

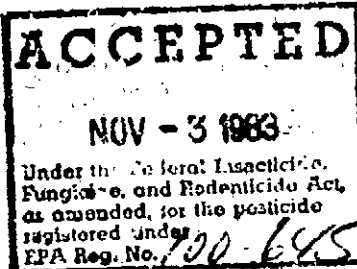
(Front Cover)

Bicep® 6L

Herbicide

For weed control in corn
and grain sorghum

2 1/2 Gallons
U.S. Standard Measure



Active Ingredients:

Atrazine: 2-chloro-4-ethylamino- 6-isopropylamino-s-triazine	27.48
Atrazine related compounds	1.58
Metolachlor: 2-chloro-N-(2-ethyl- 6-methylphenyl)-N-(2-methoxy-1- methylethyl) acetamide	36.18
Inert ingredients:	35.08
Total:	100.08

Bicep 6L contains 6 lbs. active
ingredients per gal.

Keep Out of Reach of Children.

Caution

See additional precautionary statements
inside booklet.

EPA Reg. No. 100-
EPA No. 100-LA-1

Bicep® trademark of CIBA-GEIGY
U.S. Patent No. 3,937,710 (metolachlor)

See directions for use inside booklet.

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Agricultural Division
CIBA-GEIGY Corporation
Greensboro, North Carolina 27419

CGA 56L12

CIBA-GEIGY

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product.

Conditions of Sale and Warranty

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with 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 CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.

Directions for Use

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

Bicep is a selective herbicide recommended as a preplant incorporated, preemergence surface-applied, or early postemergence treatment for control of most annual grasses and broadleaf weeds in corn and as a preplant incorporated or preemergence treatment for control of most annual grasses and broadleaf weeds in grain sorghum provided the sorghum seed has been properly treated by the seed company with Concep®. This product may be tank mixed with Dual® 8E, AAtrex® 4L (4LC, 80W, Nine-C®), or Princep® 4L (80W or Caliber® 90) for weed control in conventional tillage corn. This product may also be tank mixed with either paraquat or Roundup® alone or in combination with Princep, in minimum-tillage or no-tillage corn.

Precautions: 1) If sorghum seed is not properly pretreated with Concep, Bicep will severely injure the crop. 2) Under high soil moisture conditions prior to crop emergence, injury may occur following the use of Bicep. The crops will normally outgrow this effect.

Bicep alone or in tank mixture with AAtrex, Dual, Princep, paraquat or Roundup may be applied preplant incorporated or preemergence on corn in water or fluid fertilizer. Apply the early postemergence treatment on corn in water only. Bicep alone may also be applied on sorghum preplant incorporated or preemergence in water or in fluid fertilizer.

Bicep may be applied in water by aircraft. Applications in fluid fertilizer should be only by ground equipment.

This product may also be applied in irrigation water through center pivot irrigation systems.

Dry weather following preemergence application of Bicep or a tank mixture may reduce effectiveness. Cultivate if weeds develop in conventional tillage corn or sorghum.

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Observe all precautions and limitations on the label of each product used in tank mixtures. FAILURE TO FOLLOW ALL PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

Thoroughly clean sprayer prior to use. Do not use a sprayer contaminated with 2,4-D or other materials as crop damage or sprayer clogging may result.

Note (Bicep Alone and in Tank Mixtures): Use only on corn and grain sorghum.

Mixing Instructions

Shake well before using. Bicep is a liquid that may be mixed with water or fluid fertilizer and applied as a spray. Bicep may also be sprayed onto dry bulk granular fertilizer and applied with the granular fertilizer.

Dry Bulk Granular Fertilizers

Many dry bulk granular fertilizers may be impregnated or coated with Bicep and incorporated into the soil to control weeds in corn or Concep treated sorghum.

Labels, supplementary literature, and precautions regarding rates per acre, approved crops, soil texture, application, incorporation, crop rotation and other directions must be followed for Bicep.

All individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling the herbicide/fertilizer mixture.

Apply 200-450 pounds per acre of dry granular fertilizer impregnated with Bicep.

Do not impregnate Bicep on ammonium nitrate, potassium nitrate, or sodium nitrate either alone or in blends with other fertilizers.

Do not combine Bicep with a single superphosphate (0-20-0) or treble superphosphate (0-46-0).

Do not use Bicep on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated.

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Prepare the granular herbicide/fertilizer mixtures by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray Bicep onto the fertilizer must be placed to provide uniform spray coverage.

If the herbicide/fertilizer mixture is too wet, use a highly absorptive powder, such as Microcel E (Johns-Manville Products Corporation), diatomaceous earth or finely powdered clay, to obtain a dry free-flowing mixture. Add the absorptive powder separately and uniformly to the herbicide/fertilizer mixture and blend to form a suitable free-flowing mixture. Generally, less than 2% by weight of absorptive powder will be needed.

Calculate amounts of Bicep by the following formula:

$$\frac{2,000 \text{ lbs. of fertilizer per acre}}{1} \times \frac{\text{qts. of Bicep per acre}}{1} = \frac{\text{qts. of Bicep per ton of fertilizer}}{1}$$

For best results, apply this mixture uniformly to soil with properly calibrated equipment immediately after blending, and incorporate according to directions.

Precaution: Do not use on crops where bedding occurs following the herbicide/fertilizer application or injury may occur.

Application in Water or Fluid Fertilizers

Bicep Alone: Fill the spray tank one-half to three-fourths full with water or fluid fertilizer, add the proper amount of Bicep, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform suspension.

Tank Mixtures on Corn: Fill the spray tank one-half to three-fourths full with water or fluid fertilizer, add the proper amount of Bicep, then add AATrex or Princep, Dual, paraquat or Roundup, and finally add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform suspension.

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Check the compatibility of Bicep 6L and tank mixtures with AAtrex, Dual, Princep, paraquat or Roundup in fluid fertilizer by mixing proportionate quantities in a small container before mixing in the spray tank. If the 3 qts. per acre rate is to be applied in 25 gals. of fluid fertilizer per acre, mix 4 teaspoons of Bicep 6L in 1 pt. of fertilizer. Use 2 teaspoons of AAtrex 4L (4LC) or Princep 4L, 4/5 teaspoon of Dual 8E, 1 teaspoon of paraquat, or 4 teaspoons of Roundup when these products are to be used in the combinations. When AAtrex 80W or Nine-O, or Princep 80W or Caliber 90 is used in place of AAtrex 4L or Princep 4L, use 1.4 teaspoons of 80W, Nine-O, or Caliber 90 for each 1/2 teaspoon of 4L. For a different spray volume and/or herbicide rate, make appropriate changes in the proportion of ingredients in the test. After thorough mixing, let stand for 5 minutes. If the herbicide/fertilizer combination remains mixed or can be remixed readily, the mixture is compatible and can be sprayed.

Application Procedures

Ground Application: For uniform distribution, use fan-type nozzles. Screens in nozzles and in suction and in-line strainers should be no finer than 50-mesh. Use a pump with capacity to (1) maintain 35-40 psi at the nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension. Unless otherwise specified, use a minimum of 10 gals. of spray mixture per acre. Rinse sprayer thoroughly with clean water immediately after use.

For band applications, calculate amount to be applied per acre as follows:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Aerial Application (for Bicep alone): Use aerial application only where broadcast applications are specified. Apply a minimum of 1 gal. of water for each 1 gal. of this product applied per acre, but for rates below 1 gal./acre, use in sufficient water to equal 2 gals./acre of total spray. Avoid applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft., using low drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply Bicep by aircraft at a minimum upwind distance of 400 ft. from sensitive plants.

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin, and should wash thoroughly before eating and at the end of each day's operation.

Center Pivot Irrigation Application: Bicep alone or in mixtures with other herbicides which are registered for center pivot application may be applied in irrigation water preemergence (after planting but before weeds or crop emerge) at rates recommended on this label. Use only center pivot systems that apply water uniformly. Prepare a mixture with a minimum of 1 part of water to 1 part herbicide(s), and inject this mixture into the center pivot system using a positive displacement pump. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension. Apply in 1/2-1 inch of water. Use the lower water volume (1/2 inch) on coarser textured soils and the higher volume (1 inch) on finer textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil. Refer to supplemental literature published by CIBA-GEIGY for more information on calibration.

Precautions for center pivot applications: 1) Apply only through irrigation systems containing anti-siphon and check valves to prevent contamination of well during shutdown and overflow of solution tank. 2) Inject ahead of any right angle turn in the main line to insure adequate mixing. 3) Chemical injection pumps and water pumps must have interlocking controls to insure simultaneous shutoff. 4) Application when drift may occur from windy conditions or when system joints and connections are leaking, or when nozzles are not providing uniform distribution may cause crop injury. 5) Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.

Within rate ranges in all tables on this label, use the lower rate on soil relatively coarse-textured or low in organic matter; use the higher rate on soil relatively fine-textured or high in organic matter.

POST DOCUMENT AVAILABLE

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Bicep Applied Alone - Corn or Grain Sorghum

Preplant Incorporated or Preemergence

Weeds
Controlled

barnyardgrass
(watergrass)
browntop panicum
crabgrass
crowfootgrass
fall panicum
giant foxtail
goosegrass
green foxtail
red rice
signalgrass
(Brachiaria)
southwestern cupgrass
witchgrass
yellow foxtail
yellow nutsedge

black nightshade
carpetweed
cocklebur
common purslane
Florida pusley
galinsoga
hairy nightshade
lambsquarters
morningglory
pigweed
ragweed
smartweed
velvetleaf

Weeds
Partially Controlled

sandbur
seedling johnsongrass
volunteer sorghum

Application: Apply Bicep preplant incorporated or preemergence using the appropriate rates from Table 1 or Table 2. Preplant Incorporated: Apply to the soil and incorporate into the top 2 inches of soil within 14 days before planting using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2 inch incorporation. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop is to be planted on beds, apply and incorporate after bed formation. Preemergence: Apply to the soil surface at planting (behind the planter), or after planting but before weeds or crop emerge.

Table 1: Bicep 6L Preplant Incorporated or Preemergence - Corn

Soil texture	Broadcast rate per acre	
	Less than 3% organic matter	3% organic matter or greater
COARSE: Sand, loamy sand, sandy loam	1.5 qts.	1.8 qts.
MEDIUM: Loam, silt loam, silt	1.8 qts.	2.4 qts.
FINE: Silty clay loam, sandy clay loam, silty clay, sandy clay, clay loam, clay	2.4 qts.	2.4-3 qts.*
Muck or peat soils	DO NOT USE	

*For cocklebur, yellow nutsedge, and velvetleaf control on fine-textured soils above 3% organic matter: Apply 3 qts. of Bicep 6L per acre.

Table 2: Bicep 6L - Grain Sorghum (Concep-treated seed)

Soil texture	Organic matter	Broadcast rate per acre
COARSE: Sand, loamy sand, sandy loam	any level	DO NOT USE
MEDIUM AND FINE: Loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, clay	less than 1%	DO NOT USE
	1-1.5%	1.8 qts.
	more than 1.5%	2.2-2.4 qts.

Note: For grain sorghum, do not use in NM, OK, or TX except in northeast OK and Texas Gulf Coast areas. Do not apply preplant incorporated in AZ or the Imperial Valley of CA.

Precautions: 1) Application of Bicep on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may result in sorghum injury. 2) Do not apply Bicep when sorghum is planted in deep furrows because heavy rains following application can cause excessive concentrations of herbicide in the furrow, resulting in possible crop injury. 3) Sorghum growing under stress caused by minor element deficiency may be injured by Bicep. 4) Injury may also occur to sorghum if Bicep, preplant or pre-emergence, and an at-planting systemic insecticide applied in-furrow are used. 5) Do not apply to sorghum grown under dry mulch tillage or injury may occur.

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Rotational Crops: 1) If treated crop is lost due to poor germination, hail, flood, insects, etc., corn may be replanted immediately or sorghum may be replanted immediately provided the seed has been properly treated with Concep. Do not make a second broadcast application. If the original application was banded and the second crop is planted in the untreated row middles, a second banded treatment may be applied. 2) Corn, sorghum, soybeans, cotton, or peanuts may be planted the spring following treatment. Do not graze or feed forage or fodder from cotton to livestock. Injury may occur to soybeans planted in north-central and northwest Iowa, south-central and southwest Minnesota, northeast Nebraska, and southeast South Dakota the year following application on soils having a calcareous surface layer. 3) If applied after June 10, do not rotate with crops other than corn or sorghum the next year, or crop 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 untreated corn or sorghum 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.

Postemergence - Corn

<u>Weeds Controlled</u>	<u>Weeds Partially Controlled</u>
barnyardgrass (watergrass) crabgrass crowfootgrass fall panicum giant foxtail green foxtail yellow foxtail	jimsonweed kochia lambsquarters mustard pigweed prickly sida purslane ragweed smartweed velvetleaf cocklebur morningglory yellow nutsedge

Application: Apply early postemergence using the appropriate rate from Table 3. Apply this treatment before grass and broad-leaf weeds pass the 2-leaf stage and before corn exceeds 5 inches in height. Application to weeds larger than the 2-leaf stage will generally give unsatisfactory control. Occasional corn leaf burn may result, but this should not affect later growth or yield. Do not apply postemergence in fluid fertilizer as severe crop injury may occur.

Table 3: Postemergence - Corn

Soil texture	Broadcast rate per acre
COARSE: Sand, loamy sand, sandy loam	1.8 qts.
MEDIUM: Loam, silt loam, silt	2.4 qts.
FINE: Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.4-3 qts.*

*For better control of cocklebur, morningglory, velvetleaf, and yellow nutsedge on fine-textured soils above 3% organic matter, apply 3 qts. of Bicep 6L per acre.

Rotational Crops: Follow the preceding crop rotation instructions for Bicep Preplant Incorporated or Preemergence.

TO BE LABELED

Bicep Combinations - Corn

Tank Mixture with AAtrex, Princep, or Dual 8E - Conventional Tillage

AAtrex (4L, 4LC, 80W, or Nine-O): Add up to 1 qt. of AAtrex 4L or 4LC (1.25 lbs. 80W or 1.1 lbs. Nine-O) per acre to the rate of Bicep recommended in Table 1 in the southeastern U.S. where high rainfall can shorten the duration of control of broadleaf weeds, and in all areas where heavy infestations of cocklebur, morningglory, velvetleaf, or other broadleaf weeds claimed are expected.

Dual 8E: Add up to 1/2 pt. of Dual 8E per acre to the rate of Bicep recommended in Table 1 when heavy infestations of yellow nutsedge, sandbur, or seedling johnsongrass are expected.

Princep (4L, 80W, or Caliber 90): Add up to 1 qt. of Princep 4L (1.25 lbs. 80W or 1.1 lbs. Caliber 90) per acre to the rate of Bicep recommended in Table 1 in the northeastern U.S. where heavy infestations of crabgrass or fall panicum are expected.

Tank Mixtures of Bicep or Bicep plus Princep, with Paraquat or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides paraquat or Roundup may be tank mixed with Bicep alone or with Bicep plus Princep. When used as directed, the paraquat portion of the tank mixture controls most emerged annual weeds and suppresses many perennial weeds. Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Roundup label. The Bicep portion of the tank mixture provides preemergence control of the weeds listed on this label in the Bicep alone section for corn. The addition of Princep enhances preemergence control of crabgrass and fall panicum.

Application: Apply before, during, or after planting but before corn emerges, at the appropriate rate in Table 4. Up to 1 qt. of Princep 4L (1.25 lbs. 80W or 1.1 lbs. Caliber 90) per acre may be added to the rate of Bicep recommended in Table 4 in the northeastern U.S. where heavy infestations of crabgrass or fall panicum are expected. Add paraquat or Roundup at the following broadcast rates:

Paraquat: 1-2 pts.* per acre plus 8 oz. of X-77®
 Spreader per 100 gals. of spray mixture. Use the
 lower rate for control of annual weeds less than
 4 inches tall and the higher rate for weeds 4-6 inches
 tall. This treatment will not consistently control
 weeds taller than 6 inches.

Roundup: 1.5 qts. per acre for control of existing
 annual weeds, or 2-4 qts. per acre for existing peren-
 nial weeds. See the Roundup label for weeds con-
 trolled and recommended rates for specific weeds.

*Based on a product containing 2 lbs. ai/A.

Apply in 20-60 gals. of water per acre with conventional spray
 equipment.

Table 4: Bicep 6L for Minimum-Tillage or No-Tillage Corn

Soil texture	Broadcast rate per acre
COARSE: Sand, loamy sand, sandy loam	1.8 qts.
MEDIUM: Loam, silt loam, silt	2.4 qts.
FINE: Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.4-3 qts.*
Muck or peat soils	DO NOT USE

*For cocklebur, yellow nutsedge, and velvetleaf control on
 fine-textured soils above 3% organic matter, apply 3 qts. of
 Bicep 6L per acre.

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Rotational Crops: Follow the crop rotation instructions in the Bicep Alone section for corn.

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container. 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. Triple rinse (or equivalent) and offer for recycling or reconditioning, or dispose of in a sanitary landfill or by incineration if permitted by state and local authorities.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing vapors or spray mists. Causes eye and skin irritation. May be a skin sensitizer. Avoid contact with eyes, skin or clothing. Do not contaminate food or feed.

Practical Treatment: If swallowed, contact your local poison control center, hospital, or physician. If the patient is unconscious, maintain breathing and heartbeat (cardio-pulmonary resuscitation). If the patient is conscious and alert, induce vomiting (syrup of ipecac or stimulate the back of the throat with a finger). NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

In case of contact, immediately flush eyes or skin with plenty of water. Remove and wash contaminated clothing before reuse. Get medical attention if irritation persists.

Note to Physician: There is no specific antidote. If swallowed, induce emesis or lavage stomach. The use of an aqueous slurry of activated charcoal should be considered.

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Environmental Hazards

Do not apply directly to any body of water. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not apply when weather conditions favor drift from areas treated.

AAtrex® trademark of CIBA-GEIGY for atrazine

Bicep® trademark of CIBA-GEIGY
U.S. Patent No. 3,937,730 (metolachlor)

Caliber® trademark of CIBA-GEIGY

Concep® trademark of CIBA-GEIGY
U.S. Patent No. 4,070,389

Dual® trademark of CIBA-GEIGY for metolachlor
U.S. Patent No. 3,937,730

Nine-O® trademark of CIBA-GEIGY

Princep® trademark of CIBA-GEIGY for simazine

Roundup® trademark of Monsanto Company for glyphosate

X-77® trademark of KALO Laboratories, Inc.

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Agricultural Division
CIBA-GEIGY Corporation
Greensboro, North Carolina 27419

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