



201-281



Shell

# Bladex 4L

Herbicide

Use of Bladex 4L in Corn,  
Cotton, and Grain Sorghum

EPA Reg. No. 201-281

EPA Est. No. 201 FL-1

GREEN  
BOX

2

201 281

**TABLE OF CONTENTS**

Precautionary Statements	2
Storage and Disposal	2
Conditions of Sale and Warranty	3
General Information	3
Application Directions	4
Application in Center Pivot Sprinkler Irrigation Water	6
Use in Corn	8
Tank Mixes	11-15
Minimum or No-Till Weed Control	16
Use in Cotton	16
Preemergence	16
Directed Post Emergence Early Use	17-19
Use in Grain Sorghum (Milo)	20

**SHELL CHEMICAL COMPANY**  
A Division of Shell Oil Company  
**AGRICULTURAL CHEMICALS**  
HOUSTON, TX 77001

Covered by U.S. Patent Nos. 3,505,325  
and 3,620,710

ACL 1783J9-83

201-281

# Bladex' 4L Herbicide

Contains 4 lbs. Bladex per gallon

ACTIVE INGREDIENTS	BY WEIGHT
2 [[4-chloro-6-(ethylamino)-s-triazin-2-yl]amino] 2-methyl propionitrile	43%
INERT INGREDIENTS	57%
<b>TOTAL</b>	<b>100%</b>

## KEEP OUT OF REACH OF CHILDREN WARNING

### STATEMENT OF PRACTICAL TREATMENT

**IF SWALLOWED**, call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by inserting 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. Get medical attention if irritation persists.

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

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

See additional precautions.

## PRECAUTIONARY STATEMENTS HAZARD TO HUMANS AND DOMESTIC ANIMALS WARNING

May be fatal if swallowed. Causes eye irritation. Harmful if inhaled or absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating or smoking. Avoid breathing spray mist. Remove contaminated clothing and wash before reuse. For 24-hour emergency medical assistance, call (713) 473-9461.

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 livestock.

### ENVIRONMENTAL HAZARDS

Keep out of lakes, streams or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes. In case of significant spill, call (713) 473-9461 or CHEMTREC (800) 424-9300.

### DIRECTIONS FOR USE

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

### STORAGE AND DISPOSAL

**Storage:** Do not contaminate water, food, or feed by storage or disposal.

**Pesticide Disposal:** Pesticide, spray mixture, or residue that cannot be used according to label instructions must be disposed of according to applicable federal, state, or local procedures.

**Container Disposal:** Destroy used containers, do not reuse for any purpose. Destroy containers according to approved Federal, State, or local procedures. Triple rinse and dispose of containers in a sanitary landfill or by incineration if permitted by State and local authorities. If burned, keep out of smoke.

201 281

#### CONDITIONS OF SALE AND WARRANTY

SHELL AND THE SELLER OFFER THIS PRODUCT, AND THE BUYER AND USER ACCEPT THIS PRODUCT, ONLY UNDER THE FOLLOWING AGREED CONDITIONS OF SALE AND WARRANTY. The directions for use of this product are believed to be reliable and should be followed carefully. However, it is impossible to take into account all variables and to eliminate all risks associated with its use. Injury or damage may result because of conditions which are beyond the control of Shell or the seller, including soil texture, organic matter content of soil, weather, presence of other materials, and the manner of use or application. Shell warrants only that this product conforms to the chemical description on the label and is believed to be reasonably fit for the purposes referred to in the Directions for Use when used as directed under normal conditions. SHELL MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. Any variation or exception from this warranty must be in writing and signed by an authorized Shell representative.

#### LIMITATION OF LIABILITY

Shell's liability, whether or not based on negligence, breach of expressed or implied warranty, strict liability or any other legal theory, is limited to the cost of this product. In no case shall Shell or the Seller be liable for consequential, incidental, or indirect damages, such as loss of crops, resulting from the use or handling of this product.

#### GENERAL INFORMATION

BLADEX 4L Herbicide is a selective herbicide for the control of annual grasses and broadleaved weeds in field 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.

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 wet the top 1 1/2 to 2 inches of soil or make the soil too wet to cultivate, for most soils 1/2 to 1 inch of moisture is sufficient. A rotary hoeing or shallow cultivation is recommended if a rainfall or sprinkler irrigation has not occurred within about ten days after application of BLADEX 4L. 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, a shallow cultivation or a postemergence herbicide treatment may be of benefit under these circumstances. When applied as a directed post emergence herbicide on cotton, BLADEX 4L is also active through foliage as well as through the roots.

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

201-281

#### APPLICATION DIRECTIONS

##### General Mixing and Spraying Directions

If another pesticide has been used previously, be sure the sprayer tank, boom, and nozzles have been thoroughly flushed with clean water.

Sufficient jet or mechanical agitation should be provided during the filling operation and during application to keep the spray mixture uniformly suspended. Fill the spray tank at least one-half full of clean water and while pump and agitator are running, add the recommended amount of BLADEX 4L to the tank, then fill with water to the desired level. For tank mixes, once the BLADEX 4L is completely suspended in the water, add the recommended amount of other products to the tank while filling with water to the desired level. Add all wettable powders before liquids. For emulsible concentrates (EC), such as Lasso™ or Dual™, pre-mix these products in equal amounts of water or pouring the products directly into the water stream as the tank is filling will aid in achieving compatible tank mixtures. Fluid fertilizers may replace all or part of the water as carrier. Always check the compatibility of BLADEX 4L or BLADEX 4L tank mixes and fluid fertilizers according to the Jar Test for Compatibility instructions below, before the herbicide and fertilizer are mixed in the spray tank.

Allow the pump to run several minutes before application to ensure proper suspension and mixing of BLADEX 4L or other various mixtures. If BLADEX 4L or tank-mix combinations of BLADEX 4L with atrazine are allowed to stand in a spray tank or nurse tank for an extended period (several hours or overnight), provide good agitation for several minutes before application to ensure proper suspension and mixing. Tank-mix combinations of BLADEX 4L with other products should be continuously agitated and should be mixed and applied as soon as possible.

Apply with flat fan (even flat fan for band application) or flood nozzles in conjunction with 50 mesh nozzle screens and in-line screens. Carefully follow the nozzle manufacturer's recommendation for correct nozzle height, positioning and spacing. Check for uniform distribution of spray droplets. Apply at pressures of 15-35 psi to reduce chemical loss due to fine mist drift.

Apply the spray mixture to the soil surface using at least 15 gal's A for ground application. Apply by air using a minimum of 4 gal's A of spray mixture.

Check nozzles, pressure, and output regularly to ensure proper calibration and application.

ALL RATES INDICATED ON THIS LABEL ARE BROADCAST APPLICATION RATES PER ACRE UNLESS OTHERWISE STATED. FOR BAND APPLICATION, USE PROPORTIONATELY LESS.

201-281

### Jar Test for Compatibility

- A. Add one pint of liquid fertilizer or other carrier to be used to two quart jars. Mark one quart jar "with" and the other jar "without."
- B. To the jar marked "with" add 1/4 teaspoon of a suitable compatibility agent. Shake gently for 5 to 10 seconds to mix. (1/4 teaspoon pint = 2 pints/100 gallons)
- C. To each jar add the appropriate amount of herbicides corresponding to the herbicide rate and spray volume selected (see following table). If more than one herbicide is used, add them separately: wettable powders first, flowables second, and emulsible concentrates last. Shake gently for 5 to 10 seconds after each addition.
- D. Let stand one-half hour and make observations. If any separation, agglomeration or precipitation has occurred, again shake the jar 10 to 15 seconds.
1. If mixtures appear to be compatible in both jars, the herbicides can probably be used without a compatibility agent.
  2. If the mixture in the jar marked "with" is compatible but the one in the jar marked "without" is incompatible, a compatibility agent should be used.
  3. If both mixtures are incompatible, the liquid fertilizer and herbicides should not be used in the same spray tank.

### Jar Test for BLADEX 4L Compatibility with Liquid Fertilizer

Gallons Liquid Fertilizer per acre	15	20	25	30	40
Teaspoons of BLADEX 4L* pint of fertilizer	1 1/2	1 1/4	1	3/4	1/2

\* Based on 1 qt. BLADEX 4L (1 pound active ingredients) per acre in fertilizer volumes indicated. Increase volume proportionately to correspond with intended field rate in terms of pounds BLADEX 4L per acre (e.g., for field rate of 4 qts. BLADEX 4L in 20 gallons fertilizer per acre, add 7 teaspoons BLADEX 4L to 1 pint fertilizer for compatibility testing purposes. CALCULATION: At 4 qts. BLADEX 4L rate 20 gallons fertilizer, 4 x 1 1/4 teaspoons = 5 teaspoons BLADEX 4L/pint of fertilizer).

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.

201-281

**Tank Mix Combination Compatibility Agents**

BLADEX 4L Lasso (Liquid Fertilizer Grade)	Probably not needed in 28-0-0, 10-34-0 Compas, may help in others
BLADEX 4L Sutan + 76 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, Irony Liquid may help in others

**APPLICATION IN CENTER PIVOT SPRINKLER IRRIGATION WATER (For use in Midwest and Plains States only).**

BLADEX 4L alone or in tank-mix combinations with atrazine or Lasso 4EC, may be applied in center pivot sprinkler irrigation water. Apply any time after planting but prior to crop emergence. Pre-mix the herbicide(s) in water to form a slurry and inject at a carefully calibrated rate into the irrigation water during the entire period of the run. Mix at 1000 to 1500 rpm for a spray application. Provide good agitation for the herbicide mixture throughout the application.

Select the correct application rate of BLADEX 4L or the BLADEX tank-mix combinations from the rate tables listed on the label.

**Example.**

A center pivot sprinkler that is 1320 feet long (1/4 mile) will irrigate 125.7 acres. A sandy loam soil containing 2% organic matter will require 2 quarts of BLADEX 4L per acre.

$$125.7 \text{ A} \times 2 \text{ qts.} = 251.4 \text{ quarts active BLADEX 4L}$$

$$\frac{251.4}{4} = 62.9 \text{ gallons BLADEX 4L}$$

Mixing tank size 600 gallons. Sprinkler takes 20 hours to apply 1/2 inch of water to the complete circle, injection rate =

$$\frac{600}{20} = 30 \text{ gal./hr. or } 0.5 \text{ gal./minute}$$

Calibrate injection pump to deliver herbicide mix into the irrigation system at the rate of 30 gallons per hour or 0.5 gallons per minute. Add 62.9 gallons of BLADEX 4L to the tank.

For tank-mix combinations, select the correct dosage rate and follow the same procedures outlined above for each herbicide component.

Apply in 1/2 to 1 acre inch of water. Use this method of application only with irrigation systems designed for uniform application of water.



201-281

#### Additional Use Precautions

1. Apply product or tank mixes only through center pivot irrigation systems containing anti-siphon and check valves which will prevent water source contamination and overflow of the slurry tank and containing interlocking controls between metering device and the water pump to ensure simultaneous shut off.
2. Inject the herbicide mix with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing.
3. Application of more than label recommended quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness.
4. Do not apply when wind speed favors drift, when system connectors leak, when nozzles do not provide uniform distribution, or when lines containing the product must be drained and dismantled.
5. Greater accuracy in calibration and distribution will be achieved by injecting a large volume or more dilute slurry per hour.
6. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.

201-281

### CORN

#### Weeds Controlled by BLADIX 4L Alone and in Combination with other Herbicides on Corn

##### Grasses

Annual bluegrass  
Annual leecue  
Annual (Italian)  
ryegrass  
Barnyardgrass<sup>1</sup>  
Bullgrass  
Crabgrass

Fall panicum  
Green foxtail  
Gonsegrass  
Green foxtail  
Junglence

Setgrass (Indian  
lovegrass)  
Witchgrass  
Yellow foxtail

##### Broadleaves

Annual groundcherry  
Annual morningglory  
Annual rattle  
Black mustard  
Buffalobur  
Buttercup (annual)  
Carpenter  
Cocklebur<sup>2</sup>  
Common chickweed  
Common groundsel  
Common mallow  
Common purslane  
Corn spurry  
Curly dock (seedling)  
Fiddleneck

Florida pusley  
(Florida purslane)  
Hedge mustard  
Jimsonweed<sup>1</sup>  
Kochia  
Ladysmumh  
Lambsquarters  
Mayweed  
Nightshade (annual)  
Pigweed<sup>1</sup>  
Pineappleweed  
Plantain  
Poxwile  
Prickly sida (flower)  
Prostrate knotweed

Prostrate spurge  
Ragweed  
Russian Thistle  
Shepherdspurse  
Smallflower gasnoga  
Smartweed  
(Pennsylvania)  
Sunflower<sup>2</sup> (wild,  
annual, common)  
Tarweed cuphea  
(Gumweed)  
Velvetleaf<sup>1</sup>  
W/d buckwheat  
W/d mustard  
W/d radish  
W/d turnip

<sup>1</sup>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 BLADIX may be impaired against these weeds.  
<sup>2</sup>The degree of control will be reduced if soil moisture and temperature conditions cause deep germination of the seed.

201 241

## CORN

### PREEMERGENCE-PREPLANT

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.

A rotary hoeing is recommended for preemergence applications which do not receive adequate rainfall or sprinkler irrigation to wet the top 1 1/2-2" 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 Applied Alone

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

201-281

**TABLE 1  
PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE  
FOR BLADIX 4L APPLIED ALONE ON CORN**

Soil Texture Description	Quarts of BLADIX 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, Silty	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

201 281

### BLADEX COMBINATIONS

#### BLADEX plus Atrazine

Use at the proper rate for soil texture and organic matter indicated in Table 2. Table 2 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 2. For grassier conditions use a ratio that contains higher levels of BLADEX (3:1). For fields with more broad-leaves 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.

180 102

TABLE 2  
PREEMERGENCE BROADCAST APPLICATION RATES PER ACRE FOR  
TANK-MIX COMBINATIONS OF BLADEX 4L PLUS ATRAZINE 4L 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/Loam/Sand	DO NOT USE	0.75 + 0.5	1.0 + 0.5	1.5 + 0.5	1.75 + 0.75	2.25 + 1.0
Sandy Loam	0.75 + 0.5	1.0 + 0.5	1.5 + 0.5	1.75 + 0.75	2.25 + 1.0	2.75 + 1.25
Loam S/Loam S4	1.0 + 0.5	1.5 + 0.5	2.0 + 0.75	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 + 0.75	2.25 + 1.0	2.75 + 1.25	3.25 + 1.25	3.5 + 1.25
Sandy Clay Silty Clay Clay	2.0 + 0.75	2.25 + 1.0	2.75 + 1.25	3.25 + 1.25	3.5 + 1.25	3.75 + 1.5

Best Results NOT RECOMMENDED

\*For organic matter content between 1% - 2% listed as 1% or 2% range, use 1% rate.

\*\*If Atrazine 4L is used, multiply rates shown by 1.25 to equal rate of Atrazine 4L.



201 281

**TABLE 3**  
**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	1.25	1.5	1.75	2.0	2.25	2.5
Sandy Clay Loam Clay Loam Silt Clay Loam	1.5	1.75	2.0	2.25	2.5	2.75
Sandy Clay Silt 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 application rate linearly.  
\*\*Do not use in the Atlantic Coastal Plain.

14

16



207 2A1

**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 4. 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.

**TABLE 4  
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 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	1.5 + 0.75	1.5 + 0.75	1.75 + 0.75	2.0 + 0.75
Sandy Clay, Silty Clay, Clay	1.25 + 0.5	1.5 + 0.75	1.5 + 0.75	1.75 + 0.75	2.0 + 0.75	2.0 + 1.0
Peaty Muck	NOT RECOMMENDED					

\*For organic matter content between the recommended rate proportions.

\*\*Do not use in the Atrazine-Corn system.

\*\*\*If Atrazine Bulk is used, multiply rates shown by 1.25 to equal Quarts of Atrazine 4L.

### Minimum or No-Till Weed Control

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 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, 2, or 3 should be increased by 25%. Add 1/2-1 pt/A of 2,4-D Low Volatile 6 lb Ester (0.75-1.5 pt A 2,4-D LV 4 lb Ester). Add the 2,4-D LV to the spray tank last. Use a minimum of 25 gals/A 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 as they help aid in the breakdown of existing weeds. Add Onho X-77<sup>®</sup> surfactant at 1-2 pts per 100 gals of diluted spray or other suitable surfactant at its recommended rate. Apply before weeds are 3" in height. For control of existing alfalfa add 1.3-2 pt/A of Blawert<sup>®</sup> to the spray mixture. Apply before the alfalfa exceeds 6" in height.

For fields with existing sod grasses, such as orchardgrass, bromegrass, ryegrass, etc., or when very dry conditions exist, or when existing weeds are 3" in height, add 1 pt/A of the tank mix to 2 pt/A of paraquat in combination with BLADEX as described above in this section, except the 2,4-D LV may be omitted. Do not tank mix paraquat in suspension type liquid fertilizer.

### COTTON

#### PREEMERGENCE USE

##### Weeds Controlled

Annual monnina grass  
Cocklebur  
Flocky sida (teaweed)  
Sourge

BLADEX 4L Herbicide is a selective preemergence herbicide for early season weed control in cotton. Supplemental practices (such as directed postemergence BLADEX 4L application) may be necessary to control late season weeds. BLADEX 4L can be used in a tank-mix combination with Zonal<sup>®</sup> B04WP. Apply only in the states of AL, AR, LA, MS.

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.

When 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.**

201-281

**BLADEX Plus Zorial 80WP**

Apply BLADEX 4L plus Zorial 80WP at the proper rate for the soil texture shown in Table 5. 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 6 months after the last application of Zorial 80WP or injury may occur.

**TABLE 5  
PREEMERGENCE BROADCAST APPLICATION  
RATES PER ACRE FOR  
BLADEX 4L + ZORIAL 80WP ON COTTON**

Soil Texture (Soil Texture must contain at least 1.0% Organic Matter)	BLADEX 4L + ZORIAL 80WP qts. lbs
Coarse Sands - Sandy loam	0.5 8
Medium Sands - Sandy loam Lean clay loam sandy clay loam	0.6 13
Fine Sands - Sandy loam Silty clay loam	0.9 13
Clay	1.2 15

DO NOT USE ON COARSE SANDS AND SANDY LOAMS  
RATHER THAN FINE SANDS AND SILTY LOAMS

**DIRECTED POSTEMERGENCE — LAYBY USE**

**Weeds Controlled**

- |                        |                                |
|------------------------|--------------------------------|
| Annual morning glory*  | Palmer amaranth                |
| Bristly starbur        | Pigweed (redroot and<br>spiny) |
| Cocklebur              | Prickly sida (leafweed)        |
| Crotalaria             | Sicklepod                      |
| Jimsonweed             | Spurge                         |
| Lambquarters           | Tropaeolum                     |
| Nightshade<br>(annual) | Wright's gonolobus             |

\*The degree of preemergence control from a layby treat-  
ment 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 layby to cotton and other pre-  
emergence to weeds or postemergence to weeds in all  
cotton growing states. Apply before weeds are more than  
2 1/2 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 a height of 12 inches or more.

The spray mixture should be directed to the soil and  
the base of the cotton plants. Care should be taken to  
prevent the spray from reaching the cotton leaves as injury  
will occur. The time of treatment is dependent on applicator  
equipment and is recommended to be applied to the spray con-  
taining the cotton foliage.

BLADEX 4L may be used for postemergence following a  
preemergence application of BLADEX 4L. Apply no more  
than one preemergence and one postemergence applica-  
tion in a single crop in any one year. If BLADEX 4L is not  
used for preemergence application, then only one postemer-  
gence application is allowed in any one crop in any one year.  
Do not use BLADEX 4L for more than two postemergence  
applications.



201-281

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.

**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 6. Apply at layby at the rates for the soil texture indicated in Table 7. Add an agricultural surfactant such as X-77 or other 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).

**TABLE 6  
DIRECTED POSTEMERGENCE  
APPLICATION RATES PER ACRE  
FOR BLADEX 4L ON COTTON**

Broadcast	Banded 38" Row	
	12" Band	19" Band
0.6-1.0 qt	0.2-0.3 qt	0.1-0.1 qt

**TABLE 7  
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
	Silt and silty loam, Medium loam, clay loam, sandy clay loam and sandy clay	1.2 qt
	Fine Silty clay loam, silty clay and clay	1.6 qt

**BLADEX Plus MSMA**

Apply a tank mix combination of BLADEX 4L plus MSMA plus surfactant after the cotton is 6" 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 8. Add a surfactant such as X-77 at the rate of 2 qts/100 gals. of spray mixture (or as directed by the manufacturer).

201-281

**TABLE 8  
DIRECTED POSTEMERGENCE  
APPLICATION RATES PER ACRE  
BLADEX 4L + MSMA ON COTTON**

Broadcast	Banded 38' Row	
	12' Band	19' Band
0.6 - 1.0 Quat BLADEX 4L	0.2 - 0.3 qt	0.3 - 0.5 qt
+ 4 pnts MSMA (4.5 lb/qt)	1.3 pnts	2 pnts
or 24 pnts MSMA (6.6 lb/qt)	or	or
	0.8 pnt	1.2 pnts

**BLADEX Plus Dinitro (dinoseb)**

Apply a tank mix combination of BLADEX 4L plus Dinitro 3 plus surfactant after the cotton is 6" tall. Tank-mix BLADEX 4L plus Dinitro 3 at the rates indicated in Table 9. Add a surfactant, such as X-77, at the rate of 2 qts (100 gals) of spray mixture. Do not apply when soil surface is wet or cotton plants are extremely succulent. Do not apply in CA or AZ.

**TABLE 9  
DIRECTED POSTEMERGENCE  
APPLICATION RATES PER ACRE  
BLADEX 4L + DINITRO ON COTTON**

Broadcast	Banded 38' Row	
	12' Band	19' Band
0.6 - 1.0 qt BLADEX 4L	0.2 - 0.3 qt	0.3 - 0.5 qt
+ 1.2 qts DINITRO 3	0.7 - 0.65 qt	0.5 - 1.0 qts

**BLADEX Plus MSMA Plus Dinitro**

Apply as directed in the "BLADEX Plus MSMA" section of the label. Tank-mix BLADEX plus MSMA at the rates shown in Table 8. Add Dinitro at the rate shown in Table 9. Add a surfactant, such as X-77, at the rate of 2 qts (100 gals) of spray mixture. Do not apply when soil surface is wet or cotton plants are extremely succulent. Do not apply in CA or AZ.

201 281

### GRAIN SORGHUM (M/LO)

Tank-mix combinations of BLADEX 4L plus propachlor (Ramrod™) or propazine (Mogard™) may be used for selective preemergence weed control in grain sorghum. Do not use on forage sorghum.

BLADEX 4L in tank-mix combination with propachlor or propazine should be applied only once per crop season. 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 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, 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.

### BLADEX 4L Plus Propachlor (Ramrod)

#### Weeds Controlled

Greens	
Barnyardgrass	Great foxtail
Crabgrass	Green foxtail
Fall panicum	Yellow foxtail
Broadleaves	
Annual morningglory	Pigweed
Carpetweed	Ragweed
Cocklebur*	Smartweed
Common purslane	(Pennsylvanian)
Lambsquarters	Velvetleaf

\* 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.

Apply BLADEX 4L plus propachlor at the proper rate for soil texture and organic matter shown in Table 10. Only apply this tank-mix to grain sorghum grown in states East of the Rocky Mountains. Any rotational crop may be planted the fall or spring following this treatment.

201-281

**TABLE 10  
PREEMERGENCE BROADCAST APPLICATION  
RATES PER ACRE FOR BLADEX 4L +  
PROPACHLOR (RAMROD) 4L ON GRAIN  
SORGHUM**

SOIL TEXTURE DESCRIPTION	PERCENT ORGANIC MATTER IN SOIL*			
	2%		3%	
	QTS. ACRE BLADEX 4L	QTS. ACRE PROPA- CHLOR 4L	QTS. ACRE BLADEX CHLOR 4L	QTS. ACRE PROPA- 4L
Sand Loamy Sand	DO NOT USE			
Sandy loam	10	25	12	30
Lean Silty loam Ss	12	30	14	35
Sandy Clay loam Clay loam Silty Clay loam	14	35	16	40
Sandy Clay Silty Clay Clay	16	40	18	45
French Silt	NOT RECOMMENDED			

\*For organic matter less than 2% use 10 qts. per acre of Bladex 4L and 25 qts. per acre of Propachlor 4L.

**BLADEX Plus Propazine (Milogard)**

**Weeds Controlled**

- Graeses**
- Crabgrass
  - Fall panicum
  - Grant foxtail
  - Green foxtail
  - Yellow foxtail
- Broadleaves**
- Annual morning glory
  - Carpetweed
  - Cocklebur
  - Common purslane
  - Lambsquarters
  - Pigweed
  - Puncturevine
  - Ragweed
  - Smartweed
  - Velvetleaf

Apply BLADEX 4L plus Propazine at the proper rate for soil texture shown in Table 11.

Apply to grain sorghum grown only in the states of Texas, Oklahoma, and Kansas. Rotational Crops: In the Texas Gulf Coast and Texas Blacklands, fields treated with this tank-mix may be planted to cotton, soybeans, or corn 12 months after treatment. In Oklahoma and West Texas, fields treated with this tank-mix may be planted to cotton or corn 12 months after application. In Kansas, corn may be planted in rotation 12 months after treatment. Other crops should not be planted for 18 months following treatment.

201-281

TABLE 11  
PREEMERGENCE BROADCAST APPLICATION  
RATES PER ACRE FOR BLADEX 4L +  
PROPZINE (MILOGARD) 4L ON GRAIN  
SORGHUM

SOIL TEXTURE	QTS. ACRE BLADEX 4L	QTS. ACRE PROPZINE 4L*
Sand, Loamy Sand, Sandy Loam	DO NOT USE	
Loam, silt loam, s. l.	0.8	0.75
Sandy clay loam, clay loam, silty clay loam	1.0	1.0
Sandy clay, silty clay, clay	1.2	1.25
Peat or Muck	NOT RECOMMENDED	

\* If Propazine 60W is used multiply rate shown by 1.25 to equal pounds of Propazine 60W.

BLADEX® - Trademark of Shell Chemical Co.  
 Ethion® - Trademark of Velsicol Chemical Co.  
 Dacthal®, Milogard® - Trademarks of Ciba-Geigy Corp.  
 Eralon®, Sulon® - Trademarks of Stauffer  
 Chemical Co.  
 Lasso®, Renon® - Trademarks of Monsanto Co.  
 Ortho X 77® - Trademark of Chevron Chemical Co.  
 Topol® - Trademark of Eanco Products Co.  
 Zonal® - Trademark of Sandoz, Inc.

22

24