil texture and time interval indicated in Table 16.

**Split Applications:** BLADEX 4L plus Atrazine 4L dosage rates in Table 16 may be applied in a split application of 80% of the dosage 21 days or more before planting and the remaining 20% at planting time. If the season has been dry without sufficient rainfall to activate the herbicide after the initial application, the remaining 20% at planting time may be omitted to reduce the chances of crop injury.

### **BLADEX IN THREE-WAY COMBINATIONS**

BLADEX 4L plus atrazine in combination with DUAL or LASSO applied early preplant provides control of weeds listed on this label in the Weeds Controlled section for BLADEX 4L on grain sorghum. Additional weeds controlled by one of these combinations include:

#### **Grasses**

Barnyardgrass (1)	Stinkgrass (2)
Fall Panicum	Witchgrass (2)
Giant Foxtail	

(1) (2) Refer to Weeds Controlled section on grain sorghum for explanation.

**Rotational Crops:** If the crop treated with any of these combinations is lost, corn or grain sorghum may be replanted immediately without retreatment. Refer to the General Information section of the label for additional information regarding crop rotation.

### **BLADEX plus ATRAZINE plus DUAL**

DUAL may be used on grain sorghum only with seed treated with CONCEP II seed safener.

Use BLADEX 4L plus atrazine 4L plus DUAL 8E at the proper rate for soil texture and time interval indicated in Table 17.

### **BLADEX plus ATRAZINE plus LASSO**

LASSO may be used on grain sorghum only with seed treated with SCREEN seed safener.

Use BLADEX 4L plus Atrazine 4L plus LASSO 4EC at the proper rate for soil texture and time interval indicated in Table 18.

**TABLE 16****EARLY PREPLANT BROADCAST APPLICATION RATES OF "BLADEX" 4L PLUS ATRAZINE 4L ON GRAIN SORGHUM (0.8% TO 3% Organic Matter Soils)**

<i>Soil Texture Description</i>	<i>Quarts of BLADEX 4L + Quarts of Atrazine 4L</i>		
	<i>DAYS PRIOR TO PLANTING(b,c)</i>		
	<i>14 DAYS</i>	<i>28 DAYS</i>	<i>35 DAYS</i>
Sand, Loamy sand	DO NOT USE		
Sandy loam	1.2 + 0.6(a,d)	1.6 + 0.8	2.0 + 1.0
Loam, Silty loam, Silt	1.5 + 0.7	2.0 + 1.0	2.3 + 1.2
Sandy clay loam, Clay loam, Silty clay loam	2.0 + 1.0	2.3 + 1.2	2.6 + 1.4
Sandy clay, Silty clay, Clay	2.2 + 1.1	2.3 + 1.2	3.0 + 1.5
Peat or Muck	NOT RECOMMENDED		
Eroded Slopes or Knobs	NOT RECOMMENDED		
Soils with pH greater than 8.0	NOT RECOMMENDED		

(a) The first number is quarts/acre of BLADEX 4L. The second number is quarts/acre of atrazine 4L. For pounds/acre of atrazine 80W multiply by 1.25

(b) For intervals longer than 35 days due to delayed planting, etc., another herbicide treatment is needed before, at, or after planting.

(c) For sandy loam soils containing less than 1.5% O.M., increase the treatment interval from 14 to 21 days. Use the 14 day interval for sandy soils containing more than 1.5%.

(d) For rates between those listed at 14 and 35 days, adjust the rate proportionately.

**TABLE 17****EARLY PREPLANT BROADCAST APPLICATION RATES PER ACRE IN QUARTS OF "BLADEX" 4L, QUARTS OF ATRAZINE 4L AND PINTS OF "DUAL" 8E ON GRAIN SORGHUM (b)**

<i>Soil Texture Description</i>	<i>DAYS PRIOR TO PLANTING (c) (0.8% TO 3% Organic Matter)</i>					
	<i>14 DAYS*</i>			<i>28 DAYS</i>		
	<i>Qts BLADEX/</i>	<i>Qts Atraz/</i>	<i>Pts DUAL</i>	<i>Qts BLADEX/</i>	<i>Qts Atraz/</i>	<i>Pts DUAL</i>
Sand, Loamy sand	DO NOT USE			1.0(a)	0.5	1.8
Sandy loam	0.9(d)	0.4	1.35	1.1	0.5	1.8
Loam, Silt loam, Silt	1.1	0.5	1.35	1.35	0.7	1.8
Sandy clay loam, Clay loam, Silty clay loam	1.35	0.7	1.6	1.7	0.8	1.8
Sandy clay, Silty clay, Clay	1.5	0.75	1.6	1.8	0.9	1.8
Peat or Muck	NOT RECOMMENDED					
Eroded Slopes or Knobs	NOT RECOMMENDED					
Soils with pH greater than 8.0	NOT RECOMMENDED					

(a) The first number is quarts/acre of BLADEX 4L. The second number is quarts/acre of atrazine 4L. The third number is pints/acre of DUAL 8E.

(b) If using DUAL 8E on sorghum, CONCEP II safened seed should be planted.

(c) For intervals longer than 28 days due to delayed planting, etc., another herbicide treatment is needed before, at, or after planting.

(d) For sandy loam soils containing less than 1.5% O.M., increase the treatment interval from 14 to 21 days. Use the 14 day interval for sandy soils containing more than 1.5%.

\*For rates between those listed at 14 and 28 days, adjust the rate proportionately

**TABLE 18**

**EARLY PREPLANT BROADCAST APPLICATION RATES PER ACRE IN QUARTS OF BLADEX 4L, QUARTS OF ATRAZINE 4L AND QUARTS OF "LASSO" 4EC ON GRAIN SORGHUM (b)**

<i>Soil Texture</i>	<i>DAYS PRIOR TO PLANTING (c) (0.8% TO 3% Organic Matter)</i>						
	<i>14 DAYS*</i>			<i>28 DAYS</i>			
<i>Description</i>	<i>Qts BLADEX</i>	<i>Qts Atraz</i>	<i>Qts LASSO</i>	<i>Qts BLADEX</i>	<i>Qts Atraz</i>	<i>Qts LASSO</i>	
Sand, Loamy sand	—	DO NOT USE			—	0.9(a)	0.45 2.25
Sandy loam	0.7(d)	0.4	1.8	0.9	0.5	2.25	
Loam, Silt loam, Silt	0.9	0.5	1.8	1.2	0.6	2.25	
Sandy clay loam,	1.2	0.6	2.0	1.5	0.75	2.25	
Clay loam, Silty clay loam							
Sandy clay, Silty clay, Clay	1.35	0.7	2.0	1.7	0.8	2.25	
Peat or Muck	NOT RECOMMENDED						
Eroded Slopes or Knobs	NOT RECOMMENDED						
Soils with pH greater than 8.0	NOT RECOMMENDED						

(a) The first number is quarts/acre of BLADEX 4L. The second number is quarts/acre of atrazine 4L. The third number is quarts/acre of LASSO 4EC. (b) If using LASSO 4EC on sorghum, Screen safened seed should be planted.

(c) For intervals longer than 28 days due to delayed planting, etc., another herbicide treatment is needed before, at, or after planting.

(d) For sandy loam soils containing less than 1.5% O.M., increase the treatment interval from 14 to 21 days. Use the 14 day interval for sandy soils containing more than 1.5%.

\*For rates between those listed at 14 and 28 days, adjust the rate proportionately.

**PREEMERGENCE OR SHALLOW PREPLANT INCORPORATION**

Tank-mix combinations of BLADEX 4L plus atrazine, metolachlor (DUAL), alachlor (LASSO) or propachlor (RAMROD) may be used for selective preemergence weed control in grain sorghum. BLADEX 4L and its tank mixes may be applied preemergence on grain sorghum grown under conventional or conservation tillage systems. Do not use on forage sorghum. BLADEX 4L in two-way tank-mix combinations with propachlor or in three-way combinations with atrazine and propachlor, LASSO or DUAL should be applied only once per crop season or in split dosage treatments. (See the Early Preplant section.) If replanting of grain sorghum is necessary, it may be planted in soil previously treated with these mixtures. Do not make a second application of BLADEX or any product containing cyanazine or crop injury may occur.

Apply these tank-mix combinations at planting or after planting, but before the crop and weeds have emerged. Heavy rain immediately following application tends to cause excessive concentrations of herbicide in seed furrow and can cause crop injury and stand reduction. Do not apply to furrow-planted sorghum until furrows are leveled (plowed-in). Level deep planter marks or seed furrows before application. Sorghum growing under stress caused by minor element deficiency or cold, wet weather or sorghum growing on highly calcareous soil may suffer injury and stand loss.

**BLADEX 4L plus Propachlor (RAMROD)**

**Weeds Controlled**

Apply this tank-mix to grain sorghum only in States East of the Rocky Mountains.

**Grasses**

- |               |                |
|---------------|----------------|
| Barnyardgrass | Giant foxtail  |
| Crabgrass     | Green foxtail  |
| Fall panicum  | Yellow foxtail |

**Broadleaves**

- |                     |                          |
|---------------------|--------------------------|
| Annual morningglory | Pigweed                  |
| Carpetweed          | Ragweed (Common)         |
| Cocklebur*          | Smartweed (Pennsylvania) |
| Common purslane     | Velvetleaf*              |
| Lambsquarters       |                          |

\*Under conditions such as low temperatures, lack of soil surface moisture or other factors causing a delay in germination of the seeds, the degree of control may be impaired against these weeds.

Apply BLADEX 4L plus propachlor at the proper rate for soil texture and organic matter shown in Table 19.

Any rotational crop may be planted the fall or spring following this treatment.

**TABLE 19****PREEMERGENCE BROADCAST APPLICATION RATES IN QUARTS OF "BLADEX" 4L PLUS QUARTS OF PROPACHLOR ("RAMROD") 4L PER ACRE ON GRAIN SORGHUM**

Soil Texture Description	PERCENT ORGANIC MATTER IN THE SOIL*			
	2%		3%	
	Qts BLADEX + Qts RAMROD		Qts BLADEX + Qts RAMROD	
Sand, Loamy sand	DO NOT USE			
Sandy loam	1.0(a)	2.5	1.2	3.0
Loam, Silt loam, Silt	1.2	3.0	1.35	3.5
Sandy clay loam, Clay loam,	1.35	3.5	1.6	4.0
Silty clay loam				
Sandy clay, Silty clay, Clay	1.6	4.0	1.6	4.0
Peat or Muck	NOT RECOMMENDED			
Eroded Slopes or Knobs				
Soils with pH greater than 8.0	NOT RECOMMENDED			

(a) The first number is quarts/acre of BLADEX 4L. The second number is quarts/acre of RAMROD 4L.  
\*For organic matter content between those listed, adjust the rate proportionately.

**TABLE 20****PREEMERGENCE OR SHALLOW PREPLANT INCORPORATION BROADCAST APPLICATION RATES IN QUARTS OF "BLADEX" 4L, QUARTS OF ATRAZINE 4L PLUS PINTS OF "DUAL" 8E PER ACRE ON GRAIN SORGHUM (a,b)**

Soil Texture Description	Product		Percent Organic Matter in Soil*		
			1%	2%	3%
Sand, Loamy sand,			DO NOT USE		
Sandy loam					
Loam	BLADEX 4L	Quarts	0.66	0.7	0.8
Silty loam	Atrazine 4L	Quarts	0.3	0.4	0.4
Silt	DUAL 8E	Pints	1.5	1.5	1.5
Sandy clay loam	BLADEX 4L	Quarts	0.7	0.8	0.9
Clay loam	Atrazine 4L	Quarts	0.4	0.4	0.5
Silty clay loam	DUAL 8E	Pints	1.5	1.75	1.75
Sandy clay	BLADEX 4L	Quarts	0.8	0.9	0.9
Silty clay	Atrazine 4L	Quarts	0.4	0.5	0.5
Clay	DUAL 8E	Pints	1.5	1.75	2.0
Peat or Muck	NOT RECOMMENDED				
Eroded Slopes or Knobs					
Soils with pH greater than 8.0	NOT RECOMMENDED				

(a) When using DUAL 8E on sorghum, only CONCEP II safened seed should be planted.  
(b) To enhance weed control in areas of less than 25 inches of annual precipitation or where long dry periods are common, this treatment may require shallow incorporation with a tool such as a field cultivator operated at 5-7 mph.  
\*For organic matter content between those listed, adjust the rate proportionately.

**BLADEX IN THREE-WAY COMBINATIONS**

BLADEX 4L plus plus atrazine plus DUAL, LASSO or RAMROD may be applied preemergence or with shallow incorporation for weed control in grain sorghum only in the states of Kansas, Nebraska and South Dakota. These treatments provide control of weeds listed on this label in the Weeds Controlled section for BLADEX 4L on grain sorghum. Additional weeds controlled by these combinations include:

**Grasses**

Barnyardgrass(1)      Witchgrass (2)  
Stinkgrass (2)      Giant Foxtail  
Fall Panicum

(1) (2) Refer to Weeds Controlled section on grain sorghum for explanation.

**Rotational Crops:** If the crop treated with this combination is lost, corn or grain sorghum may be replanted immediately without retreatment. Refer to the "General Information" section of the BLADEX label and to the tank mix product labels for additional information regarding crop rotation.

**TABLE 21**

**PREEMERGENCE OR SHALLOW PREPLANT INCORPORATION BROADCAST APPLICATION RATES IN QUARTS OF "BLADEX" 4L, QUARTS OF ATRAZINE 4L AND QUARTS OF "LASSO" EC PER ACRE ON GRAIN SORGHUM (a,b)**

Soil Texture Description	Product		Percent Organic Matter in Soil*		
			1%	2%	3%
Sand, Loamy sand.			DO NOT USE		
Sandy loam	BLADEX 4L	Quarts	none	0.66	0.7
	Atrazine 4L	Quarts	none	0.3	0.4
	LASSO 4EC	Quarts	none	2.0	2.0
Loam	BLADEX 4L	Quarts	0.66	0.7	0.8
Silt loam	Atrazine 4L	Quarts	0.3	0.4	0.4
Silt	LASSO 4EC	Quarts	2.0	2.0	2.0
Sandy clay loam	BLADEX 4L	Quarts	0.7	0.8	0.9
Clay loam	Atrazine 4L	Quarts	0.4	0.4	0.5
Silty clay loam	LASSO 4EC	Quarts	2.25	2.25	2.25
Sandy clay	BLADEX 4L	Quarts	0.8	0.9	0.9
Silty clay	Atrazine 4L	Quarts	0.4	0.5	0.5
Clay	LASSO 4EC	Quarts	2.25	2.25	2.5
Peat or Muck			NOT RECOMMENDED		
Eroded Slopes or Knobs			NOT RECOMMENDED		
Soils with pH greater than 8.0			NOT RECOMMENDED		

(a) When using LASSO 4EC on sorghum, only Screen safened seed should be planted.

(b) To enhance weed control in areas of less than 25 inches of annual precipitation or where long dry periods are common, this treatment may require shallow incorporation with a tool such as a field cultivator operated at 5-7 mph.

\*For organic matter content between those listed, adjust the rate proportionately.

**TABLE 22**

**PREEMERGENCE BROADCAST APPLICATION RATES IN QUARTS OF "BLADEX" 4L, QUARTS OF ATRAZINE 4L AND QUARTS OF PROPACHLOR ("RAMROD") 4L PER ACRE ON GRAIN SORGHUM**

Soil Texture Description	PERCENT ORGANIC MATTER IN THE SOIL*					
	2%			3%		
	Qts BLADEX	Qts Atrazine	Qts RAMROD	Qts BLADEX	Qts Atrazine	Qts RAMROD
Sand, Loamy sand			DO NOT USE			
Sandy loam	0.6(a)	0.3	2.25	0.7	0.4	2.7
Loam, Silt loam, Silt	0.7	0.4	2.7	0.8	0.4	3.15
Sandy clay loam, Clay loam,	0.8	0.4	3.15	0.9	0.5	3.6
Silty clay loam						
Sandy clay, Silty clay, Clay	0.9	0.5	3.6	0.9	0.5	3.6
Peat or Muck			NOT RECOMMENDED			
Eroded Slopes or Knobs			NOT RECOMMENDED			
Soils with pH greater than 8.0			NOT RECOMMENDED			

(a) The first number is quarts/acre of BLADEX 4L. The second number is quarts/acre of atrazine 4L. The third number is quarts/acre of RAMROD 4L. \*For organic matter content between those listed, adjust the rate proportionately.

**BLADEX plus ATRAZINE plus DUAL**

DUAL can be used on grain sorghum only with seed treated with CONCEP II seed safener.

Use BLADEX 4L plus DUAL 8E at the proper rate for soil texture and organic matter indicated in Table 20. Use only on soils having at least 1% organic matter.

**BLADEX plus ATRAZINE plus LASSO**

LASSO can be used on grain sorghum only with seed treated with SCREEN seed safener.

Use BLADEX 4L plus Atrazine 4L plus LASSO 4EC at the proper rate for soil texture and organic matter indicated in Table 21. Use only on soils having at least 1% organic matter.

**BLADEX plus ATRAZINE plus RAMROD**

Use BLADEX 4L plus Atrazine 4L plus RAMROD at the proper rate for soil texture and organic matter indicated in Table 22.

**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, soak up with sand, earth or synthetic absorbant (do not use alkaline absorbants) and dispose of wastes in compliance with local, State and Federal regulations. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

**PESTICIDE DISPOSAL:** Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to applicable Federal, State or local procedures.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**NOTICE OF WARRANTY**

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. 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, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. **DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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