PM 23 100-817 4/30/99 Page 1 of 50

APR 30 1999

Ms. Karen S. Stumpf
Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Dear Ms. Stumpf:

Subject: Bicep II Magnum™ Herbicide
EPA Registration No. 100-817
Application and Letter Dated April 13, 1999, Request To Amend Registration by Revising the Label Claims To Add a Generic Claim for Tank Mixing, Application of Balance up to 14 Days Before Planting, Adding: Balance as a Tank Mix Partner (TMP) in Conventional Tillage, Balance as a TMP for Minimum Tillage or No-Tillage Systems with Gramoxone Extra, Landmaster BW, or Roundup; use as TMP with 2,4-D or 2,4-D + Banvel for Minimum or No-Tillage Systems; use as TMP with Liberty® and Roundup Ultra™ for Postemergence Salvage Weed Control in Field Corn Only; Names and Trademarks in the Trademark Section

The proposed labeling submitted with the aubject application to amend the registration of Bicep II Magnum Herbicide has been reviewed and found acceptable under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended, provided that you:

1. Revise the description of the "Compatibility Test" on page 9 and 10 of the proposed label to reflect the attached description that includes pesticides as well as fertilizers that may be used as tank mixtures. The new description is required for the generic claim for tank mixing with labeled pesticides, not named on this label.

2. Submit one (1) copy of the final printed label before you release the product for shipment under the subject labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA, section

CONCURRENCES								
SYMBOL								
SURNAME								
DATE								

EPA Form 1320-1 (12-70) OFFICIAL FILE COPY

D 4 50

6(e). Your release for shipment of the product under this label constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Attachment (1)
Enclosure (1)

CONCURRENCES								
SYMBOL								
SURNAME								
DATE								

GPO 1985-467-853

Compatibility Test

A jar test is recommended before tank mixing to ensure compatibility of [insert product name] with other pesticides. The following test assumes a spray volume of 25 gals/A. For other spray volumes, make appropriate changes in the ingredients.

Note: Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray. Because liquid fertilizers vary, even within the same analysis, always check compatibility with pesticide(s) before use. Incompatibility of tank mixtures is more common with suspensions of fertilizer and pesticides.

Test Procedure

1. Add 1.0 pt. of carrier (fertilizer or water) to each of 2 one qt. jars with tight lids. Note: Use the same source of water that will be used for the tank mix and conduct the test at the temperature the tank mix will be applied.

2. *To one of the jars, add ¼ tsp. or 1.2 milliliters of a compatibility agent approved for this use,* such as Compex or Unite (1/4 tsp. is equivalent to 2.0 pts./100 gals. spray) Shake or stir gently to mix.

3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on recommended label rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.

4. After adding all ingredients, put lids on and tighten, and invert each jar ten times to mix. Let the mixtures stand 15 – 30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of unproving compatibility: (a) Slurry the dry pesticide(s) in water before addition, or (b) add ½ the compatibility agent to the fertilizer or water and the other ½ to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.

5. *After compatibility testing is complete, dispose of any pesticide wastes in accordance with the* **Storage and Disposal** section in this label.

4 8 50

DRAFT

(Front Cover of Removable Booklet)

RESTRICTED USE PESTICIDE
(GROUND AND SURFACE WATER CONCERNS)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

Bicep II MAGNUM®

HERBICIDE

For weed control in corn and grain or forage sorghum

2.5 GALLONS
U.S. Standard Measure

ACCEPTED
with COMMENTS
In EPA Letter Dated
APR 30 1999
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.
100-817

Active Ingredients:	
Atrazine (CAS No. 1912-24-9)	32.0%
Atrazine related compounds	1.7%
S-Metolachlor (CAS No. 87392-12-9)	26.1%
Other Ingredients:	40.2%
Total:	100.0%

Bicep II MAGNUM contains 3.1 lbs. atrazine + relateds per gallon and 2.4 lbs. *S*-Metolachlor active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

5 7 50

EPA Reg. No. 100-817

EPA Est. 100-LA-1^{S}

EPA Est. 11773-IA-01^{W}

(Superscript is first letter of lot number on jug)

NCP 817A-L1 (DRAFT)

[QUARK/BICEP II MAGNUM/N-BICEP II MAGNUM-D] - ccg - 4/8/99

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. If terms are not acceptable, return the unopened product container at once.

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 Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Novartis 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. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis 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 Novartis.

DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Waterproof gloves
- Shoes plus socks

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

Note: Not for sale, use, or distribution in Nassau County or Suffolk County, New York.

GENERAL INFORMATION

Bicep II MAGNUM is a selective herbicide recommended before planting, before or after emergence (see directions) for control of most annual grasses and broadleaf weeds in corn. Bicep II MAGNUM can also be used before crop emergence for control of most annual grasses and broadleaf weeds in grain or forage sorghum, provided the sorghum seed has been properly treated by the seed company with Concep® or Screen®. This product may be tank mixed with other herbicides specified on this label for weed control in conventional, minimum-till, and no-till corn, grain sorghum, or forage sorghum.

Note: Tank mixtures are permitted only in those states where the tank mix partner is registered. Tank mixtures with Bicep II MAGNUM are not limited to the tank mix partners mentioned in this label. Refer and follow the label of each tank mix product used for precautionary statements, directions for use, geographic and other restrictions.

Following many years of continuous use of atrazine (one of the ingredients in Bicep II MAGNUM), and products chemically related to atrazine, biotypes of some of the weeds listed on this label which are controlled by the atrazine component have been reported to develop resistance to this and chemically related herbicides. Where this is known or suspected, and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of Bicep II MAGNUM in combination or in sequence with registered herbicides which do not contain triazines. Consult with your State Agricultural Extension Service for specific recommendations.

Precautions: (1) If sorghum seed is not properly pretreated with Concep or Screen, Bicep II MAGNUM will severely injure the crop. (2) Injury may occur to sorghum following the use of Bicep II MAGNUM under abnormally high soil moisture conditions during early development of the crop.

Bicep II MAGNUM alone or in tank mixture with AAtrex®, Balance®, Bladex®, Dual®, Dual II®, Dual MAGNUM™, Dual II MAGNUM™, Extrazine® II, or Princep® may be applied early preplant, preplant surface, preplant incorporated, or preemergence on corn, in water or fluid fertilizer. Apply postemergence treatments of Bicep II MAGNUM to corn, alone or in combination, using water only as the carrier. Bicep II MAG-

NUM may be applied in tank mix combination with Gramoxone® Extra, Landmaster® BW, or Roundup® with or without the above herbicides preplant surface or preemergence to corn. Bicep II MAGNUM alone may also be applied on sorghum early preplant, preplant incorporated, preplant surface, or preemergence in water or in fluid fertilizer.

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

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

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

Do not apply under conditions which favor runoff or wind erosion of soil containing this product to nontarget areas.

To prevent off-site movement due to runoff or wind erosion:

1. Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

2. Do not apply to impervious substrates, such as paved or highly compacted surfaces.

3. Do not use tailwater from the first flood or furrow irrigation of treated fields to treat nontarget crops, unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor or consistent control at a level below that generally considered acceptable for commercial weed control.

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

Observe all precautions and limitations on the label of each product used in tank mixtures.

Thoroughly clean sprayer or other application device before using. Dispose of cleaning solution in a responsible manner. Do not use a sprayer or applicator contaminated with other materials, or crop damage or sprayer clogging of the application device may occur.

Mixing Instructions

Shake 2.5 gal. jugs well or thoroughly recirculate larger containers and bulk tanks before using. Bicep II MAGNUM is a liquid that may be mixed with water or fluid fertilizer and applied as a spray. Bicep II MAGNUM 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 II MAGNUM and used to control weeds in corn or Concep-treated sorghum.

When applying Bicep II MAGNUM with dry bulk granular fertilizers, follow all directions for use and precautions on the Bicep II MAGNUM label regarding target crops, rates per acre, soil texture, application methods, and rotational crops.

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.

Prepare the herbicide/fertilizer mixture by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray Bicep II MAGNUM onto the fertilizer must be placed to provide uniform spray coverage. Care should be taken to aim the spray onto the fertilizer only, avoiding the walls of the blender.

If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® F.G. or Celatom MP-79®, or similar granular clay or diatomaceous earth materials, to obtain a dry, free-flowing mixture. Absorptive materials should be added only after the herbicide has been thoroughly blended into the fertilizer mixture. Best application results will be obtained by using a granule of 6/30 particle size or of a size similar to that of the fertilizer material being used. Generally, less than 2% by weight of absorptive material will be needed. Avoid using more than 5% absorptive material by weight.

Calculate the amount of Bicep II MAGNUM to be used by the following:

2,000 lbs. of fertilizer per acre	X	qts. of Bicep II MAGNUM per acre	=	qts. of Bicep II MAGNUM per ton of fertilizer	

Pneumatic (Compressed Air) Application

High humidity, high urea concentrations, low fertilizer use rates, and dusty

fertilizer may cause fertilizer mixtures to build up or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix Bicep II MAGNUM with Exxon Aromatic 200 at a rate of 2.0-2.5 pts./gal. of Bicep II MAGNUM. Aromatic 200 is a noncombustible/nonflammable petroleum product. Aromatic 200 may be used in either a fertilizer blender or through direct injection systems. Drying agents should not be used when using Aromatic 200.

Notes: (1) Mixtures of Bicep II MAGNUM and Aromatic 200 must be used on dry fertilizer only. Poor results or crop injury may result if these mixtures are used in water or liquid fertilizer solutions for spraying applications. (2) When impregnating Bicep II MAGNUM in a blender before application, a drier mixture can be attained by substituting a drying agent for Aromatic 200. The use of Agsorb F.G. or another drying agent of 6/30 particle size is recommended. (3) Drying agents are not recommended for use with On-The-Go impregnation equipment.

Precautions: To avoid potential for explosion, (1) Do not impregnate Bicep II MAGNUM on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers. (2) Do not combine Bicep II MAGNUM with a single superphosphate (0-20-0) or treble superphosphate (0-46-0). (3) Do not use Bicep II MAGNUM on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated.

Application

Apply 200-700 lbs. of the herbicide/fertilizer mixture per acre. For best results, apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential in order to prevent possible crop injury or injury to subsequent rotational crops. Nonuniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil is recommended to obtain satisfactory weed control. On fine- or medium-textured soils in areas where soil incorporation is not planned, i.e., reduced tillage situations or in some conventional till situations, make applications approximately 30 days before planting to allow moisture to move the herbicide/fertilizer mixture into the soil. On coarse-textured soils, make applications approximately 14 days prior to planting.

Precautions: (1) To help avoid rotational crop injury, make applications as early as possible, since Bicep II MAGNUM impregnated onto dry, bulk, granular fertilizers can be expected to last longer in the soil than when Bicep II MAGNUM is applied as a spray in water or fluid fertilizer. (2) To avoid potential crop injury, do not use the herbicide/fertilizer mixture on crops where planting beds are to be formed.

Application in Water or Fluid Fertilizers

Bicep II MAGNUM Alone: Fill the spray tank 1/2-3/4 full with water or fluid fertilizer, add the proper amount of Bicep II MAGNUM, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform suspension.

Tank Mixtures: Fill the spray tank 1/2-3/4 full with water or fluid fertilizer, add the proper amount of Bicep II MAGNUM, then add AAtrex, Balance, Banvel®, linuron, or Princep; next add Dual, Dual II, Dual MAGNUM, or Dual II MAGNUM; then add Gramoxone Extra, Landmaster BW, or Roundup (glyphosate products), depending on the tank mix combination desired; and finally, add the rest of the water or fluid fertilizer. Only water may be used with Bicep II MAGNUM + Liberty Herbicide when applied postemergence to corn designated as tolerant to Liberty (glufosinate); and with Roundup Ultra™ when applied postemergence to corn designated as tolerant to Roundup (glyphosate). When Bladex or Extrazine II is used in the tank mixture, add it before Bicep II MAGNUM, unless otherwise specified. (See Bladex section under **Bicep II MAGNUM Combinations – Corn** for further mixing instructions.) Provide sufficient agitation during mixing and application to maintain a uniform suspension.

Compatibility Test: Check the compatibility of Bicep II MAGNUM and tank mixtures in fluid fertilizer by mixing proportionate quantities in a small container, as described below, before mixing in the spray tank. Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray. Since liquid fertilizers can vary, even within the same analysis, **always check compatibility each time before reuse**. Be especially careful when using complete suspension or fluid fertilizers, as serious compatibility problems are more apt to occur. Commercial application equipment may improve compatibility in some instances. The following test assumes a spray volume of 25 gals./A. For other spray volumes, make appropriate changes in the ingredients. Check compatibility using this procedure:

1. Add 1.0 pt. of fertilizer to each of 2 one-qt. jars with tight lids.

2. To **one** of the jars, add 1/4 tsp. or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (1/4 tsp. is equivalent to 2.0 pts./100 gals. spray). Shake or stir gently to mix.

3. To **both** jars, add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

   Dry herbicides: For each pound to be applied per acre, add 1.4 teaspoons to each jar.

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

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) slurry the dry herbicide(s) in water before addition, or (B) add 1/2 of the compatibility agent to the fertilizer and the other 1/2 to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If still incompatible, do not use the mixture.

5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the directions in the **Storage and Disposal** section at the end of this label.

Soil Texture Information

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.

Recommendations are based upon soil textures, which are defined as follows:

COARSE	Sand, loamy sand, sandy loam
MEDIUM	Loam, silt loam, silt
FINE	Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay

Application Procedures

Ground Application: Use sprayers that provide accurate and uniform application. 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:

band width in inches / row width in inches	X	broadcast rate per acre	=	amount needed per acre of field

Low Carrier Application (Broadcast Ground Application Only): Use sprayers, such as Ag-Chem RoGator®, Hagie, John Deere Hi-Cycle™, John Deere 4700 Sprayer, Melroe Spra-Coupe, Tyler-Patriot™, or Willmar Air Ride®, that provide accurate and uniform application. **Only water may be used as a carrier.** Screens in suction and in-line strainers should be 50-mesh. Manufacturers may require that tip screens as fine as 100-mesh be used with some nozzles. Use a pump with capacity to: (1) maintain up to 35-40 psi at the nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension. Use a minimum of 5.0 gals. of spray mixture per acre. Maximum recommended sprayer speed is 15 mph. Maintain uniform travel speed while spraying. Rinse sprayer thoroughly with clean water immediately after each use.

Note: Low pressure nozzles are recommended to reduce drift and increase application accuracy. Care should be taken when using automatic rate controlling devices to spray the material within the rated working pressure and flow ranges of the nozzle selected. Nozzle screens should be used when recommended by the manufacturer. All nozzles should be placed on 20-inch centers, except flooding types which should be placed on 40-inch centers. When Flat Fan-type nozzles are used, angles of 80° or 110° are recommended. Always read and follow the manufacturer's directions for optimum setup and performance of their nozzles or tips.

Aerial Application (for Bicep II MAGNUM alone): Use aerial application only where broadcast applications are specified. Apply a minimum of 1.0 gal. of water for each 1.0 gal. of this product applied per acre, but for rates below 1.0 gal./A, use in sufficient water to equal 2.0 gals./A 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 the 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 II MAGNUM 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.

Aerial Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are

responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

2. Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the **Aerial Drift Reduction Advisory Information** section below.

Aerial Drift Reduction Advisory Information

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity,** and **Temperature Inversions**).

Controlling Droplet Size

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

- **Pressure** – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

- **Number of nozzles** – Use the minimum number of nozzles that provide uniform coverage.

- **Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

- **Nozzle Type** – Use a nozzle type that is designed for the intended

application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications should not be made at a height greater than 10 ft. above the top of the largest plants, unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.)

Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form

as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, nontarget crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

BICEP II MAGNUM APPLIED ALONE – CORN (ALL TYPES), GRAIN SORGHUM, OR FORAGE SORGHUM

Early Preplant, Preplant Surface-Applied, Preplant Incorporated, or Preemergence

Weeds Controlled		Weeds Partially Controlled**
barnyardgrass (watergrass)	carpetweed	sandbur
browntop panicum	chickweed	seedling johnsongrass
crabgrass	cocklebur*	shattercane
crowfootgrass	common purslane	sicklepod
fall panicum	common ragweed	woolly cupgrass
foxtail millet	Florida pusley	
giant foxtail	galinsoga	
goosegrass	giant ragweed*	
green foxtail	henbit	
prairie cupgrass	jimsonweed	
red rice	lambsquarters	
signalgrass *(Brachiaria)**	morningglory	
southwestern cupgrass	mustards	
witchgrass	nightshades	
yellow foxtail	pigweed	
yellow nutsedge*	smartweed	
	velvetleaf*	
	waterhemp	

*Control of these weeds can be erratic, especially under dry weather conditions. Control escaped weeds with cultivation or application of an appropriate EPA-registered postemergence herbicide. On fine-textured

soils, only partial control can be expected.

**Control may be improved by following these suggested procedures:

1. **In corn,** apply up to the maximum single application rate in Table 1 for your given soil texture and rate limitation based on your soil conservation practices.

2. **Thoroughly till moist soil** to destroy germinating and emerged weeds. If Bicep II MAGNUM is to be applied preplant incorporated, this tillage may be used to incorporate Bicep II MAGNUM if uniform 2-inch incorporation is achieved as recommended under **Application Procedures.**

3. Plant crop into moist soil **immediately after tillage.** If Bicep II MAGNUM is to be used preemergence, apply at planting or immediately after planting.

4. If available, **sprinkler irrigate** within 2 days after application. Apply 1/2-1 inch of water. Use lower water volume (1/2 inch) on coarse-textured soils and higher volume (1 inch) on fine-textured soils.

5. If irrigation is not possible and rain does not occur within 2 days after planting and application, weed control may be decreased. Under these conditions, a uniform, shallow cultivation is recommended as soon as weeds emerge.

Bicep II MAGNUM Rate Limitations – Corn and Sorghum*

*Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or greater setbacks) which are different from the label, the more restrictive/protective requirements must be followed. Certain states may have established rate limitations within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

Note: For purposes of calculating total atrazine active ingredient applied, Bicep II MAGNUM contains 3.1 lbs. a.i. atrazine + relateds per gal. (0.775 lb. a.i./qt.).

FOR ALL SOIL APPLICATIONS PRIOR TO CROP EMERGENCE

- **On Highly Erodible Land (as defined by SCS)**

  If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at planting, apply a maximum of 2.6 qts./A as a broadcast spray. Refer to "B" in tables following.

  If the soil coverage with plant residue is less than 30% at planting, a maximum of 2.1 qts./A may be applied. Refer to "A" in tables following.

- **On Land Not Highly Erodible**

  Apply a maximum of 2.6 qts./A as a broadcast spray. Refer to "B" in tables following.

FOR POSTEMERGENCE APPLICATION TO CORN

If no atrazine was applied prior to corn emergence, apply a maximum of 2.6 qts./A broadcast. If a postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 lbs. active ingredient (3.2 qts. of Bicep II MAGNUM) per acre per calendar year.

Application Timings

Early Preplant (Corn): Use on medium- and fine- textured soils with minimum-tillage or no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply 2/3 the recommended rate of Bicep II MAGNUM as a split treatment 30-45 days before planting and the remainder at planting, using the rates in Table 1. Applications made less than 30 days prior to planting may be as either a split or single treatment. Use the lower rate for light expected weed infestations and the higher rate for heavy expected weed infestations. On coarse-textured soils, apply 2.1 qts./A not more than 2 weeks prior to planting. The above procedure may be followed if AAtrex, Dual, Dual II, Dual MAGNUM, Dual II MAGNUM, or Princep is used in tank mixtures with Bicep II MAGNUM. Tank mixtures with Balance may be applied up to 14 days before planting field corn. Substitute a fluid fertilizer for some or all of the water carrier for burndown of existing annual weeds listed on this label up to the 2-leaf stage of development. The addition of crop oil concentrate to the spray mixture will enhance the burndown activity. If larger weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone Extra or Roundup). Observe directions for use, precautions, and restrictions on the label of the contact herbicide.

On medium- and fine-textured soils with minimum- or no-tillage systems in DE, MD, MI, NY, OH, PA, VA, and WV, early preplant applications may be applied following the directions for use above. If the amount of rainfall results in unsatisfactory length of weed control following the earlier treatment, a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide may be used, i.e., AAtrex, Beacon®, Basagran®, 2,4-D, Banvel, bromoxynil (Brominal® or Buctril®), Exceed®, or Marksman®. If the postemergence treatment includes the herbicide used early preplant, do not exceed the labeled rate for corn on a given soil texture. Observe all directions for use, precautions, and limitations on the label of the postemergent herbicide.

Bicep II MAGNUM may be used according to the above directions to control winter wheat planted as a cover crop in IN, KY, and OH, in addition to providing residual weed control. The wheat must be less than 6 inches tall (preferably still in a dormant or semi-dormant state coming out of winter) at the time of application. Depending on rainfall, 10-20 days may be required to completely kill the wheat. In the event that adequate rainfall does not occur, control of the winter wheat may be unsatisfactory and the application of a contact herbicide (i.e., Gramoxone Extra or Roundup) may be required before planting the crop.

On medium- and fine-textured soils following final seedbed preparation in the Blacklands and Gulf Coast areas of TX, an early preplant application of Bicep II MAGNUM at 1.6-1.9 qts./A may be made 30-45 days before planting. Grass suppression of 2-3 weeks after planting can be expected as a result of this application. Do not incorporate or disturb the soil before planting, and avoid moving the soil during the planting operation. A follow-up application of Dual, Dual II, Dual MAGNUM, or Dual II MAGNUM may be needed in fields with a history of heavy grass pressure. Apply after planting, but before corn and grass weeds emerge.

Notes: (1) If a follow-up application of Dual, Dual II, Dual MAGNUM, or Dual II MAGNUM is needed, do not exceed a total of 1.6 lbs. a.i. of *S*-Metolachlor per acre, including the preplant Bicep II MAGNUM application on medium- or fine-textured soils. On fine-textured soils with more than 3% organic matter, do not exceed 1.9 lbs. a.i. of *S*-Metolachlor.

[To determine the total lbs. a.i. of *S*-Metolachlor per acre, use the following 2-step method:

A. Determine the lbs. a.i. of *S*-Metolachlor applied as Bicep II MAGNUM (1.0 qt. = 0.6 lb. a.i. of *S*-Metolachlor); then,

B. If Dual MAGNUM or Dual II MAGNUM is to be used, add the lbs. a.i. to be applied in these products to the lbs. in Step A above.

OR

If Dual or Dual II is to be used, multiply the lbs. a.i. of metolachlor to be applied by 0.625 and add to the lbs. a.i. of *S*-Metolachlor from Step A.]

(2) To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

Table 1: Bicep II MAGNUM – Early Preplant – Corn

Soil Texture	Single Application	Split Application*	
		30-45 DBP**	At Planting
COARSE Sand, loamy sand, sandy loam	2.1 qts./A	DO NOT APPLY	
MEDIUM Loam, silt loam, silt	**A.** 2.1 qts./A	1.4 qts./A	0.7 qt./A
	B. 2.1-2.6 qts./A	1.4 qts./A to 1.75 qts./A	0.7 qt./A to 0.9 qt./A
FINE Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	**A.** 2.1 qts./A	1.4 qts./A	0.7 qt./A
	B. 2.6 qts./A	1.75 qts./A	0.9 qt./A

*Split applications can be made less than 30 days before planting if desired.

**DBP – Days before planting

A. Do not exceed this rate on highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

B. Use these rates for all other applications.

Early Preplant (Sorghum-Seed Treated with Concep or Screen): For minimum-tillage and no-tillage systems only, Bicep II MAGNUM may be applied up to 45 days before planting grain sorghum in IA, IL, eastern KS, MO, NE, and SD, using the rates in Table 2. Use only split applications for treatments made 30-45 days before planting with 2/3 the recommended

rate applied initially and the remaining 1/3 at planting. Applications made less than 30 days prior to planting may be made as either a split or single application.

Substitute a fluid fertilizer for some or all of the water carrier for burndown of existing annual weeds listed on this label up to the 2-leaf stage of development. The addition of crop oil concentrate to the spray mixture will enhance the burndown activity. If larger weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone Extra, Landmaster BW, or Roundup). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. Under dry conditions, irrigation after application is recommended to move Bicep II MAGNUM into the soil.

Note: To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished. Do not use on coarse soils. Do not use on medium soils with less than 1.0% organic matter.

On medium- and fine-textured soils following final seedbed preparation in the Blacklands, Panhandle, and Gulf Coast areas of TX, an early preplant application of Bicep II MAGNUM at 1.6-1.9 qts./A may be made 30-45 days before planting. Grass suppression of 2-3 weeks after planting can be expected as a result of this application. Do not incorporate or disturb the soil before planting, and avoid moving the soil during the planting operation. A follow-up application of a Dual, Dual II, Dual MAGNUM, or Dual II MAGNUM product may be needed in fields with a history of heavy grass pressure. Apply after planting, but before sorghum and grass weeds emerge.

Notes: (1) Do not use on soils with a pH greater than 8.0 if grain sorghum is to be planted. (2) If a follow-up application of a Dual, Dual II, Dual MAGNUM, or Dual II MAGNUM formulation is needed, do not exceed a total of 1.4 lbs. of *S*-Metolachlor a.i. per acre, including the early preplant Bicep II MAGNUM application on medium-textured soils. On fine-textured soils, do not exceed 1.6 lbs. of *S*-Metolachlor a.i. per acre.

[To determine the total lbs. a.i. of *S*-Metolachlor per acre, use the following 2-step method:

A. Determine the lbs. a.i. of *S*-Metolachlor applied as Bicep II MAGNUM (1.0 qt. = 0.6 lb. a.i. of *S*-Metolachlor); then,

B. If Dual MAGNUM or Dual II MAGNUM is to be used, add the lbs. a.i. to be applied in these products to the lbs. in Step A above.

OR

If Dual or Dual II is to be used, multiply the lbs. a.i. of metolachlor to

be applied by 0.625 and add to the lbs. a.i. of S-Metolachlor from Step A.]

Table 2: Bicep II MAGNUM – Early Preplant – Grain or Forage Sorghum (Seed treated with Concep or Screen)

Soil Texture	Organic Matter Content	Single Application	Split Application*	
			30-45 DBP**	At Planting
COARSE Sand, loamy sand, sandy loam	any level	DO NOT USE	DO NOT USE	
MEDIUM Loam, silt loam, silt	A. more than 1.0%	2.1 qts./A	1.4 qts./A	0.7 qt./A
	less than 1.0%	DO NOT USE	DO NOT USE	
	B. more than 1.0%	2.1 qts./A to 2.33 qts./A	1.4 qts./A to 1.6 qts./A	0.7 qt./A to 0.8 qt./A
FINE Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	A. more than 1.0%	2.1 qts./A	1.4 qts./A	0.7 qt./A
	1.0%-1.5%	2.1 qts./A to 2.33 qts./A	1.4 qts./A to 1.6 qts./A	0.7 qt./A to 0.8 qt./A
	B. more than 1.5%	2.33 qts./A to 2.6 qts./A	1.6 qts./A to 1.75 qts./A	0.8 qt./A to 0.9 qt./A

*Split applications can be made less than 30 days before planting if desired.

**DBP – Days before planting

A. Do not exceed this rate on highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

B. Use these rates for all other applications.

Preplant Surface, Preplant Incorporated, or Preemergence (Corn or Sorghum-Seed Treated with Concep or Screen): Apply Bicep II MAGNUM preplant surface, preplant incorporated, or preemergence, using the appropriate rates from Table 3 for corn, or from Table 4 for sorghum.

Preplant Surface: Apply uniformly to the soil surface within 14 days before planting. Where applications are made to coarse soils more than 7 days before planting, use the rates in Table 1 for corn.

Preplant Incorporated: Apply to the soil and incorporate into the top 2 inches of the soil within 14 days before planting, using a finishing disk, finishing harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use the preplant incorporated method 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 3: Bicep II MAGNUM – Preplant Surface, 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	1.3 qts.	1.6 qts.
MEDIUM Loam, silt loam, silt	1.6 qts.	2.1 qts.
FINE Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.1 qts.	**A.** 2.1 qts. **B.** 2.1-2.6 qts.*
Muck or peat soils (more than 20% organic matter)	DO NOT USE	

*For cocklebur, yellow nutsedge, and velvetleaf control on fine-textured soils above 3% organic matter: Apply 2.6 qts. of Bicep II MAGNUM per acre.

A. Do not exceed this rate on highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

B. Use this rate for all other applications.

Notes: (1) In the event of escape of annual weeds following an early preplant, preplant surface, preplant incorporated, or preemergence treatment of Bicep II MAGNUM applied alone or in combination, follow with a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide, i.e., AAtrex, Accent®, Banvel, Basagran, Beacon, Brominal, Buctril, Exceed, Marksman, or 2,4-D. If the postemergence treatment includes the herbicide used in the earlier treatment, do not exceed the labeled rate for corn on a given soil texture. (2) Brominal or Buctril may be applied postemergence alone or in tank mix combination with AAtrex. Do not exceed 1.2 lbs. a.i./A of AAtrex in tank mix combination with Brominal or Buctril postemergence. Refer to the AAtrex, Brominal, and Buctril labels for specific rates and precautions. (3) If AAtrex or another product containing atrazine is used postemergence following application of Bicep II MAGNUM, do not exceed a total of 2.5 lbs. a.i./A of atrazine per year. (4) Substitute a fluid fertilizer for some or all of the water carrier for burndown of existing annual weeds listed on this label up to the 2-leaf stage of development. The addition of crop oil concentrate to the spray mixture will enhance the burndown activity. If larger weeds are present, add a contact herbicide as noted in the **Bicep II MAGNUM Combinations** section of this label.

Table 4: Bicep II MAGNUM – Preplant Surface, Preplant Incorporated, or Preemergence – Grain or Forage Sorghum* (Seed treated with Concep or Screen)

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, silty clay loam, clay loam, sandy clay, silty clay, clay	less than 1.0%	DO NOT USE
	more than 1.0%	1.6 - 2.1 qts.

*Do not use in NM or TX, except in the TX Panhandle, Gulf Coast, and Blacklands areas. Do not apply preplant incorporated in AZ or the Imperial Valley of CA.

Note: Substitute a fluid fertilizer for some or all of the water carrier for burndown of existing annual weeds listed on this label up to the 2-leaf stage of development. The addition of crop oil concentrate to the spray mixture will enhance the burndown activity. If larger weeds are present at the time of treatment, add a contact herbicide as noted in the **Bicep II MAGNUM Combinations** section of this label.

Precautions: To avoid possible crop injury, (1) Do not apply Bicep II MAGNUM on highly alkaline soils (pH greater than 8.0) or on eroded areas where calcareous subsoils are exposed. (2) Do not apply Bicep II MAGNUM when sorghum is planted in deep furrows because heavy rains following application can cause excessive concentrations of herbicide in the furrow. (3) Do not apply to sorghum grown under dry mulch tillage. (4) Injury may occur if both Bicep II MAGNUM applied early preplant, preplant surface, preplant incorporated, or preemergence and an at-planting systemic insecticide applied in-furrow are used. (5) In addition, sorghum growing under stress caused by minor element deficiency may be injured by Bicep II MAGNUM.

Rotational Crops

Do not rotate to food or feed crops other than those listed below:

(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 or Screen. 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, or illegal residues may result. (3) Injury may occur to soybeans planted the year following application on soils having a calcareous surface layer. (4) In eastern parts of the Dakotas, KS, western MN, and NE, do not rotate to soybeans for 18 months following application if the rate applied to corn or sorghum was more than 2.0 lbs. a.i. of atrazine or equivalent band application rate, or soybean injury may occur. (5) If applied after June 10, do not rotate with crops other than corn or sorghum the next year, or crop injury may occur. (6) In the High Plains and Intermountain areas of the West, where rainfall is sparse and erratic or where irrigation is required, use only when corn or sorghum is to follow corn or sorghum, or a crop of untreated corn or sorghum is to precede other rotational crops. (7) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes the year following application, or injury may occur.

Postemergence Broadcast – Corn

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

Application: Apply early postemergence, using the appropriate rate from Table 5. Apply this treatment before grass and broadleaf 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 result in unsatisfactory control. Occasional corn leaf burn may result, but this should not affect later growth or yield. Do not apply postemergence in fluid fertilizer, or severe crop injury may occur.

Note: To avoid possible illegal residues, do not graze or feed forage from treated areas for 30 days following application.

Table 5: Postemergence Broadcast – Corn

Soil Texture	Broadcast Rate Per Acre
COARSE Sand, loamy sand, sandy loam	1.6 qts.
MEDIUM Loam, silt loam, silt	2.1 qts.
FINE Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.1-2.6 qts.*

*For better residual control of cocklebur, velvetleaf, and yellow nutsedge on fine-textured soils above 3% organic matter, apply 2.6 qts. of Bicep II MAGNUM per acre.

Notes: (1) If Bicep II MAGNUM has been applied early preplant, preplant surface, preplant incorporated, or preemergence, do not exceed a total of 3.25 qts./A of Bicep II MAGNUM on a corn crop. (2) If AAtrex (atrazine) or AAtrex plus Dual, Dual II, Dual MAGNUM, or Dual II MAGNUM tank mixtures have been applied early preplant, preplant surface, preplant incorporated, or preemergence, limit the Bicep II MAGNUM early post application not to exceed a total of 2.5 lbs. of active ingredient in AAtrex or 3.75 lbs. of the active ingredient in Dual MAGNUM products or its component in the Bicep II MAGNUM product per acre on a corn crop, or illegal residues may result. If Dual, Dual II, Bicep, or Bicep II® is used, multiply lbs. a.i. of metolachlor by 0.625 and add to the MAGNUM products, not exceeding 3.75 lbs.

Rotational Crops: Follow the preceding crop rotation instructions for **Bicep II MAGNUM – Early Preplant, Preplant Surface-Applied, Preplant Incorporated, or Preemergence.**

Postemergence-Directed – Corn

Bicep II MAGNUM may be applied at 1.3-2.6 qts./A in a minimum of 15 gals. of water as a postemergence-directed treatment to corn to extend control of weeds listed in the **Early Preplant, Preplant Surface-Applied, Preplant Incorporated, Preemergence, or Postemergence Broadcast** section of the corn label. Apply using the appropriate rate from Table 6.

For best results, apply Bicep II MAGNUM to weed-free soil following use of a preplant surface, preplant incorporated, or preemergence herbicide, or following a lay-by cultivation. If weeds have emerged at the time of Bicep II MAGNUM application, apply before grass and broadleaf weeds exceed the 2-leaf stage. Application to weeds larger than the 2-leaf stage will generally give unsatisfactory control. Apply to corn not exceeding 12 inches in height. Minimize contact with corn leaves. Do not apply postemergence in fluid fertilizer, or severe crop injury may occur.

Note: To avoid possible illegal residues, do not graze or feed forage from treated areas for 30 days following application.

Table 6: Postemergence-Directed – Corn

Soil Texture	Broadcast Rate Per Acre
COARSE Sand, loamy sand, sandy loam	1.3 qts.
MEDIUM Loam, silt loam, silt	2.1 qts.
FINE Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.1-2.6 qts.*

*For better residual control of cocklebur, velvetleaf, and yellow nutsedge on fine-textured soils above 3% organic matter, apply 2.6 qts. of Bicep II MAGNUM per acre.

Notes: (1) If Bicep II MAGNUM has been applied early preplant, preplant surface, preplant incorporated, or preemergence, do not exceed a total of 3.25 qts./A of Bicep II MAGNUM on a corn crop. (2) If AAtrex (atrazine) or AAtrex plus Dual, Dual II, Dual MAGNUM, or Dual II MAGNUM tank mixtures have been applied preplant surface, preplant incorporated, or preemergence, limit the Bicep II MAGNUM post-directed application not to exceed a total of 2.5 lbs. of the active ingredient in AAtrex or 3.75 lbs. of the active ingredient in the Dual MAGNUM product or its component in the Bicep II MAGNUM product per acre on a corn crop, or illegal residues may result. If Dual, Dual II, Bicep, or Bicep II is used, multiply lbs. a.i. of metolachlor by 0.625 and add to the MAGNUM products, not exceeding 3.75 lbs.

BICEP II MAGNUM COMBINATIONS – CORN*

Always follow label instructions for tank mix products when mixing with Bicep II MAGNUM.

*When tank mixing Bicep II MAGNUM with AAtrex formulations, refer to the **Bicep II MAGNUM Rate Limitations** section of this label. Do not exceed the following:

On highly erodible land with less than 30% plant residue cover prior to crop emergence	1.6 lbs. a.i. of atrazine
On other land prior to crop emergence	2.0 lbs. a.i. of atrazine
Postemergence applications only – any land	2.0 lbs. a.i. of atrazine
Preemergence + postemergence applications	2.5 lbs. a.i. of atrazine

Tank Mixture with AAtrex, Dual, Dual II, Dual MAGNUM, Dual II MAGNUM, Princep, Balance, Bladex, or Extrazine II – Conventional Tillage

Note: Check the compatibility of Bicep II MAGNUM tank mixtures with Balance, Bladex or Extrazine II before mixing in spray tank by using the procedure described under **Application in Water or Fluid Fertilizers.** Always use Unite (or an equivalent compatibility agent) at 2.0 pts./100 gals. when using Bladex 90DF in tank mixtures with Bicep II MAGNUM. Compatibility testing is especially critical when using Bladex 90DF combinations. Always add Bladex or Extrazine II to the spray tank before Bicep II MAGNUM, regardless of which Bladex or Extrazine II formulation is used.

AAtrex (4L or Nine-O): Add up to 1.0 qt. of AAtrex 4L (1.1 lbs. of Nine-O) per acre to the rate of Bicep II MAGNUM recommended in Table 3 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 Products: Add up to 0.5 pt. of Dual or Dual II or up to 0.33 pt. of Dual MAGNUM or Dual II MAGNUM per acre to the rate of Bicep II MAGNUM recommended in Table 3 when heavy infestations of yellow nutsedge, sandbur, or seedling johnsongrass are expected.

Princep (4L or Caliber 90): Add up to 1.0 qt. of Princep 4L (1.1 lbs. of Caliber 90) per acre to the rate of Bicep II MAGNUM recommended in Table 3 where heavy infestations of crabgrass or fall panicum are expected or additional control of certain broadleafs is desired.

Balance (Field Corn Only): The tank mixture of Bicep II MAGNUM + Balance provides control of weeds listed on the Bicep II MAGNUM label, certain weed biotypes resistant to ALS-inhibitor herbicides and to triazine herbicides, velvetleaf, and others on the respective product labels. Balance will contribute to the control of problem grass and other broadleaf species on its label. Application may be preplant (surface applied up to 14 days before to planting), preplant incorporated, or preemergence in conventional tillage, conservation tillage, and no-till systems. Refer to **Table 1: Bicep II MAGNUM – Early Preplant** for the early preplant application rate (8 to 14 days before planting) or refer to **Table 3** for the appropriate rate for preplant (surface applied 0 to 7 days before planting), preplant incorporated, or preemergence application. Refer to the **Application Procedures** and **Tank Mix Directions** on the Balance label, but to reduce the potential for injury from Balance contact with corn, use 1 oz./A of Balance on coarse-textured soils and 1.0-1.5 oz./A on medium and fine-textured soils in conventional, conservation, and no-tillage systems. For early preplant applications 8 to 14 days before planting, add 0.5 oz./A of Balance to the rates of Balance described above.

Observe all applicable directions, precautions, and limitations on the Bicep II MAGNUM and Balance labels when applying these products in tank mix combination in states where Balance is registered. Where difficult species and/or severe weed populations are expected, use the maximum rates of Bicep II MAGNUM and Balance where rate ranges are listed for this tank mixture.

Bladex (4L or 90DF): Add up to 2.0 qts. of Bladex 4L (2.2 lbs. of 90DF) per acre. When Bladex is added, the rate of Bicep II MAGNUM suggested in Table 3 should be reduced by not more than 25% for a given soil texture in the Clarion-Nicollet-Webster soil association in northern IA and southern MN, or in other areas where soybean rotational concerns exist. **Note:** Crop injury may occur if this combination is applied postemergence to corn.

Extrazine II: Add 1.0-2.0 qts. of Extrazine II 4L (1.1-2.2 lbs. of Extrazine II DF) per acre to the rate of Bicep II MAGNUM in Table 3. For purposes of calculating the total atrazine rate, Extrazine II 4L contains 0.25 lb. of atrazine per quart. Do not exceed a total of 2.5 lbs. of atrazine active ingredient per acre per calendar year. **Note:** Crop injury may occur if this combination is applied postemergence to corn.

Tank Mixture of Bicep II MAGNUM Alone or Bicep II MAGNUM + AAtrex, Balance, Bladex, Dual, Dual II, Dual MAGNUM, Dual II MAGNUM, Extrazine II, or Princep, with Gramoxone Extra, Landmaster BW, 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 Gramoxone Extra, Landmaster BW, or Roundup should be tank mixed with Bicep II MAGNUM alone or with Bicep II MAGNUM + AAtrex, Balance, Bladex, Dual, Dual 8E, Dual II, Dual MAGNUM, Dual II MAGNUM, Extrazine II, or Princep. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged annual weeds and suppresses many perennial weeds. Landmaster BW or Roundup combinations will control emerged annual and perennial weeds when applied as directed on its label. The Bicep II MAGNUM portion of the tank mixture provides preemergence control of the weeds listed on this label in the **Bicep II MAGNUM Alone** section for corn. The addition of AAtrex, Balance, Bladex, Dual, Dual 8E, Dual II, Dual MAGNUM, Dual II MAGNUM, Extrazine II, or Princep offers the advantage indicated for each under **Conventional Tillage.**

Application: Apply before, during, or after planting, but before corn emerges, at the appropriate rate in Table 7. Up to 1.0 qt. of AAtrex 4L (1.1 lbs. of Nine-O), or 1 to 2 ozs. of Balance (refer to **Tank Mixture with Balance** for specific rate), or 2.0 qts. of Bladex 4L (2.2 lbs. of 90DF), or 0.5 pt. of Dual, Dual 8E, or Dual II, or 0.33 pt. of Dual MAGNUM or Dual II MAGNUM, or 1.0-2.0 qts. of Extrazine II 4L (1.1-2.2 lbs. of Extrazine II DF), or 1.0 qt. of Princep 4L (1.1 lbs. of Caliber 90) per acre may be added to the rate of Bicep II MAGNUM recommended in Table 7. Add Gramoxone Extra, Landmaster BW, or Roundup at labeled rates. **Tank mixtures with Balance can be used only on field corn.**

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

Tank Mixture of Bicep II MAGNUM Alone or Bicep II MAGNUM + AAtrex, Balance, Bladex, or Extrazine II, with 2,4-D or 2,4-D + Banvel 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, Bicep II MAGNUM may be applied in combination with AAtrex, Balance, Bladex, or Extrazine II. When used as directed, the Bicep II MAGNUM portion of the tank mixture provides preemergence control of the weeds listed on this label in the **Bicep II MAGNUM Alone** section for corn. The addition of AAtrex, Balance, Bladex, or Extrazine II offers the advantage indicated for each under **Conventional Tillage.**

Application: Apply Bicep II MAGNUM before, during, or after planting, but before corn emerges, at the appropriate rate in Table 7. Up to 1.0 qt.

of AAtrex 4L (1.1 lbs. of Nine-O), or 1 to 2 oz. of Balance (refer to **Tank Mixture with Balance** for specific rate), or 2.0 qts. of Bladex 4L (2.2 lbs. of 90DF), or 1.0-2.0 qts. of Extrazine II 4L (1.1-2.2 lbs. of Extrazine II DF) per acre may be added to the rate of Bicep II MAGNUM recommended in Table 7.

Where heavy crop residues exist, add an appropriately labeled 2,4-D amine or low volatile ester to the spray tank last and apply in a minimum of 25 gals. of carrier per acre.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burndown of existing weeds, and therefore, are recommended instead of water. Add X-77® surfactant at 1.0-2.0 qts./100 gals. of diluted spray, or another surfactant cleared for use on growing crops at its recommended rate. Apply before weeds exceed 3 inches in height. If alfalfa is present, add Banvel to the spray mixture at 0.33-0.5 pt./A and apply before alfalfa exceeds 6 inches in height.

For fields with existing sod grasses (e.g., bromegrass, orchardgrass, rye, or timothy), when existing weeds exceed 3 inches in height or when very dry conditions exist, add Gramoxone Extra at the rate of 2.5 pts./A in place of, or in addition to, 2,4-D as indicated above. Do not apply Gramoxone Extra in suspension-type liquid fertilizer. Observe all directions for use, precautions, and limitations on the respective product labels when applying these products in tank mix combination.

Note: When applying Bicep II MAGNUM and Bladex or Extrazine II in tank mix combination, follow directions under **Conventional Tillage** to ensure compatibility of these products in the tank mixture. Do not exceed a total of 2.5 lbs. of atrazine active ingredient per acre per calendar year.

Table 7: Bicep II MAGNUM for Minimum-Tillage or No-Tillage Corn

Soil Texture	Broadcast Rate Per Acre
COARSE Sand, loamy sand, sandy loam	1.6 qts.
MEDIUM Loam, silt loam, silt	2.1 qts.
FINE Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	**A.** 2.1 qts.
	B. 2.1-2.6 qts.*
Muck or peat soils	DO NOT USE

*For cocklebur, yellow nutsedge, and velvetleaf control on fine-textured soils above 3% organic matter, apply 2.6 qts. of Bicep II MAGNUM per acre.

A. Do not exceed this rate on highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

B. Use this rate for all other applications.

Tank Mixture with Linuron for Control of Lambsquarters and Pigweed

For prolonged control of lambsquarters and pigweed in DE, MD, NJ, NY, PA, VA, and WV, Bicep II MAGNUM may be applied preemergence in combination with linuron. Apply Bicep II MAGNUM according to the rates in Table 3 and linuron according to the following rates:

Soil Texture	Broadcast Rate Per Acre
Sandy loam (1-3% organic matter)	0.67 lb. Lorox*
Sandy loam (3-6% organic matter)	1.0 lb. Lorox*
Medium- and fine-textured soils (1-6% organic matter)	1.0 lb. Lorox*

*When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1.0 lb. of Lorox DF.

Follow instructions and precautions on the Bicep II MAGNUM and Lorox labels when tank mixing these products.

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

BICEP II MAGNUM COMBINATIONS - FIELD CORN ONLY

Tank Mixture with Broadstrike*+Dual® for Preemergence Weed Control in Field Corn Only

Reduced rates of Broadstrike+Dual herbicide and Bicep II MAGNUM herbicide may be tank mixed for control of several annual grasses and broadleaf weeds in field corn. In addition to the weeds listed as controlled on the Bicep II MAGNUM label, this mixture will control velvetleaf and triazine-resistant populations of lambsquarters, pigweed, and velvetleaf. Weeds partially controlled by this tank mix include those under the **Weeds Partially Controlled** section under **Bicep II MAGNUM Applied Alone** plus common ragweed and morningglory. Control of a few weeds can be erratic. Refer to the **Weeds Controlled** section of this label under **Bicep II MAGNUM Applied Alone** for further information.

The Broadstrike+Dual and Bicep II MAGNUM tank mix may be applied preplant incorporated, preemergence, or applied postemergence through the "spike" stage of corn growth, but before weed emergence. When applied postemergence to the crop, apply only with water before corn is 2 inches tall and first true leaf is unfurled. Target weeds which have emerged at the time of application may not be controlled.

Mixing Instructions

Fill the spray tank 1/4-1/2 full with water or liquid fertilizer and start agita-

tion. Add the required amount of Bicep II MAGNUM and allow to become fully dispersed, then add the required amount of Broadstrike+Dual, then add the rest of the water or liquid fertilizer. For tank mixtures with liquid fertilizer, always check compatibility as described on the labels for Bicep II MAGNUM and Broadstrike+Dual.

Precautions and Restrictions:

- Do not apply more than 2 weeks before planting.
- Do not apply to field corn grown for seed.
- Do not use when Counter® or Thimet® insecticides are to be applied due to the risk of severe crop injury.
- Plant corn at least 1½ inches deep.
- Refer to the product labels for Broadstrike+Dual and Bicep II MAGNUM for specific use restrictions, use precautions, and rotational crop intervals. The most restrictive provisions on either label shall apply.

Table 8: Broadcast Application Rates Per Acre for Preemergence Weed Control in Field Corn

	Less Than 3% Organic Matter*			Greater Than 3% Organic Matter		
Soil Texture	Broadstrike+Dual (pts.)	+	Bicep II MAGNUM (pts.)	Broadstrike+Dual (pts.)	+	Bicep II MAGNUM (pts.)
COARSE	1.5	+	1.33	1.5	+	1.33
MEDIUM	1.5-1.75**	+	1.75	1.75	+	1.75
FINE	1.75	+	1.75	2.0	+	1.75-2.25**

*Application on soils with <1.5% organic matter may result in unacceptable crop injury.

**Use the higher rate in fields with heavy weed pressure.

Follow directions in the **Bicep II MAGNUM Applied Alone** section of this label for improved control of certain weeds.

Add 1.0-2.0 pts./A of AAtrex 4L or equivalent rates of AAtrex Nine-O for an improved spectrum of broadleaf control and for more effective burndown in no-till or minimum-till situations. Follow atrazine rate restrictions on the AAtrex label.

Note: Triazine "resistant" weeds (triazine tolerant biotypes) are controlled by the tank mixture of Broadstrike+Dual and Bicep II MAGNUM.

TANK MIXTURES FOR POSTEMERGENCE SALVAGE WEED CONTROL IN FIELD CORN ONLY

For postemergence control of weeds in specific types of field corn, the combinations listed below with Bicep II MAGNUM may be used. Full season weed control from early preplant, preplant incorporated, or preemergence treatments can lead to maximum yield potential under competition-free conditions. However, if control of emerged weeds is needed, a postemergence program as listed below can be used to provide residual control for the remainder of the season.

Notes: (1) Follow all label directions, instructions, precautions, and limitations for each product. (2) Do not use fluid fertilizer with these mixtures or corn injury may occur. (3) For each tank mixture with Bicep II MAGNUM, apply only to the specific field corn type specified on the tank mix product label. (4) In-row weed control may be reduced because of lack of coverage when applied to corn over 4 inches tall.

A. **Bicep II MAGNUM + Liberty Herbicide: Postemergence Use in LibertyLink® Corn or Corn Warranted by AgrEvo USA Company as Being Tolerant to Liberty Herbicide -** The tank mixture of Bicep II MAGNUM + Liberty Herbicide can be applied postemergence to weeds and corn from seed designated as LibertyLink or corn warranted by AgrEvo USA Company as being tolerant to Liberty Herbicide. Liberty provides postemergence control of a broad spectrum of grass and broadleaf weeds and the Bicep II MAGNUM provides residual control of grasses and broadleaf weeds listed in the label section **Bicep II MAGNUM Applied Alone - Weeds Controlled**. For the proper rate of Bicep II MAGNUM applied postemergence with Liberty, refer to Table 3 and use the minimum rate per soil texture for season-long residual control. Refer to the Liberty label for the Liberty postemergence application rate according to weed species and their maximum height at the time of postemergence application. Where multiple weed species are present, use the highest Liberty rate recommended to control the species and growth stages present.

   Follow all applicable use directions, limitations, precautions and information regarding application to corn on the Bicep II MAGNUM and Liberty Herbicide labels.

B. **Bicep II MAGNUM + Roundup Ultra for Postemergence Application to Corn with the Roundup Ready® Gene -** The tank mixture of Bicep II MAGNUM + Roundup Ultra can be applied postemergence to weeds and to corn designated as containing the Roundup Ready Gene. Application may be applied postemergence to Roundup Ready corn up to 12 inches in height. This mixture will provide postemergence control of weed species on the Roundup Ultra label, and also residual control of weed species on the Bicep II

MAGNUM label. Use the minimum Bicep II MAGNUM rate post-emergence with Roundup Ultra in Roundup Ready corn as specified in Table 3 of this label according to soil texture. Refer to the **Supplemental Labeling of Roundup Ultra for Postemergence Application to Corn with the Roundup Ready Gene** and to each product label and follow all appropriate use directions, application procedures, precautions, and limitations. Apply 24 to 32 fl. oz./A of Roundup Ultra for control of labeled broadleaf and grass weeds. Refer to the Roundup Ultra label for directions to control problem species.

Follow all applicable use directions, limitations, precautions, and information regarding application to corn on the Bicep II MAGNUM and Roundup Ultra labels, and on the **Supplemental Labeling of Roundup Ultra for Postemergence Application to Corn with the Roundup Ready Gene.** Where difficult species and/or severe weed populations are expected, use the maximum rate where rate ranges are listed.

C. **Bicep II MAGNUM + Exceed** - Apply 1.33-1.75 qts./A of Bicep II MAGNUM + 1.0 oz./A of Exceed to corn that is 4-12 inches tall. The application may be broadcast, semi-directed, or directed. The Bicep II MAGNUM rate is based on soil texture, with 1.33 qts./A on coarse, and 1.75 qts./A on medium and fine soils. Add a nonionic surfactant at 0.25% v/v.

This mixture is effective for control of many annual broadleaf weeds and some grasses. A few instances of broadleaf weed control antagonism have been observed with this combination. Control of certain annual grasses can be improved with the addition of Accent.

D. **Bicep II MAGNUM + Exceed + Accent** - Apply the same rates of Bicep II MAGNUM and Exceed as mentioned above. Add Accent at 0.33 oz./A for more effective control of certain annual grasses. Apply to field corn between 4 and 12 inches. Add a nonionic surfactant at 0.25% v/v. The use of fertilizer or crop oil concentrate with this combination may cause injury to corn.

E. **Bicep II MAGNUM + Spirit** - Spirit herbicide at 1.0 oz./A can be substituted in place of Exceed in the above combinations in field corn only.

Note: Do not use fertilizer or crop oil concentrate with these mixtures or injury to field corn may occur. The combination of Bicep II MAGNUM with other products for postemergence weed control in corn is generally not recommended. **These combinations may cause injury and/or weed control concerns that would not exist when the products are used separately.** A certain inherent risk is involved with the various combinations of these products used postemergence in corn. [It should be noted

that early preplant, preplant incorporated, or preemergence control of these weeds would usually provide more timely weed control resulting in higher yields than total postemergence treatments.]

Mixing Order

Add these products (Tank Mixtures C, D and E) to the tank mix in the following order:

1. Products in water-soluble bags should be added first.
2. Bicep II MAGNUM
3. Additives

Precautions: (1) Follow all label ***instructions, precautions, and rotational restrictions*** *for individual products when making these applications to field corn. When Bicep II MAGNUM is applied after June 10, crop injury may occur the following year if you rotate to crops other than corn or sorghum. (2) In-row weed control may be reduced because of lack of coverage when applied to corn over 4 inches tall.*

BICEP II MAGNUM COMBINATIONS – GRAIN SORGHUM (SEED TREATED WITH CONCEP OR SCREEN)

Tank Mixture of Bicep II MAGNUM with Gramoxone Extra, Landmaster BW, or Roundup for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where grain sorghum is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Extra, Landmaster BW, or Roundup may be tank mixed with Bicep II MAGNUM. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged annual weeds and suppresses many perennial weeds. Landmaster BW or Roundup combinations will control emerged annual and perennial weeds when applied as directed on its label. The Bicep II MAGNUM portion of the tank mixture provides preemergence control of the weeds listed on this label in the **Bicep II MAGNUM Applied Alone** section.

Refer to the label of each product used in combination and observe the planting details, restrictions, and all other precautions and limitations.

Application: Apply before, during, or after planting, but before grain sorghum emerges, at the appropriate rate in Table 9. Add Gramoxone Extra, Landmaster BW, or Roundup at labeled rates.

Apply in a minimum of 20 gals. of water per acre with conventional spray equipment.

Table 9: Bicep II MAGNUM for Minimum-Tillage or No-Tillage Grain Sorghum* (Seed treated with Concep or Screen)

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, silty clay loam, clay loam, sandy clay, silty clay, clay	less than 1.0%	DO NOT USE
	1.0-1.5%	1.6 qts.
	more than 1.5%	1.8-2.1 qts.

*Do not use in NM or TX, except in the TX Panhandle, Gulf Coast, and Blacklands areas. Do not apply preplant incorporated in AZ or the Imperial Valley of CA.

Precautions: To avoid possible crop injury, (1) Do not apply Bicep II MAGNUM on highly alkaline soils (pH greater than 8.0) or on eroded areas where calcareous subsoils are exposed. (2) Do not apply Bicep II MAGNUM when sorghum is planted in deep furrows because heavy rains following application can cause excessive concentrations of herbicide in the furrow. (3) Do not apply to sorghum grown under dry mulch tillage. (4) Injury may occur if both Bicep II MAGNUM applied early preplant, preplant surface, preplant incorporated, or preemergence and an at-planting systemic insecticide applied in-furrow are used. (5) In addition, sorghum growing under stress caused by minor element deficiency may be injured by Bicep II MAGNUM.

Rotational Crops: Follow the crop rotation instructions in the **Bicep II MAGNUM Alone** section.

STORAGE AND DISPOSAL

Storage

Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

Pesticide Disposal

Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

Container Disposal

Do not reuse empty container. Triple rinse (or equivalent), puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes eye irritation. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist. This product may cause skin sensitization reactions in some people.

Statement of Practical Treatment

If in eyes: Flush with plenty of water. Call a physician if irritation persists.

If swallowed: Immediately call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of

throat with finger, or, if available, by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

If inhaled: Remove victim to fresh air.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

Note to Physician: If ingested, induce emesis or lavage stomach. Administration of an aqueous slurry of activated charcoal can be considered. Treat symptomatically.

Personal Protective Equipment

Applicators and other handlers must wear:

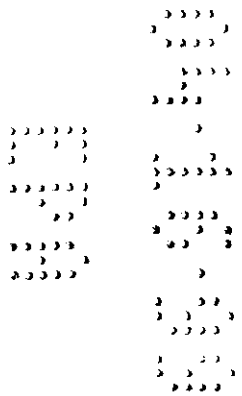
- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)]. When using the closed system, the mixers' and loaders' PPE requirements may be reduced or modified as specified in the WPS.

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



User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate. This pesticide contains atrazine, which has been shown to be toxic to aquatic invertebrates. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas.

Ground Water Advisory

Bicep II MAGNUM contains both the active ingredients atrazine and *S*-metolachlor.

Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

S-metolachlor has the potential to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory

S-metolachlor has the potential to contaminate surface water through ground spray drift. Under some conditions, *S*-metolachlor may also have a high potential for runoff into surface water (primarily via dissolution in

runoff water) for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

Mixing/Loading Instructions

Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check-valves or antisiphoning devices must be used on all mixing equipment.

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

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

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 ft. of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft. around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 ft. buffer or setback from runoff entry points must be

planted to crop, or seeded with grass or other suitable crop.

Tile-Terraced Fields Containing Standpipes

To ensure protection of surface water from runoff through standpipes with tile-outlets in terraced fields, one of the following options may be used:

1. Do not apply this product within 66 ft. of standpipes in tile-outletted terraced fields.

2. Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire tile-outletted terraced field.

3. Apply this product to the entire tile-outletted terraced field under a no-till practice only when a high crop residue management practice is practiced. High crop residue management practice is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

AAtrex®, Beacon®, Bicep®, Bicep II®, Bicep II MAGNUM®, Caliber 90®, Concep®, Dual®, Dual II®, Dual MAGNUM™, Dual II MAGNUM™, Exceed®, Nine-O®, Princep®, and Spirit™ trademarks of Novartis
U.S. Patent Nos. 4,478,635; 4,618,361; 4,671,819; 5,002,606

Accent®, Bladex®, Extrazine®, and Lorox® trademarks of E. I. duPont de Nemours and Company, Inc.

Ag-Chem RoGator® trademark of Ag-Chem Equipment Company

Agsorb® trademark of Oil-Dri Corporation

Banvel®, Basagran®, and Marksman® trademarks of BASF Corporation

Broadstrike* trademark of Dow AgroSciences

Balance®, Brominal® and Buctril® trademarks of Rhône-Poulenc Ag Company

Celatom MP-79® trademark of Eagle-Picher Industries, Inc.

Compex® trademark of KALO Agricultural Chemicals, Inc.

Counter® and Thimet® trademarks of American Cyanamid Company

Gramoxone® trademark of Zeneca Ag Products

Hi-Cycle™ trademark of John Deere Company

Landmaster®, Roundup®, Roundup Ready®, Roundup Ultra™, and Screen® trademarks of Monsanto Company

Liberty® and LibertyLink® trademarks of AgrEvo

Tyler Patriot™ trademark of Tyler Ltd. Partnership

Unite® trademark of HACO, Inc.

Willmar Air Ride® trademark of Willmar Manufacturing

X-77® trademark of Loveland Industries, Inc.

Novartis Crop Protection, Inc.
Greensboro, North Carolina 27419

NCP 817A-L1 (DRAFT)

[QUARK/BICEP II MAGNUM/N-BICEP II MAGNUM-D] - CCG - 4/8/99

(Container Label)

RESTRICTED USE PESTICIDE
(GROUND AND SURFACE WATER CONCERNS)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

Bicep II MAGNUM®

HERBICIDE

For weed control in corn and grain or forage sorghum

2.5 GALLONS
U.S. Standard Measure

Active Ingredients:

Atrazine (CAS No. 1912-24-9)	32.0%
Atrazine related compounds	1.7%
S-Metolachlor (CAS No. 87392-12-9)	26.1%
Other Ingredients:	40.2%
Total:	100.0%

Bicep II MAGNUM contains 3.1 lbs. atrazine + relateds per gallon and 2.4 lbs. *S*-Metolachlor active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes eye irritation. Harmful if swallowed, inhaled, or absorbed through

skin. Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist. This product may cause skin sensitization reactions in some people.

Statement of Practical Treatment

If in eyes: Flush with plenty of water. Call a physician if irritation persists.

If swallowed: Immediately call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

If inhaled: Remove victim to fresh air.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

Note to Physician: If ingested, induce emesis or lavage stomach. Administration of an aqueous slurry of activated charcoal can be considered. Treat symptomatically.

Environmental Hazards

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate. This pesticide contains atrazine, which has been shown to be toxic to aquatic invertebrates. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas.

Ground Water Advisory

Bicep II MAGNUM contains both the active ingredients atrazine and *S*-metolachlor.

Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

S-metolachlor has the potential to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory

S-metolachlor has the potential to contaminate surface water through ground spray drift. Under some conditions, *S*-metolachlor may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

Mixing/Loading Instructions

Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check-valves or antisiphoning devices must be used on all mixing equipment.

This product may not be mixed/loaded or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes*.

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 ft. of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft. around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-ft. buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.*

*For exceptions to these restrictions, see the **Environmental Hazards** section of the **Precautionary Statements** in attached booklet.

Aerial Drift Management Requirements

Do not apply this product by air, unless the supplemental labeling on **Aerial Drift Management** in attached booklet is followed.

Chemigation Prohibition

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

Container Disposal

Do not reuse empty container. Triple rinse (or equivalent), puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

See directions for use in attached booklet.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-817

EPA Est. 100-LA-1^{S}

EPA Est. 11773-IA-01^{W}

(Superscript is first letter of lot number on jug)

Bicep II MAGNUM® trademark of Novartis
U.S. Patent No. 4,618,361

Novartis Crop Protection, Inc.
Greensboro, North Carolina 27419

NCP 817A-L1 (DRAFT)

[QUARK/BICEP II MAGNUM/N-BICEP II MAGNUM-D] - ccg - 4/8/99