

ACCOUNTED  
201-281

BLADEX® 4L  
HERBICIDE

(Contains 4 lbs. BLADEX Per Gallon)

BY WEIGHT

<u>ACTIVE INGREDIENTS</u>	
2-[[4-chloro-6-(ethylamino)-s-triazine-2-yl]	
amino]-2-methylpropionitrile.....	43%
<u>INERT INGREDIENTS.....</u>	<u>57%</u>
TOTAL	100%

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

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 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. 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 inside.

EPA Reg. No. 201-281

EPA Est. No. 201-IL-1

Shell Chemical Company  
A Division of Shell Oil Company  
Agricultural Chemicals  
Houston, TX 77001

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 dust or 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 bovines.

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 rinsate 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.

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 cause, 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, sweet corn, popcorn, cotton, grain sorghum, wheat and fallow cropland.

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 1/2-3/4" 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 post-emergence herbicide, 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.

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-mixing 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 fertilizer, according to the Jar Test for Compatibility instructions below, before the herbicide and fertilizer are mixed in the spray tank.

For use with a surfactant or vegetable oil, completely suspend the BLADEX 4L in water and fill the tank before adding the surfactant or vegetable oil.

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 gals./A. for ground application. Apply by air using a minimum of 4 gals./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.

#### 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. Increased 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,  $4 \times 1-1/4$  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.

TANK MIX COMBINATION	COMPATIBILITY AGENTS
BLADEX 4L/Lasso (Liquid Fertilizer Grade)	Probably not needed in 28-0-0, 10-34-0. Compex, 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.

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 4 EC, may be applied in center pivot sprinkler irrigation water. Apply anytime 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 as directed 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 this 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.

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

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

Mixing tank size 600 gallons. Sprinkler takes 20 hours to apply 1/2 inch of water to the complete circle; inject 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.

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 overlay sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.



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

## Grasses

Annual bluegrass	Fall panicum	Stinkgrass (Indian lovegrass)
Annual fescues	Giant foxtail	Wild oat
Annual (Italian) ryegrass	Goosegrass	Witchgrass
Barnyardgrass <sup>1</sup>	Green foxtail	Yellow foxtail
Bullgrass	Johnsongrass (seedling)	
Crabgrass	Junglerice	

## Broadleaves

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

<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 BLADEX 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.

### 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 label.

A rotary hoeing is recommended for preemergence applications which do not receive adequate rainfall or sprinkler irrigation to wet the top 1½-2" 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.

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.

## 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 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.

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, Loamy 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, Silt Loam, Silt	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
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 lbs. of Atrazine 80W.

BLADEX plus Lasso 4 EC

Use BLADEX 4L at the proper rate for the soil texture and organic matter shown in Table 3 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 3 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 of less than 1 percent organic matter and the light sandy soils of eastern coastal states. Do not use on corn seed stock.

Apply before planting. Incorporate the mixture immediately upon application using power-driven cultivation equipment set for 2-3 inch 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 discing, readjust the disc to prevent cutting deeper than 4 inches. BLADEX 4L may be applied preemergence as an overlay over previous 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*
Perennial	Yellow Nutsedge (nutgrass)
Weeds	Purple Nutsedge (nutgrass)

\*Suppression only--refer to Sutan+ or Eradicane label for appropriate supplement 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.

BLADEX Plus Dual 8E

Use BLADEX 4L at the proper rate for soil texture and organic matter shown in Table 3. Use Dual as follows:

<u>SOIL TEXTURE</u>	<u>BROADCAST RATE PER ACRE</u>
<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.

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,	1.25	1.5	1.75	2.0	2.25	2.5 Silt
Sandy Clay Loam, 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 Atlantic Coastal Plain.

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

Quarts of BLADEX 4L + Quarts Atrazine 4L\*\*\*  
Percent of Organic Matter in Soil\*

Soil Texture Description	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 Atlantic Coast Plain.

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

## Conservation Tillage Weed Control

### Early Preplant (EPP)

[Prior to planting weed control for land going into production of corn.]

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.

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

Where broadleaf weeds are present, add 2,4-D LV Ester at 1 1/3 - 2 pts./A. (6 lb./gal.) or 2 - 3 pts./A. (4 lbs./gal.) plus X-77 surfactant at 1 qt./100 gals. of diluted spray, or other suitable surfactant at its recommended rate. If existing weeds exceed 3 inches in height, add 1 - 2 pts./A. of paraquat to the above mixture. Well established weeds over 6 inches tall may not be well controlled. Use at least 25 gals./A. of spray mixture by ground rig or 5 - 10 gals./A. for aerial application.

Depending upon weather conditions following the EPP application, a postemergence BLADEX treatment, 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 or 2 qts./A. of Lasso 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, 2, 3, or 4 should be increased by 25%. Add 1/2 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. 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 as they aid in the burndown of existing weeds. Add Ortho X-77™ 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" 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" 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" in height add Paraquat CL to the tank-mix. Use 2 pts/A. of Paraquat CL in combination with BLADEX as described above in this section, except the 2,4-D LV may be omitted if desired. Do not apply Paraquat CL in suspension type liquid fertilizer.

#### POSTEMERGENCE

##### BLADEX Applied Alone

Use BLADEX 4L at the proper rate for the soil texture and organic matter shown in Table 5 or 5A. Use rates shown in Table 5 if BLADEX has not been applied to the soil this season. Use rates shown in Table 5A if BLADEX has 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" 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 in a liquid fertilizer carrier.

DO NOT APPLY THIS TREATMENT UNDER COLD, WET, WEATHER CONDITIONS OR TO WEATHER STRESSED OR STORM DAMAGED CORN. Yellowing of the corn 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 use on corn grown for seed. Any rotational crop may be planted the fall or spring following this treatment.

TABLE 5  
 POSTEMERGENCE BROADCAST APPLICATION RATES  
 PER ACRE FOR BLADEX 4L ON CORN  
 NO PRIOR BLADEX APPLICATION

Soil Texture	Quarts of BLADEX 4L			
	Percent Organic Matter in Soil*			
	Less than 1%	1%	2%	Over 2%
Sand, Loamy Sand 2.0	DO NOT USE	1.25	1.5	
Sandy Loam 2.0	1.25	1.5	2.0	
Loam, Silt Loam, 2.0 Silt	1.5	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 5A  
 POSTEMERGENCE BROADCAST APPLICATION RATES  
 PER ACRE FOR BLADEX 4L ON CORN  
 BLADEX 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 1.4	DO NOT USE	DO NOT USE	1.4	
Sandy Loam 2.0	DO NOT USE	DO NOT USE	1.6	
Loam, Silt Loam, 2.0 Silt	DO NOT USE	1.4	2.0	
All other 2.0 textures	DO NOT USE	1.8	2.0	

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

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 4L equal to the rate shown in Table 5 or 5A for the proper soil texture and organic matter. To determine the amount of BLADEX 4L to use, multiply the rate indicated by 0.7. To determine the amount of Atrazine 4L to use, multiply the rate indicated by 0.3. (For the 2.0 qts/A. rate, use 1.5 qts/A. of BLADEX 4L plus 0.5 qts/A. of Atrazine 4L.)

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

BLADEX Plus Banvel

Apply as directed under "Postemergence - BLADEX Applied Alone" section of  
this label. Add 1/2 - 2/3 pt/A. of Banvel to the mixture.

COTTONIDLE SEASON EARLY PREPLANT WEED CONTROL (CALIFORNIA ONLY)

## Weeds Control

## Grasses

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

## Broadleaves

Annual Henbit	Groundsel	Pineapple Weed
Black Nightshade	Knotweed	Prickley Lettuce
Burclover	Marestail	Shepherd spurse
Cheeseweed*	Miners Lettuce	Sowthistle
Chickweed	Lambsquarter	Wild Mustard
Fiddleneck	London Rocket	Wild Radish

\*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 following table. 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 on where volunteer grains are a major problem, tank-mix BLADEX with 1 - 2 pts./A. of paraquat or 2 - 3 qts./A. of Dinitro 5 Weed Killer. Well established weeds 6 - 8 inches tall or taller may not be well controlled.

Apply BLADEX in at least 20 gal./A. of carrier by ground, 5 gal./A. by air. Add X-77 surfactant at 1 - 2 qts./100 gals. of diluted spray where

paraquat is used. Crop oil concentrate or emulsible vegetable oil are not needed where paraquat or Dinitro Weed Killer are used.

BLADEX can also be tank-mixed with Treflan™ pre-plant incorporated for fall listed cotton beds instead of surface applied as described above.



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

Soil Texture	DAYS PRIOR TO PLANTING*					
	30 Days		60 Days		90 Days	
	Qts. of BLADEX Organic Matter		Qts. of BLADEX Organic Matter		Qts. of BLADEX Organic Matter	
	2% or Less	2% or More	2% or Less	2% or More	2% or Less	2% or More
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 rate proportionately.

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.

PREEMERGENCE USE

Weeds Controlled

Annual morningglory  
Cocklebur  
Prickly sida (teaweed)  
Spurge

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 on cotton either alone, as an overlay following a preplant incorporated application of Treflan™ or in a tank-mix combination with Zorial™ 80WP. Apply preemergence only in the states of Alabama, Arkansas, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, and some areas of Texas (Texas Gulf Coast/Costal Bend and Blacklands only).

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            OR FEED FOLIAGE FROM TREATED AREAS TO LIVESTOCK.

#### BLADEX Applied Alone or as an Overlay

Apply BLADEX 4L at planting, or after planting but before the crop has emerged. Use BLADEX 4L at the proper rate for soil texture and organic matter shown in Table 6. Any rotational crop may be planted the fall or spring following this treatment. Should the cotton stand be lost, the field can be replanted to cotton or soybeans.

TABLE 6  
 PREEMERGENCE BROADCAST APPLICATION  
 RATES PER ACRE FOR BLADEX 4L ON COTTON

SOIL TEXTURE (Must Contain at least 1% Organic Matter)	Soil Texture	Qts. BLADEX 4L Organic Matter	
		1 - 1.5%	Over 1.5%
Coarse Soils	Sandy loam	0.8	0.8
Medium Soils	Silt and silt loam	0.8 - 1.0	1.0
	Loam, clay loam, sandy clay loam, and sandy clay	1.2 - 1.6	1.6
Fine Soils	Silty clay loam, silty clay and clay	1.6 - 2.0	2.0

Do not use BLADEX 4L on coarse soils (sands and loamy sands) containing more than 70 percent sand. Do not use BLADEX 4L on soils containing less than 1 percent organic matter. Use of BLADEX 4L on sands and loamy sands and/or soils containing less than 1 percent organic matter will likely result in injury to the cotton crop.

BLADEX Plus Zorial 80WP

Apply BLADEX 4L plus Zorial 80WP at the proper rate for the soil texture shown in Table 7. 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 80WP or injury may occur.

TABLE 7  
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 qts.	+ ZORIAL 80W lbs.
Coarse Soils	Sandy loam	0.5	.8
Medium Soils	Silt and silt loam	0.6	1.3
	Loam, clay loam, sandy clay loam, and sandy clay	0.9	1.3
Fine Soils	Silty clay loam, silty clay and clay	1.2	1.6

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

DIRECTED POSTEMERGENCE - LAYBY USEWEEDS 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 post-emergence/layby to cotton and either preemergence to weeds or post-emergence 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 a 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 help avoid the spray contacting the cotton foliage.

BLADEX may be applied postemergence following a preemergence application of BLADEX. Apply no more than two postemergence and one preemergence application to the same crop in any one year. If BLADEX is not used preemergence, apply no more than three postemergence applications to the same crop in any one year. 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 8. Apply at layby at the rates for the soil texture indicated in Table 9. 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 8

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

Banded 38" Row		
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 9

LAYBY APPLICATION RATES PER ACRE  
FOR BLADEX 4L ON COTTON

Height of Cotton	Soil Texture		Broadcast Rates
12 inches	Coarse	Sandy Loam	0.8 qt.
or more	Medium	Silt and silt loam, 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 10. Add a surfactant, such as X-77, at the rate of 2 qts./100 gals of spray mixture (or as directed by the manufacturer).

TABLE 10

DIRECTED POSTEMERGENCE APPLICATION RATES  
PER ACRE FOR BLADEX 4L + MSMA 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.
+	+	+
4 pints MSMA (4 lb/gal)	1.3 pints	2 pints
or	or	or
2.4 pints MSMA (6.0 lb/gal)	.8 pint	1.2 pints

BLADEX Plus Dinitro (dinoseb)

Apply a tank-mix combination of BLADEX 80W plus Dinitro 3 plus surfactant after the cotton is 6" tall. Tank-mix BLADEX 80W plus Dinitro 3 at the rates indicated in Table 11. 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 California or Arizona.

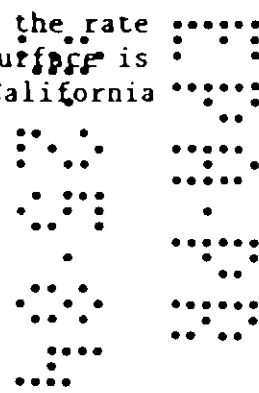
TABLE 11

DIRECTED POSTEMERGENCE APPLICATION RATES  
PER ACRE FOR 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	0.3 - 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 10. Add Dinitro at the rate shown in Table 11. 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 California or Arizona.





GRAIN SORGHUM (MILO)

Tank-mix combinations of BLADEX 4L plus propachlor (Ramrod™) or propazine (Milogard™) 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 CONTROLLEDGrasses

Barnyardgrass	Giant foxtail
Crabgrass	Green foxtail
Fall panicum	Yellow foxtail

Broadleaves

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

\*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 12. 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.

TABLE 12

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 PROPACHLOR 4L	QTS./ACRE BLADEX 4L	QTS./ACRE PROPACHLOR 4L
Sand, Loamy Sand	DO NOT USE			
Sandy Loam	1.0	2.5	1.2	3.0
Loam, silt loam, silt	1.2	3.0	1.4	3.5
Sandy clay loam, clay loam, silty clay loam	1.4	3.5	1.6	4.0
Sandy clay, silty clay, clay	1.6	4.0	1.6	4.0
Peat or Muck	NOT RECOMMENDED			

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

BLADEX Plus Propazine (Milogard)WEEDS CONTROLLEDGrasses

Crabgrass  
 Fall panicum  
 Giant foxtail

Green foxtail  
 Yellow foxtail

Broadleaves

Annual morningglory  
 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 13.

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.

TABLE 13

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

SOIL TEXTURE	QTS./ACRE BLADEX 4L	QTS./ACRE PROPAZINE 4L*
Sand, Loamy Sand, Sandy Loam	DO NOT USE	
Loam, silt loam, silt	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 80W is used multiply rate shown by 1.25 to equal pounds of Propazine 80W.

BLADEX™ - Trademark of Shell Chemical Co.  
 Banvel™ - Trademark of Velsicol Chemical Co.  
 Dual™, Milogard™ - Trademarks of CIBA-Geigy Corp.  
 Eradicane™, Sutan+™ - Trademarks of Stauffer Chemical Co.  
 Lasso™, Ramrod™ - Trademarks of Monsanto Co.  
 Ortho X-77™ - Trademark of Chevron Chemical Co.  
 Treflan™ - Trademark of Elanco Products Co.  
 Zorial™ - Trademark of Sandoz, Inc.