

METOLACHLOR

GROUP

15

HERBICIDE

**HELM**

HELMET Herbicide

For weed control in Corn (field, pop, sweet, grown for seed), Cotton, Peanuts, Crop Group 6 Legume Vegetables (succulent and dried) Potatoes, Safflowers, Sorghum, Soybeans, and Tomato

ACTIVE INGREDIENT:

Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)
acetamide

% BY WT.

84.1%

OTHER INGREDIENTS:

15.9%

TOTAL:

100.0%

HELMET Herbicide contains 7.8 lbs. of active ingredient per gallon.

EPA Reg. No. 74530-97

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label find someone to explain it to you in detail)

**SEE INSIDE BOOKLET FOR FIRST AID, ADDITIONAL PRECAUTIONARY STATEMENTS AND
DIRECTIONS FOR USE INCLUDING STORAGE AND DISPOSAL**

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300

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

Manufactured For:

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FIRST AID	
IF SWALLOWED	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have affected person sip a glass of water if able to swallow. • Do not induce vomiting unless told by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF IN EYES	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF INHALED	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER Have the product container or label with you when calling a poison control center, such as 1-800-222-1222 or doctor or going for treatment. For Chemical Emergency Assistance (Spill, Leak, Fire or Accident) call CHEMTREC at 1-800-424-9300.	

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear protective eye wear.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pant
- Chemical-resistant gloves: made of Barrier Laminate, Butyl Rubber, ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Natural Rubber ≥ 14 mils, Polyethylene, Polyvinyl Chloride (PVC) ≥ 14 mils, or Viton ≥ 14 mils.
- Chemical resistant footwear plus socks
- Chemical resistant headgear for overhead exposure
- Chemical resistant apron when cleaning equipment mixing or loading.

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

ENGINEERING CONTROLS STATEMENT

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 170.607(d-e)]. 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/PPE 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, or 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.

Groundwater Advisory:

This chemical is known to leach through soil into groundwater 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 groundwater contamination.

Surface Water Advisory:

Metolachlor can contaminate surface water through ground spray drift. Under some conditions, 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 over-laying extremely shallow groundwater, 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 over-laying 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 anti-siphoning devices must be used on all mixing and/or irrigation equipment.

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 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.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABEL.

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.

FOR ALL TANK MIXTURES: It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

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 over short-sleeved shirt and short pants
- Chemical-resistant gloves made of Barrier Laminar, Butyl Rubber, ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Natural Rubber ≥ 14 mils, Polyethylene, Polyvinyl Chloride (PVC) ≥ 14 mils, or Viton ≥ 14 mils.
- Chemical-resistant footwear plus socks,
- Chemical-resistant headgear for overhead exposure.

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 or Suffolk Counties, NY.

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

PRODUCT INFORMATION

HELMET Herbicide is a selective herbicide registered for use as a preplant surface-applied, preplant incorporated, or preemergence treatment in water or fluid fertilizer for control of most annual grasses and certain broadleaf weeds in corn (field, pop, sweet, grown for seed), cotton, peanuts, crop group 6 legume vegetables (succulent and dried), potatoes, safflowers, sorghum, soybeans, and tomatoes. HELMET Herbicide is also registered as a postemergent treatment on corn, cotton, potato, soybean, and tomato.

RESTRICTION:

- DO NOT use in nurseries, turf, or landscape plantings.
- DO NOT apply to frozen ground.
- 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:
 - DO NOT treat powdery dry or light sand soils when conditions are favorable for wind erosion.
 - Under these conditions, the soil surface must first be settled by rainfall or irrigation.
 - DO NOT apply to impervious substrates, such as paved or highly compacted surfaces.
 - 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.

Observe all use restrictions and precautions on the labels of each product used in tank mixtures. Tank mixtures are permitted only in those states where the tank mix partner is registered.

FOR ALL TANK MIXTURES: It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Where directions on this label specify a HELMET Herbicide tank mixture with atrazine, follow the rates, restrictions, and use precautions on the labeling of the atrazine product used. Certain states may have established rate limitations for atrazine 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.

If this product is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.

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.

USE PRECAUTIONS

1. Injury may occur following the use of this product under abnormally high soil moisture conditions during early development of the crop.
2. Dry weather following preemergence application of this product or a tank mixture may reduce effectiveness. Cultivate if weeds develop.

RESISTANCE MANAGEMENT

For resistance management, clomazone metolachlor is a Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to metolachlor and other Group 15 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of this product or other Group 15 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance management and/or integrated weed-management recommendations for specific crops and weed biotypes.

INTEGRATED WEED PEST MANAGEMENT

Integrate this product into an overall weed pest management strategy whenever the use of an herbicide is required. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

SOIL TEXTURES AND HERBICIDE RATES

Where rates are based on coarse-, medium-, or fine-textured soils, it is understood that soil textural classes are generally categorized as follows:

Coarse	Medium	Fine
Sand Loamy sand Sandy loam	Loam Silt loam Silt	Sandy clay loam Silty clay loam Clay loam Sandy clay Silty clay Clay

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

HELMET Herbicide may be applied preemergence alone, or in combination with tank mix partners specified on this label, following preplant incorporated herbicides when used according to their label directions, provided that such use is not prohibited on the respective labels.

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 any other materials, or crop damage or clogging of the application device may result.

MIXING INSTRUCTIONS

HELMET Herbicide Alone: Mix HELMET Herbicide with water or fluid fertilizer (as specified in the individual crop sections) and apply as a spray. Fill the spray tank 1/2 - 3/4 full with water or fluid fertilizer, add the proper amount of this product, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

Tank Mixtures: Fill the spray tank one-quarter full with water, and start agitation; add tank mix partners (with the exception of paraquat or glyphosate), allow it to become dispersed; then add HELMET Herbicide; then add paraquat, glyphosate/2,4-D, or glyphosate if these products are being used; and finally the rest of the water.

In some tank mixtures with atrazine, dicamba, linuron, simazine, pendimethalin, simazine; fluid fertilizers may replace all or part of the water as carrier, except in the atrazine postemergence and the dicamba post-emergence tank mixes. For tank mixtures with atrazine, see additional mixing instructions on the atrazine label. For each tank mixture, check compatibility with fluid fertilizer before mixing in spray tank. For all tank mixtures, conduct a compatibility test as described in the Compatibility Test Section of this label. For all tank mixtures, agitate during mixing and application to maintain a uniform suspension.

*See **Mixing Instructions** for tank mixtures with fluometuron, atrazine, or simazine+pendimethalin under the appropriate tank mixture section.

APPLICATION PROCEDURES

Application Timing

HELMET Herbicide alone or in tank mixtures with other labeled herbicides may be applied for weed control in crops listed on this label. Refer to the individual crop sections of the label to determine if application timings listed below are applicable.

- a. Preplant Surface-Applied: For minimum-tillage or no-tillage systems only, HELMET Herbicide alone and some HELMET Herbicide tank mixtures may be applied up to 45 days before planting. Use only split applications for treatments made 30-45 days before planting, with 2/3 the specified broadcast rate for the crop and soil texture applied initially and the remaining 1/3 at planting. Treatments less than 30 days before planting may be made either as a split or a single application. Refer to individual crop sections to determine if early preplant surface application is allowed.

If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, paraquat or glyphosate). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. 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.

- b. Preplant Incorporated: Apply HELMET Herbicide to the soil and incorporate into the top 2 inches of soil within 14 days before planting, using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If the crop will be planted on beds, apply and incorporate this product after bed formation, unless specified otherwise.
- c. Preemergence: Apply this product during planting (behind the planter) or after planting, but before weeds or crops emerge.
- d. Postemergence (cotton and soybean use only): For pre-emergence or partial control of the weeds listed in the WEEDS CONTROLLED – HELMET Herbicide APPLIED ALONE and in the WEEDS PARTIALLY CONTROLLED sections of this label, use one application of this product at the rate specified in the cotton or soybean sections of this label. This product alone will not control emerged weeds, so it must be applied to a weed-free surface or in a tank mixture with products that provide postemergence weed control. If weeds are present at the time of application, tank mix with a labeled postemergence herbicide and observe all directions for use, precautions, limitations, and restrictions on the label of the tank mix partner. For additional postemergence information, follow the crop specific label requirements identified on this label.

SPECIAL APPLICATION PROCEDURES

- 1. CA Only (Corn, Safflowers, Crop Group 6 Legume Vegetables (succulent and dried)):** **Preplant Incorporated:** Broadcast this product alone or with tank mix partners listed on this label to the soil and thoroughly incorporate with a disk or similar implement set to till 4-6 inches deep. For more thorough incorporation, till the soil in 2 different directions (cross-till). Crops may be planted on flat surface or on beds. Caution should be used when forming the beds that only soil from the HELMET Herbicide treated zone is used (i.e., untreated soil should not be brought to soil surface). If the application is made to pre-formed beds, incorporate this product with a tillage implement set to till 2-4 inches deep. Care should be taken during tilling to keep the tilled (HELMET Herbicide treated) soil on the beds.
- 2. Preemergence:** Apply this product after planting. Water with sprinkler or flood irrigation within 7-10 days.
- 3. Fall Application (Only in IA, MN, ND, SD, WI, and North of Route 20 in the state of NE, and North of Route 136 in the state of IL – See specific instructions in the individual crop sections of this label for timing of application and other information):** Use on medium and fine soils with greater than 2.5% organic matter that will be planted to corn or soybeans the next spring. Ground may be tilled before or after application.

RESTRICTIONS – Fall applications

1. DO NOT apply to frozen ground.
2. DO NOT exceed a 2 to 3-inch incorporation depth if tilled after treatment.
3. If a spring application is made, the total rate of the fall plus spring applications MUST NOT exceed the maximum total rate for the specific crop, or illegal residues may result.
4. Ground Application: Apply this product alone or in tank mixtures by ground equipment in a minimum of 10 gals. of spray mixture per acre, unless otherwise specified. Use sprayers that provide accurate and uniform application. For tank mixtures of this product with wettable powder or dry flowable formulations, screens and strainers should be no finer than 50-mesh. Rinse sprayer thoroughly with clean water immediately after use.

Calculate the amount of herbicide needed for band treatment by the formula:

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

For information on applying in lower volumes of carrier, see the **Low Carrier Application Section**.

For application by air or through center pivot systems, see the **Aerial Application** section or **Center Pivot Irrigation Application** section.

For information on impregnating dry fertilizer, see the **DRY BULK GRANULAR FERTILIZERS** section.

WEEDS CONTROLLED – HELMET HERBICIDE APPLIED ALONE

Barleygrass (watergrass)	foxtail millet	signalgrass (<i>Brachiaria</i>)
bristly foxtail	galinsoga	southwestern cupgrass
carpetweed	giant foxtail	tall waterhemp
common waterhemp	goosegrass	wild proso millet*
crabgrass	green foxtail	witchgrass
crowfootgrass	pigweed	woolly cupgrass*
Eastern black nightshade	prairie cupgrass	yellow foxtail
fall panicum	red rice	yellow nutsedge
Florida pusley	robust foxtails (purple, white)	

*For control of these weeds in corn only, refer to the **Corn - Woolly Cupgrass and Wild Proso Millet Control Program** section of this label.

Weeds Partially Controlled*

common purslane	sandbur	volunteer sorghum
eclipta	seedling johnsongrass	wild proso millet
Florida beggarweed**	shattercane	woolly cupgrass
hairy nightshade	Texas panicum***	

*See **Product Information** section. Control of these weeds can be erratic due partially to variable weather conditions.

**For partial control of this weed, use a minimum of 2 pts./A and apply preemergence.

***For partial control of this weed, use a minimum of 2 pts./A applied through a center pivot irrigation system.

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. Control of these weeds can be erratic, due partially to variable weather conditions. Control may be improved by following these suggested procedures:

1. Thoroughly till moist soil to destroy germinating and emerged weeds. If this product is to be applied preplant incorporated, this tillage may be used to incorporate this product if uniform 2- inch incorporation is achieved as recommended under Application Procedures.
2. Plant crop into moist soil immediately after tillage. If this product is to be used preemergence, apply at planting or immediately after planting.
3. If available, sprinkler irrigate within 2 days after application. Apply one-half to 1 inch of water. Use lower water volume (one-half inch) on coarse-textured soils and higher volume (1 inch) on fine-textured soils. Also, refer to the section on Center Pivot Irrigation Application for this method of applying HELMET Herbicide.
4. 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.

ROTATIONAL CROPS

HELMET HERBICIDE ALONE

Replanting if a crop is lost

If a crop treated with this product alone is lost, any crop on this label may be replanted immediately if the rate from the previous crop does not exceed the rate for the crop to be planted. Do not make a second broadcast application of this product.

Rotational Crop Directions

- (1) Barley, oats, rye, or wheat may be planted 4.5 months following treatment.
- (2) Alfalfa may be planted 4 months following application. Clover may be seeded 9 months following application.

RESTRICTIONS: To avoid injury to rotational alfalfa or clover:

1. DO NOT apply more than 2.0 lbs. a.i. of metolachlor per acre (2.0 pts. of HELMET Herbicide) preemergence (including preplant surface, preplant incorporated, postplant incorporated, etc.)
2. DO NOT make lay-by or other postemergent applications of HELMET Herbicide.
3. DO NOT graze or feed forage or fodder from cotton to livestock.
- (3) Any crop on this label, in addition to root crops, tobacco, barley, buckwheat, milo, oats, rice, rye, wheat, cabbage, or peppers may be planted in the next spring following treatment.
- (4) Following a lay-by treatment or multiple treatments applied the previous season, any crop on this label, in addition to tobacco, cabbage, or peppers, may be planted in the spring. All other rotational crops may be planted 12 months after a lay-by application.
- (5) Do not graze or feed forage or fodder from cotton to livestock.

HELMET Herbicide Tank Mixtures

For Rotational Crops restrictions for this product used in tank mixtures, refer to the statements/restrictions above for this product and to the respective product labels of any mixing partner(s) for additional statements/restrictions.

SPRAY EQUIPMENT LOW CARRIER APPLICATION

For Broadcast Ground Application Only

Use sprayers 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. Rinse sprayer thoroughly with clean water immediately after each use.

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 nozzles 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

Apply HELMET Herbicide in water alone or in tank mixtures with atrazine, or linuron, metribuzin in a minimum total volume of 2.0 gals./A by aircraft. This product may also be applied by air in combination with pendimethalin, or trifluralin. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft., using low-drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply HELMET Herbicide alone or HELMET Herbicide + atrazine by aircraft at a minimum upwind distance of 400 ft. from sensitive plants, or apply HELMET Herbicide + linuron, or metribuzin at a minimum upwind distance of 300 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 must be observed.

The applicator must 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 the **Wind, Temperature and Humidity, and Temperature Inversions** sections).

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. 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).

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

CENTER PIVOT IRRIGATION APPLICATION

HELMET Herbicide alone or in tank mixture with other herbicides on this label, which are registered for center pivot application, may be applied in irrigation water preemergence (after planting, but before weeds or crop emerge) at rates specified on this label. This product also may be applied postemergence to the crop and preemergence to weeds in crops where postemergence applications are allowed on this label. Follow all restrictions (height, timing, rate, etc.) to avoid illegal residues. Apply this product only through a center pivot irrigation system. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Operating Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being with-drawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 1 part of water to 1 part herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Meter into irrigation water during entire period of water application.
10. Apply in 1/2 - 1 inch of water. Use the lower water volume (1/2 inch) on coarse-textured soils and the higher volume (1 inch) on fine-textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

PRECAUTIONS FOR CENTER PIVOT APPLICATIONS

1. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result.
2. Where sprinkler distribution patterns overlap excessively, crop injury may result.

DRY BULK GRANULAR FERTILIZERS

Many dry bulk granular fertilizers may be impregnated or coated with this product alone or selected HELMET Herbicide tank mixtures which are registered for preplant incorporated or preplant surface applications which are used to control weeds on labeled crops on the HELMET Herbicide label and are not prohibited from use on dry bulk granular fertilizers.

When applying HELMET Herbicide or HELMET Herbicide mixtures with dry bulk granular fertilizers, follow all directions for use and precautions on the respective product labels, regarding target crops, corn, rates per acre, soil texture, application methods (including timing of application), 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 mixtures by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray HELMET Herbicide and HELMET Herbicide mixtures onto the fertilizer must be placed to provide uniform spray coverage. Care should be taken to aim the spray directly onto the fertilizer only and to avoid spraying the walls of the blender.

If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® 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 amounts of HELMET Herbicide, atrazine, atrazine plus simazine, metribuzin, isoxaflutole or ethafluralin by the following formula:

$$\frac{2,000}{\text{lbs. of fertilizer per acre}} \times \frac{\text{pts./A of liquid or flowable product}}{\text{flowable product}} = \frac{\text{pts. of liquid or flowable product per ton of fertilizer}}{\text{ton of fertilizer}}$$

$$\frac{2,000}{\text{lbs. of fertilizer per acre}} \times \frac{\text{lbs./A of dry product}}{\text{dry product}} = \frac{\text{lbs. of dry product per ton of fertilizer}}{\text{ton of fertilizer}}$$

Pneumatic (Compressed Air) Application (HELMET Herbicide Alone): High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer may cause fertilizer mixture to build up or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix HELMET Herbicide with Exxon Aromatic 200 at a rate of 1.0 to 4.0 pts./gal. of HELMET Herbicide. 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.

PRECAUTIONS

1. Mixtures of HELMET Herbicide 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 HELMET Herbicide in a blender before application, a drier mixture can be attained by substituting a drying agent for Aromatic 200. The use of Agsorb FG or drying agents of 6/30 particle size are recommended.
3. Drying agents are not recommended for use with On-The-Go impregnation equipment.

RESTRICTIONS

To avoid potential for explosion,

1. Do not impregnate HELMET Herbicide or HELMET Herbicide mixtures on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers.
2. Do not use HELMET Herbicide or HELMET Herbicide mixtures 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 to prevent possible crop injury. Non-uniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve 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.

USE PRECAUTION:

To avoid crop injury, do not use the herbicide/fertilizer mixture on crops where bedding occurs.

COMPATIBILITY TEST

Because liquid fertilizers can vary, even within the same analysis, always check compatibility with herbicide(s) each time before use. Be especially careful when using complete suspension or fluid fertilizers, as serious compatibility problems are more likely 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 (1/4 tsp. is equivalent to 2.0 pts./100 gals. spray). Shake or stir gently to mix. When an adjuvant is to be used with this product, Sipcam Agro USA recommends the use of Compex®, Unite® or a Chemical Producers and Distributors Association (CPDA) certified adjuvant.
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 1.5 level 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 incompatibility is still observed, do not use the mixture.

CROPS

CORN (FIELD, POP, SWEET, GROWN FOR SEED) – HELMET HERBICIDE ALONE

Apply this product, either preplant surface, preplant incorporated, or preemergence, using the appropriate rate specified below.

1. PREPLANT SURFACE-APPLIED

Refer to instructions for use of HELMET Herbicide alone under Application Procedures.

A. Fall Application

- Apply after September 30 in MN, ND, SD, WI, and north of Route 30 in IA;
- Apply after October 15 north of Route 91 in NE and south of Route 30 in IA;
- Apply after October 31 north of Route 136 in IL

In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67-2.0 pts./A on medium-textured and 2.0 pts./A on fine-textured soils. A tillage operation may precede the application. Minimize furrow and ridge formation in the tillage operations.

RESTRICTIONS:

1. If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for corn, or illegal residues may result.
2. DO NOT apply to frozen ground.
3. A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2-3 inches.

B. 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 specified rate of HELMET Herbicide (1.67 pts./A on medium soils and 2.0 pts./A on fine soils) as a split treatment 30-45 days before planting and the remainder at planting. Applications made less than 30 days prior to planting may be as either a split or single treatment. Apply 1.33 pts./A on coarse soils not more than 2 weeks prior to planting.

RESTRICTION: If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for corn, or illegal residues may result.

C. On medium- and fine-textured soils with minimum- or no-tillage systems in CT, DE, MA, MD, ME, MI, NH, NY, OH, PA, RI, VA, VT, and WV, preplant surface 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 post-emergence application of an appropriately labeled broadleaf and/or grass weed herbicide may be used, i.e., metolachlor, primisulfuron-methyl, prosulfuron, nicosulfuron, dicamba, bromoxynil, or 2,4-D. If the postemergence treatment includes the herbicide used preplant surface-applied, do not exceed the total labeled rate for corn on a given soil texture.

Observe all directions for use, precautions, and restrictions on the label of the postemergent herbicide.

2. PREPLANT INCORPORATED OR PREEMERGENCE

Follow instructions for use of HELMET Herbicide alone under Application Procedures.

On coarse soils, apply 1.0-1.33 pts./A of HELMET Herbicide if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. On medium soils, apply 1.33-1.67 pts./A of HELMET Herbicide. On fine soils, apply 1.33-1.67 pts./A of HELMET Herbicide if organic matter content is less than 3%, or 1.67-2.0 pts./A if organic matter content is 3% or greater.

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Preplant Incorporated: See the **SPECIAL APPLICATION PROCEDURES** Section of this label.

3. LAY-BY OR POSTEMERGENCE: To extend the duration of weed control in corn, a maximum rate of 2.0 pts./A of HELMET Herbicide may be applied after crop emergence until the corn plants reach 40 inches in height, following any preplant surface-applied, preplant incorporated, or preemergence herbicide application, including HELMET Herbicide. For best results, applications should be made to soil free of emerged weeds and directed towards the base of the corn plants in excess of 5 inches tall. The total HELMET Herbicide rate applied on corn during any one crop year must not exceed 4.0 pts./A, depending on soil texture.

Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta – Partial Control: For more consistent partial control of shattercane, wild proso millet, woolly cupgrass, or eclipta, apply 2.0-2.55 pts./A as a single application; or apply 1.0-1.33 pts./A of HELMET Herbicide preplant incorporated followed by 1.0-1.33 pts./A of HELMET Herbicide preemergence; however, do not apply more than a total of 2.55 pts./A. Make the preemergence application during or after planting, but before weeds and corn plants emerge. Apply the 1.33 pts./A rate of HELMET Herbicide when a heavy infestation of shattercane, wild proso millet, woolly cupgrass, or eclipta is expected. A shallow cultivation may be needed to control any late emerging weeds.

Woolly Cupgrass and Wild Proso Millet Control Program: For control of these species, use the following 3-step program:

1. Apply HELMET Herbicide early preplant, preplant incorporated, or preemergence at 1.67 pts./A on medium soils and 2.0 pts./A on fine-textured soils, up to the maximum label rate. Lightly incorporate with a rotary hoe if rainfall does not occur within 5-7 days;
2. Apply a postemergence tank mix of primisulfuron-methyl at 0.38 oz./A or Exceed primisulfuron-methyl and prosulfuron at 1 packet per 4 acres plus nicosulfuron at 0.33 oz./A plus 1.0 qt. of crop oil concentrate plus 1.0 gal./A of 28% nitrogen, or the equivalent amount of ammonium sulfate, when grasses are 2-3 inches tall and the corn plant is at least 4 inches tall; and
3. Cultivate 14-21 days after the postemergence application.

RESTRICTIONS (for all application methods):

1. To avoid possible illegal residues, DO NOT graze or feed forage from treated areas for 30 days following application.
2. DO NOT apply more than the labeled application rate for a given soil texture per year, either as a single or split treatment, or illegal residues may result.
3. In corn, HELMET Herbicide may be used up to 2.75 pts./A as either a preplant surface, preplant incorporated, or preemergence treatment on soils having an organic matter content between 6% and 20% or up to 2.0 pts./A on any soil for extended residual control and where severe stands of problem weeds are expected.
4. In the event of escape of annual weeds following a preplant surface, preplant incorporated, or pre-emergence treatment of HELMET Herbicide, follow with a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide, i.e., atrazine, primisulfuron-methyl, metolachlor, primisulfuron-methyl, prosulfuron, nicosulfuron, dicamba, bromoxynil, or 2,4-D. If the postemergence treatment includes the herbicide used in the earlier treatment, i.e., atrazine, do not exceed the total labeled rate for corn on a given soil texture.
5. Bromoxynil may be applied postemergence alone or in tank mix combination with atrazine. DO NOT exceed 1.2 lbs. a.i./A of atrazine in tank mix combination with bromoxynil postemergence. Refer to the atrazine, bromoxynil labels for specific rates and precautions.
6. Do not use HELMET Herbicide on peat or muck soils.
7. Do not apply to frozen ground.

CORN (FIELD, POP, SWEET, GROWN FOR SEED) – HELMET HERBICIDE COMBINATIONS

Chart 1: HELMET HERBICIDE Tank Mixtures for Corn - Additional Weeds Controlled and Special Instructions

	HELMET HERBICIDE + Atrazine and/or Simazine (Preplant Surface, PPI, PRE)	HELMET HERBICIDE + Atrazine (Post)	HELMET HERBICIDE + Dicamba (Field Corn)	HELMET HERBICIDE + Atrazine + Linuron	HELMET HERBICIDE + Atrazine or Simazine + Pendimethalin	HELMET HERBICIDE + Atrazine / dicamba
Comments	2, 3, 4, 5	2, 3, 4		2, 3, 4, 5	1, 2, 3, 4	6
Browntop panicum	A			A	A	
Cocklebur	A	B	B	A	A	A
Common purslane	A			A	A	A
Hairy nightshade	A			A	A	A
Jimsonweed		A	B			A
Kochia		A				A
Lambsquarters	A	A	A	A	A	A
Morningglory	A	B	B	A	A	A
Mustard		A				A
Pigweed				A	A	A
Prickly sida		A				A
Ragweed	A	A	A	A	A	A
Smartweed	A	A	A	A	A	A
Velvetleaf	A	A	B	A	A	A
a = control; b = partial control.						

Comments:

1. Special Mixing Instructions for HELMET Herbicide + atrazine or simazine and pendimethalin

- Fill the spray tank 1/4 full with water or fluid fertilizer and start agitation.
 - To aid compatibility, add a compatibility agent, such as Unite® or X-77®, at 4.0 pts./100 gals. of spray mixture.
 - Then add the atrazine or simazine and allow it to become dispersed.
 - Then add HELMET Herbicide and pendimethalin.
 - Add the rest of the water.
- Follow the directions for use, rates, and restrictions on the tank mix partner label(s).
 - In Minimum-Tillage and No-Tillage systems, mix with paraquat for control of most emerged annual weeds and suppression of perennial weeds; or with glyphosate/2, 4-D for suppression of emerged field bindweed and control or suppression of annual weeds; or with glyphosate for control of most emerged annual and perennial weeds.
 - Refer to TANK MIXTURE WITH ATRAZINE; OR ATRAZINE + 2,4-D; OR ATRAZINE + 2,4-D + DICAMBA FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS in the corn section of this label for specific directions for 2,4-D or dicamba burndown combinations in Minimum-Tillage and No-Tillage systems.
 - HELMET Herbicide in any tank mixture for corn may be applied in water or fluid fertilizer, except as noted.
 - Refer to Corn (Field, Pop, Sweet, Grown For Seed) - HELMET Herbicide Alone, for sequential postemergence treatments if escape weeds develop.

RESTRICTIONS FOR ALL TANK MIXES USED ON CORN

- For all applications to corn, do not graze or feed forage from treated areas for 30 days following application, or possible illegal residues may result.
- When applying HELMET Herbicide in tank mixture with atrazine, do not exceed the specified amount of atrazine per acre per year. Certain states may have established rate limitations for atrazine 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.
- In corn, HELMET Herbicide may be used up to 2.0 pts./A in combinations on any soil for extended residual control and where severe stands of problem weeds are expected.
- Do not apply more than the labeled rate for a given soil texture per year, either as a split or single treatment, or illegal residues may result.

1. TANK MIXTURE WITH ATRAZINE OR SIMAZINE, OR ATRAZINE + SIMAZINE– PREPLANT SURFACE, PREPLANT INCORPORATED, OR PREEMERGENCE

In addition to the weeds controlled by HELMET Herbicide alone, HELMET Herbicide+atrazine or simazine, or HELMET Herbicide+ atrazine + simazine, applied preplant surface, preplant incorporated, or preemergence, also controls the following weeds: browntop panicum, cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf.

Apply HELMET Herbicide + atrazine or simazine, or HELMET Herbicide + atrazine + simazine either preplant surface, preplant incorporated, or preemergence.

Preplant Surface-Applied: Follow instructions for use of HELMET Herbicide alone under Application Procedures and under application instructions for HELMET Herbicide alone on corn. Apply HELMET Herbicide + atrazine or simazine, or HELMET Herbicide + atrazine + simazine on medium soils (1.67 pts./A of HELMET Herbicide + the labeled rate of atrazine or simazine, or atrazine+ simazine combined) and on fine soils (1.67-2.0 pts./A of HELMET Herbicide + the labeled rate of atrazine or simazine, or atrazine+simazine combined) in minimum-tillage and no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply the tank mixtures as a split or single treatment in those states and as indicated in the HELMET Herbicide Alone – Preplant Surface-Applied section of the label. On coarse soils, apply 1.33 pts./A of HELMET Herbicide and the labeled rate of atrazine or simazine, or atrazine+simazine combined.

Preplant Incorporated or Preemergence: Follow instructions for use of HELMET Herbicide alone under Application Procedures. Apply HELMET Herbicide + atrazine or simazine, or HELMET Herbicide + atrazine + simazine, using the appropriate rates from Table 1.

CALIFORNIA ONLY

Preplant Incorporated: See the **SPECIAL APPLICATION PROCEDURES** Section of this label.

Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta – Partial Control

For more consistent partial control of shattercane, wild proso millet, woolly cupgrass, or eclipta, where HELMET Herbicide is applied in tank mixture or sequentially with other registered corn herbicides, apply 2.0- 2.33 pts. as a single application, or the following applications may be made:

1. Apply 1.0-1.33 pts./A of HELMET Herbicide + the labeled rate of atrazine or simazine preplant incorporated, followed by 1.0-1.33 pts./A of HELMET Herbicide preemergence. Make the preemergence application during or after planting, but before weeds and corn plants emerge.
2. Apply HELMET Herbicide at 1.33 pts./A alone or in tank mix combination with up to the labeled rate of atrazine or simazine, preplant incorporated. Do not exceed the total rate of triazine herbicide specified for corn grown on a given soil texture. Follow with a post-directed application of ametryn at the labeled rate. Refer to the ametryn label for specific directions for the post-directed application.
3. Apply EPTC or butylate at labeled rates preplant incorporated, followed by a preemergence application of HELMET Herbicide at 1.0-1.33 pts./A. Do not use EPTC or butylate on soils where rapid degradation has been shown to occur. Make the preemergence application during or after planting, but before weeds and corn plants emerge.

PRECAUTION: When following the application regimes in numbers 1-3 above, a shallow cultivation may be needed after the preemergence or postemergence application to help control any late emerging shattercane or wild proso millet plants.

Table 1: HELMET Herbicide + atrazine or simazine, or HELMET Herbicide + atrazine + simazine, Preplant Incorporated, or Preemergence – Corn (Field, Pop, Sweet, Grown For Seed)

Soil Texture	BROADCAST RATES PER ACRE	
	LESS THAN 3% ORGANIC MATTER	3% ORGANIC MATTER OR GREATER
Coarse	0.85 - 1.0 pt. + the label rate of either atrazine or simazine*	1.0 pt. + the label rate of either atrazine or simazine*
Medium	1.0 - 1.33 pts. + the label rate of either atrazine or simazine*	1.33 pts. + the label rate of either atrazine or simazine*
Fine	1.33 pts. + the label rate of either atrazine or simazine*	1.33 - 1.67 pts. + the label rate of either atrazine or simazine*
DO NOT USE ON MUCK OR PEAT (SOILS WITH MORE THAN 20% ORGANIC MATTER)		

* Use simazine in preference to atrazine when heavy infestations of crabgrass or fall panicum are expected. On soils having between 6% and 20% organic matter, HELMET Herbicide may be used up to 2.33 pts./A in tank mix combination with the label rate of atrazine. Refer to the atrazine label for weeds controlled at this rate.

Table 2: Tank Mixture with Atrazine – Postemergence

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

Apply 1.0 pt./A of HELMET Herbicide + the label rate of atrazine on coarse soils, 1.33 pts./A of HELMET Herbicide + the label rate of atrazine on medium soils, or 1.33-1.67 pts./A of HELMET Herbicide + the label rate of atrazine on fine soils. Apply this tank mixture 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.

Lay-by: Apply to corn plants not more than 12 inches tall. Applications to corn plants in excess of 5 inches should be directed to the base of the plants; whereas, applications to plants less than 5 inches tall may be made over the top. Occasionally, some corn leaf burn may result, but this should not affect later growth or yield. Do not apply this postemergence tank mixture in fluid fertilizer, or severe crop injury may occur.

For better control of cocklebur, morningglory, velvetleaf, and yellow nutsedge on fine-textured soils above 3% organic matter, apply the label rate of atrazine with 1.33-1.67 pts./A of HELMET Herbicide.

Tank mixtures of HELMET Herbicide + atrazine may be applied following use of any registered preplant surface-applied, preplant incorporated, or preemergence corn herbicide, including HELMET Herbicide + atrazine.

RESTRICTIONS

1. The total HELMET Herbicide rate must not exceed 4.0 pts., and the atrazine rate must not exceed the amount allowed on the label during any one crop year, or illegal residues may result.
2. Refer to the atrazine label for geographic, soil-texture, and rotational restrictions.
3. TANK MIXTURE WITH DICAMBA

Preemergence: Use this tank mixture only on field corn, which is flat-planted (no furrows) in CO, IA, IL, IN, KS, MN, NE, OH, SD, and WI if the tank mix partner is registered in the state.

In addition to the weeds controlled by HELMET Herbicide alone, HELMET Herbicide + dicamba, applied preemergence, also controls lambsquarters, ragweed, smartweed, cocklebur*, jimsonweed*, morningglory*, and velvetleaf*.

*Partially controlled.

Apply HELMET Herbicide + dicamba preemergence. Broadcast the label rate of dicamba with 1.33 pts./A of HELMET Herbicide on medium soils, or with 1.33-1.67 pts./A of HELMET Herbicide on fine soils. Do not apply on coarse soils or on soils with less than 2.5% organic matter. Apply this tank mixture to the soil surface at planting or after planting, but before field corn emerges. Plant seed at least 1.5 inches deep and apply behind planting equipment, avoiding incorporation by the planter wheel or other seed-covering device. Do not incorporate before corn plants emergence. If it is necessary to rotary hoe to break the soil crust, do not disturb the soil more than 1/2 inch deep.

Postemergence for Control of Pigweed (Mid-Atlantic states, including DE, MD, PA, VA, and WV): Apply 1.0-1.5 pts. of HELMET Herbicide + the label rate of dicamba by ground equipment when pigweed plants are less than 3 inches tall and before field corn exceeds 5 inches in height in a minimum of 20 gals. of spray per acre. Use the lower specified rate on coarse-textured and low organic matter soils. Use the higher specified rate on fine-textured and high organic matter soils.

RESTRICTIONS FOR ALL HELMET HERBICIDE AND DICAMBA TANK MIXES ON CORN

- A. Avoid drift to sensitive nontarget plants, such as soybeans, during application, or injury may occur.
- B. Do not apply with aircraft.

4. TANK MIXTURE WITH ATRAZINE AND LINURON FOR CONTROL OF LAMBSQUARTERS AND PIGWEED

For prolonged control of lambsquarters and pigweed in DE, MD, NJ, NY, PA, VA, and WV, HELMET Herbicide may be applied preemergence in tank mix combination with atrazine + the label rate of linuron. Apply HELMET Herbicide and atrazine according to the rates in Table 1 and linuron according to the labeled rates. Observe all directions for use, precautions, and restrictions on the HELMET Herbicide, atrazine, and linuron labels when applying these products in tank mix combinations.

5. TANK MIXTURE WITH ATRAZINE OR SIMAZINE +PENDIMETHALIN FOR PROLONGED CONTROL OF LAMBSQUARTERS AND PIGWEED IN FIELD CORN ONLY (NORTHEAST U.S., INCLUDING MI, IN, KY, AND STATES EAST OF THESE)

For prolonged control of lambsquarters and pigweed, in addition to a broad spectrum of annual broadleaf and grass weeds, HELMET Herbicide in tank mix combination with atrazine* or simazine + pendimethalin may be applied after planting, but before field corn or weeds emerge. Apply by ground equipment in a minimum of 10 gals. of water or 20 gals. of liquid fertilizer. Apply by air in a minimum of 5.0 gals. of water. Refer to Table 1 of this label for rates of HELMET Herbicide to be applied. Apply pendimethalin, atrazine, or simazine at the label rate.

Some formulations of atrazine and pendimethalin are not compatible. Before using this tank mixture, a compatibility test must be conducted. See the COMPATIBILITY TEST section of this label.

Mixing Instructions:

1. Fill the spray tank 1/4 full with water or fluid fertilizer and start agitation.
2. To aid compatibility, add a compatibility agent, such as Unite® or X-77®, at 4.0 pts./100 gals. of spray mixture.
3. Then add the atrazine or simazine and allow it to become dispersed.
4. Then add HELMET Herbicide and pendimethalin.
5. Add the rest of the water.

Observe all directions for use, precautions, and restrictions on the respective product labels when applying these products in tank mix combination. Refer to the pendimethalin label for replanting instructions in the event of crop loss.

6. TANK MIXTURE WITH ATRAZINE OR SIMAZINE, OR ATRAZINE + SIMAZINE, WITH PARAQUAT, GLYPHOSATE +2,4-D, OR GLYPHOSATE FOR MINIMUM-TILLAGE OR NO TILLAGE SYSTEMS

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides paraquat, glyphosate or glyphosate+2,4-D, may be added to a tank mix of HELMET Herbicide + atrazine and/or simazine, mixed with paraquat for control of most emerged annual weeds and suppression of perennial weeds; or with glyphosate/2, 4-D for suppression of emerged field bindweed and control or suppression of annual weeds; or with glyphosate for control of most emerged annual and perennial weeds. The HELMET Herbicide + atrazine or simazine, or HELMET Herbicide + atrazine + simazine portion of the tank mixture provides preemergence control of the weeds listed on this label in the tank mixture section for **HELMET HERBICIDE + ATRAZINE OR SIMAZINE, OR HELMET HERBICIDE + ATRAZINE + SIMAZINE PREPLANT SURFACE, PREPLANT INCORPORATED, OR PREEMERGENCE.**

Application: Apply before, during, or after planting, but before the corn emerges, at the rates specified below. Add paraquat, glyphosate or glyphosate/2, 4-D at the labeled broadcast rate. See the paraquat, glyphosate or glyphosate/2, 4-D labels for weeds controlled, labeled rates for specific weeds, and other use directions.

- Apply surfactant at 1.0 or 2.0 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6 inches.
 - Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.
 - On *coarse soils*, apply 1.0 pt./A of HELMET Herbicide with the labeled rate of all tank mix partners,
 - On *medium soils*, apply 1.33 pts./A of HELMET Herbicide with the labeled rate of all tank mix partners.
 - On *fine soils****, apply 1.33-1.67 pts./A of HELMET Herbicide with the labeled rate of all tank mix partners,
- * Use simazine in preference to atrazine when heavy infestations of crabgrass or fall panicum are expected.
- ** When using the tank mixture of HELMET Herbicide + atrazine + simazine, use equal rates of atrazine and simazine as shown when heavy broadleaf weed infestations are expected. When heavy infestations of crabgrass or fall panicum are expected, use a 1:2 ratio of atrazine + simazine instead of the 1:1 ratio.
- *** For cocklebur, yellow nutsedge, and velvetleaf control on *fine-textured soils* above 3% organic matter, apply the specified labeled rate of atrazine and/or simazine, with 1.33-1.67 pts./A of HELMET Herbicide.

RESTRICTION: Do not apply combinations containing paraquat in suspension-type liquid fertilizers, as the activity of paraquat will be reduced.

7. TANK MIXTURE WITH ATRAZINE; OR ATRAZINE + 2,4-D; OR ATRAZINE + 2,4-D + DICAMBA 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, HELMET Herbicide applied in combination with atrazine will kill most emerged small annual weeds. Apply HELMET Herbicide + atrazine before, during, or after planting, but before corn emerges, according to the rates in Table 1.

Where heavy crop debris exists, add the label rate of an appropriately labeled 3.8 lbs. a.i./gal. of 2,4-D amine (such as Weedar® 64 or Formula 40®) 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 appropriate surfactant at its recommended rate, or add crop oil concentrate plus 28% liquid nitrogen (or equivalent). Apply before weeds exceed 3 inches in height. If alfalfa is present, add dicamba to the spray mixture at the labeled rate 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 paraquat at the label rate in place of or in addition to 2,4-D, as indicated above. Do not apply paraquat in suspension-type liquid fertilizer. Observe all directions for use, precautions, and restrictions on the respective product labels when applying these products in tank mix combination.

8. TANK MIXTURE WITH DICAMBA / ATRAZINE IN CONSERVATION TILLAGE – FIELD CORN In conservation tillage systems where field corn is planted directly into a cover crop or previous crop residue, HELMET Herbicide + dicamba / atrazine will kill most emerged small annual weeds. Apply HELMET Herbicide + dicamba / atrazine before, during, or after planting, but before field corn emergence on *medium* and *fine soils* with greater than 2.5% organic matter. For fields with existing vegetation exceeding 3 inches in height or when very dry conditions exist, add paraquat at its labeled rate. HELMET Herbicide + dicamba / atrazine may be applied postemergence to field corn plants less than 3 inches tall and before weedy grasses exceed the 2-leaf stage. As carriers, nitrogen solutions and complete liquid fertilizers, applied before crop emergence enhance burndown of existing weeds. Do not apply paraquat in suspension-type liquid fertilizer or use on emerged crop.

Refer to the dicamba / atrazine label and follow all directions, restrictions, and use precautions regarding application and use in field corn.

COTTON – HELMET HERBICIDE ALONE

Application: Apply HELMET Herbicide preemergence only in Area 1* at the rate of 0.75 to 1 pt./A on sandy loams, 1 to 1.33 pts./A on *medium soils*, or 1 to 1.33 pts./A on *fine soils*. Apply this product preplant incorporated or preemergence in Area 2** at 1 pt./A on sandy loams, 1 to 1.33 pts./A on *medium soils*, or 1.33 pts./A on *fine soils*. Apply this product postemergence to cotton and preemergence to weeds at 0.75 to 1.33 pts./A according to the state rate restrictions in the **Postemergence** section below. **DO NOT use on sands and loamy sand.**

* Area 1 = AR, LA, MS, TN, and Bootheel of MO

**Area 2 = NM, OK, and TX

Preplant Incorporated (NM, OK, and TX Only): Apply HELMET Herbicide to the soil and incorporate into the top inch of soil immediately before planting, at planting, or after planting, but before crop or weeds emerge. Use a rolling cultivator or similar implement to uniformly incorporate not more than 1 inch deep. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. Where furrow irrigation is used, wet the top of the bed for best results. If the crop is to be planted on beds, apply and incorporate after bed formation. Cotton should be planted below the zone of incorporation; i.e., at least 1 inch on *fine soils* and 1.5 inches on *coarse* and *medium soils*. If incorporated prior to planting, use a planter that will result in a minimum of soil disturbance.

RESTRICTIONS:

1. For best control of yellow nutsedge and suppression of seedling johnsongrass, apply this product preplant incorporated at the maximum rate for the soil texture, whether applied alone or mixed with prometryn.

Preemergence: Apply HELMET Herbicide to the soil surface at planting or after planting, but before weeds or crop emerge.

Postemergence: Apply HELMET Herbicide broadcast over-the-top or directed to the soil surface, according to the rate and cotton height restrictions listed below by state. Application before weeds emerge or after clean cultivation to remove existing weeds is necessary as this product will not control emerged weeds. This product postemergence may be applied over any previous registered herbicide treatment. In sprinkler-irrigated areas, sprinkler irrigate after application with one-half to 1 inch of water (one-half inch on *coarse-textured soils* to 1 inch on *fine-textured soils*). To incorporate this product in furrow-irrigated areas, apply this product, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In non-irrigated areas, if at least one-half inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of this product.

VA, NC, SC, GA, FL, and AL	Apply HELMET Herbicide at 1 to 1.33 pts./A when cotton is 3 to 6 inches tall.
TN, AR, MS, MO, and LA	Apply HELMET Herbicide at 0.75 to 1.33 pts./A when cotton is 3 to 12 inches tall.
TX, OK, NM, AZ, CA, and Clay Soils in AR	Apply HELMET Herbicide at 1 to 1.33 pts./A when cotton is 3 to 12 inches tall, but before August 1.

Multiple Applications: Where weed pressure is heavy, difficult-to-control species are expected, or reinfestation may occur, and a weed control program is used, multiple applications of this product are effective when used as part of the weed control program. Apply as a preplant incorporated or preemergence treatment and follow with an application postemergence to cotton before weeds emerge or after clean cultivation to remove existing weeds since this product will not control emerged weeds. Cotton should be at least 3 inches tall at the postemergence timing. Apply this product postemergence over a previous preplant or preemergence application of this product as shown in the following table.

State	HELMET Herbicide Multiple Applications to Cotton		
	Preplant incorporated or Preemergence Pts./A		Postemergence and Height Pts./A
MS, LA, TN, AR, MO	0.75 – 1.33 (Preemergence Only)	+	0.75 – 1.33 to 3-12" cotton
TX, OK, NM	1.0 – 1.33	+	1.0 – 1.33 to 3-12" cotton before August 1
NC, VA	1.0 – 1.33 (Preemergence Only)	+	1.0 – 1.33 to 3-12" cotton

In sprinkler-irrigated areas, sprinkler irrigate after application with one-half to 1 inch of water (one-half inch on *coarse-textured soils* to 1 inch on *fine-textured soils*) to incorporate this product. In furrow-irrigated areas, apply this product, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In non-irrigated areas, if at least one-half inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of this product.

For best control of yellow nutsedge and suppression of seedling johnsongrass, apply this product preplant incorporated, preemergence, or postemergence to cotton and preemergence to weeds at the maximum rate for the soil texture, whether applied alone or in combinations. Do not apply more than a total of 2 pts./A on *coarse soils* or 4 pts./A of this product on *medium* and *fine soils* during a growing season (do not make tandem applications of metolachlor and s-metolachlor herbicides). These treatments may be applied over previous application of herbicides.

RESTRICTIONS:

1. Do not graze or feed forage or fodder from cotton to livestock, or illegal residues may result.
2. To avoid crop injury, do not apply this product on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed;

3. To avoid concentration in the seed furrow, do not make broadcast applications of this product to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow;
4. In furrow-planted cotton, to avoid concentration in the furrow and potential injury, do not apply this product postemergence until after first “knifing” or cultivation to level soil surface.
5. Do not apply over-the-top in fluid fertilizer or any other adjuvant, surfactant, oil, or other pesticide not specified in the cotton section of this label, or injury may occur;
6. Do not apply on Taloka silt loam.
7. Do not use in Gaines County, TX.

COTTON – HELMET HERBICIDE COMBINATIONS

TANK MIXTURE WITH PROMETRYN

HELMET Herbicide tank mixed with prometryn may be applied preplant incorporated or preemergence in water or fluid fertilizer. When fluid fertilizer is used as a carrier for this product, either alone or in combination with prometryn, mix only the amount that will be sprayed in one operation. Do not allow these to stand without agitation. Only water may be used as a carrier for postemergence-directed application.

In addition to those weeds controlled by HELMET Herbicide alone, HELMET Herbicide + prometryn, applied preplant incorporated or preemergence, also controls the following weeds: junglerice, wild oats, annual morningglory, groundcherry, hairy nightshade, lambsquarters, malva, mustard, prickly sida (teaweed), purslane, ragweed, and shallow-germinating seedlings of cocklebur and coffeeweed. As a postemergence-directed application, prometryn provides postemergence control and residual control of weeds on its label, while this product provides residual control of weed species on its label. This product will not control emerged weeds.

Preplant Incorporated or Preemergence: Apply HELMET Herbicide + prometryn, either preplant incorporated or preemergence, using the appropriate rate from the table below. Cotton should be planted below the zone of incorporation; i.e., at least 1 inch on *fine soils* and 1.5 inches on *coarse and medium soils*. If incorporated before planting, use a planter that will result in a minimum of soil disturbance.

TABLE 2: HELMET HERBICIDE + PROMETRYN – COTTON (NM, OK, TX)

Use Areas	Soil Texture	Broadcast Rates Per Acre	
		HELMET HERBICIDE	Prometryn
ALL	Sand, Loamy sand	DO NOT USE	
OK, and Blacklands, Gulf Coast, and Rio Grande Valley of TX	Loams	0.85-1.33 pts.	Label rate
	Clays	1.33 pts.	Label rate
NM; High Plains, Rolling Plains, Edwards Plateau of TX; and Southwest TX	Sandy loam	0.85-1.0 pt.	Label rate
	Loams	0.85-1.33 pts.	Label rate
	Sandy clay loams	1.33 pts.	Label rate
	Other clay soils	1.33 pts.	Label rate

Postemergence-Directed (AR, AZ, CA, LA, MO, MS, NM, OK, TN, and TX): HELMET Herbicide may be tank mixed with prometryn in water and applied postemergence directed in cotton for control of emerged weeds listed on the prometryn label and residual preemergence control of weeds controlled by this product and prometryn, or application may be made after cultivation for residual preemergence control. These treatments may be applied over previous application of herbicides, including this product, provided the maximum label rate of any product is not exceeded (do not make tandem applications of metolachlor and s-metolachlor herbicides). Do not apply over-the-top of cotton or injury may occur.

Apply HELMET Herbicide + prometryn in a minimum of 20 gals. of spray volume per acre. Follow the directions, restrictions, and use precautions on the prometryn label when prometryn is applied as a postemergence-directed application. Refer to the directions, restrictions, and use precautions for this product under the **Cotton — HELMET Herbicide Alone — Postemergence** section.

RESTRICTIONS:

1. To avoid concentration in the seed furrow, do not make broadcast applications of this product + prometryn to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow.
2. To avoid crop injury,
 - a. Do not apply on sand or loamy sand soils, or in areas where water is likely to “pond” over the bed;
 - b. Do not apply in cut areas of newly leveled fields, or in areas of excess salt;
 - c. Do not apply to glandless cotton varieties; and
 - d. Do not apply on Taloka silt loam.
3. Do not use in Gaines County, TX.
4. Do not graze or feed forage or fodder from cotton to livestock, or illegal residues may result.
5. Refer to the prometryn label for further instructions and restrictions.

TANK MIXTURE WITH FLUOMETURON

HELMET Herbicide may be applied in tank mixture with fluometuron preemergence for control of those weeds controlled by this product alone and those as listed on the fluometuron label. This combination will also control spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge. Apply to the soil surface at planting or after planting, but before weeds or crop emerges, using the appropriate rates from the table below. The tank mixture may be applied postemergence to cotton, but preemergence to weeds, or it may be applied postemergence to both cotton and broadleaf weeds for control of weeds on the fluometuron label. Apply as a directed, semi-directed, or over-the-top spray. This product will not control emerged weeds, but will provide preemergence control of species on its label.

Mixing Instructions: Incompatibility may occur when tank mixing HELMET Herbicide and fluometuron. To help overcome this condition, fill the spray tank one-quarter full with water or fluid fertilizer and start agitation, add the fluometuron and allow it to become dispersed. Add X-77® at 0.5% volume/volume final spray (4 pts./100 gals.), then add this product and finally the rest of the water or fluid fertilizer. Agitate during mixing and application to maintain a uniform suspension. Do not use fluid fertilizer as a carrier for postemergence applications.

TABLE 3: HELMET HERBICIDE + FLUOMETURON – COTTON

Soil Texture	Broadcast Rates Per Acre		
	HELMET HERBICIDE (pts.)		Fluometuron
	Area 1*	Area 2**	
Sand, Loamy sand	DO NOT USE		
Sandy loam	0.75-1.0	0.85-1.0	Label rate
Loam, Silt loam, Silt	1.0-1.33	1.0-1.33	Label rate
Fine soil	1.0-1.33	1.33	Label rate

* Area 1 = AR, LA, MS, Bootheel of MO and TN

**Area 2 = Eastern OK, Gulf Coast, Rio Grande Valley, and Eastern TX

Postemergence: This tank mixture may be applied postemergence to cotton, but preemergence to weeds or postemergence to both cotton and weeds for control of weeds on the fluometuron label. Apply as a directed, semi-directed, or over-the-top spray. This product will not control emerged weeds, but will provide preemergence control of species on its label. Apply when cotton is in the 3- to 12-inch stage. Where rate ranges are given for fluometuron, use the higher rate when applying postemergence to weeds that are 2 inches or less. These treatments may be applied over previous application of herbicides, including this product, provided the maximum label rate of any product is not exceeded (do not make tandem applications of metolachlor and s-metolachlor herbicides).

RESTRICTIONS

1. To avoid possible illegal residues, DO NOT feed treated forage or gin trash to livestock, or graze treated areas.
2. DO NOT apply HELMET Herbicide + fluometuron on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed, or crop injury may occur.
3. To avoid concentration in the seed furrow, do not make broadcast applications of this product + fluometuron to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow.
4. The use of fluometuron following the use of a systemic insecticide at planting may result in crop injury.
5. DO NOT use on Taloka silt loam, or crop injury may occur.
6. DO NOT use in Gaines County, TX.

Refer to the fluometuron labels for further instructions, use precautions, and restrictions.

TANK MIXTURE OF HELMET HERBICIDE + FLUOMETURON WITH PARAQUAT OR GLYPHOSATE FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS

In minimum-tillage or no-tillage systems where cotton is planted directly into a cover crop, stale seedbed, or previous crop residues, the contact herbicides paraquat or glyphosate may be added to a tank mix of either HELMET Herbicide or HELMET Herbicide + fluometuron. When used as directed, the paraquat portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Glyphosate combinations will control emerged annual and perennial weeds when applied as directed on the glyphosate label. HELMET Herbicide and HELMET Herbicide + fluometuron portion of the tank mixture provides preemergence control of the weeds listed on each label, respectively.

Refer to the label of each product used in combination and observe the planting details, information regarding application, geographical restrictions, and all other precautions and restrictions. Refer to **Mixing Instructions** under **Tank Mixture with Fluometuron** section.

Application: Apply before, during, or after planting, but before the cotton emerges, at the rates specified below. Apply this product at 0.85 to 1 pt./A on sandy loams, *medium-*, and *fine-textured* soils. Use fluometuron at the labeled rates.

Do not apply this product + fluometuron + glyphosate in tank mixture because of compatibility problems.

Add paraquat or glyphosate at the following broadcast rates:

Paraquat: Use the labeled rates. Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50 to 74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6 inches.

RESTRICTION: Do not apply combinations containing paraquat in suspension-type liquid fertilizers, as the activity of paraquat will be reduced.

Glyphosate: See the glyphosate label for weeds controlled, specified rates, and other use directions.

Apply in 20 to 60 gals. of water or fluid fertilizer per acre with ground equipment.

RESTRICTIONS:

1. If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days, or where the seeding slit has not been properly closed.
2. Refer to the fluometuron labels and the **Tank Mixture with Fluometuron** section of this label for further instructions, use precautions, and restrictions.
3. Do not use in Gaines County, TX.

TANK MIXTURE WITH MSMA, MSMA + PROMETRYN, OR MSMA + FLUOMETURON

HELMET Herbicide may be tank mixed with MSMA in water and applied postemergence-directed for control of emerged weeds listed on the MSMA product label and residual preemergence control of weeds controlled by this product. The addition of prometryn or fluometuron will add control of weed species on their respective labels.

Postemergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and Bootheel of MO): Apply HELMET Herbicide + MSMA postemergence-directed to 3 to 12-inch cotton according to the directions, restrictions, and use precautions on the MSMA product label, as well as the directions, restrictions, and use precautions for use of this product in the section for **Cotton — HELMET Herbicide Alone – Postemergence**. Do not apply after first cotton bloom. These treatments may be applied over previous registered treatments, including this product, provided the maximum label rate of any product is not exceeded. Fluometuron or prometryn may be added to this product + MSMA tank mixture according to the respective label directions for application to 3- to 12-inch cotton. When these mixtures are used, follow the mixing instructions for HELMET Herbicide + prometryn or fluometuron and then add the MSMA product.

Do not use this product in tank mix with premixes of MSMA plus herbicides other than those registered for use in tank mixture with this product on cotton.

TANK MIXTURE OF HELMET HERBICIDE WITH GLYPHOSATE FOR USE ON ROUNDUP READY® COTTON AND ROUNDUP READY FLEX COTTON ONLY

HELMET Herbicide may be tank mixed with glyphosate in water and applied postemergence over-the-top or postemergence-directed spray only to RoundUp Ready or RoundUp Ready Flex cotton or other cotton varieties or cultivars warranted as tolerant to glyphosate. This tank mixture will control emerged weeds listed on the glyphosate label and residual preemergence control of weeds listed on this label. See the **Cotton – HELMET Herbicide Alone – Postemergence** section for proper rates and timing of HELMET Herbicide. Also follow the glyphosate label for appropriate use rate, method of application, and restrictions of application timing. For postemergence over-the-top application, do not add any adjuvants, surfactants, fertilizers, or other pesticides to this tank mixture as unacceptable injury may occur.

RESTRICTIONS:

1. Do not apply this tank mixture postemergence to any cotton variety unless it is designated glyphosate tolerant, and unless the glyphosate formulation being used is registered for postemergence use in Roundup Ready Cotton or glyphosate tolerant cotton.
2. Postemergence over-the-top applications of this tank mixture may cause temporary injury in the form of necrotic spotting to exposed cotton leaves, which will not affect normal plant development.
3. Do not apply glyphosate postemergence over-the-top to cotton past the growth stage limit specified on the label.
4. Do not use on sand or loamy sand soils in Gaines County, TX.

TANK MIXTURE OF HELMET HERBICIDE WITH GLUFOSINATE RESISTANT COTTON

HELMET Herbicide may be tank mixed with glufosinate in water and applied as a postemergence, broadcast over-the-top spray or as a postemergence-directed spray only to LibertyLink cotton or other cotton varieties or cultivars warranted as resistant to glufosinate. This tank mixture will control emerged weeds listed on the glufosinate label and provide residual preemergence control of weeds listed on this label. See the **Cotton – HELMET Herbicide Alone – Postemergence** section for proper rates and timing of HELMET Herbicide. Also follow the glufosinate label for appropriate use rate, method of application, and restrictions of application timing. For postemergence over-the-top application, do not add any adjuvants, surfactants, fertilizers, or other pesticides to this tank mixture as unacceptable injury may occur.

RESTRICTIONS:

1. Do not apply this tank mixture postemergence to any cotton variety unless it is designated glufosinate resistant, and unless the glufosinate formulation being used is registered for postemergence use in glufosinate resistant cotton.
2. Postemergence over-the-top applications of this tank mixture may cause temporary injury in the form of necrotic spotting to exposed cotton leaves, which will not affect normal plant development.
3. Do not apply glufosinate postemergence to cotton beyond early bloom stage.
4. Do not use on sand or loamy sand soils in Gaines County, TX.

PEANUTS – HELMET HERBICIDE ALONE

Apply HELMET Herbicide, either preplant incorporated, postplant incorporated, preemergence, or lay-by, using the appropriate rate specified below. **Preplant Incorporated or Preemergence:** Follow instructions for use of this product alone under **Application Procedures**.

Postplant Incorporated: Apply and shallowly incorporate this product into the soil after planting, but before peanut germination. Incorporation depth and incorporating implements must be kept above the seed, or seed will be damaged.

Lay-by: Apply HELMET Herbicide to the soil immediately after the last normal cultivation. Apply this product alone, preplant incorporated, postplant incorporated, or pre-emergence, or lay-by, at a broadcast rate of 1 to 1.33 pts./A in the Southeast* and 0.85 to 1.33 pts./A in NM, OK, and TX.

*In the Southeast, use 1.33 to 2 pts./A and apply preemergence for partial control of Florida beggarweed.

RESTRICTIONS:

1. Do not apply within 90 days of harvest, or illegal residues may result.
2. Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
3. HELMET Herbicide alone may be applied as directed after any of the following preplant incorporated herbicides when used according to their label: trifluralin at the labeled rate; ethafluralin at the labeled rate; imazethapyr at the labeled rate; or pendimethalin at the labeled rate.

PEANUTS – HELMET HERBICIDE COMBINATIONS

TANK MIXTURE OR SEQUENTIALLY WITH IMAZETHAPYR

The tank mixture or sequential treatment of HELMET Herbicide and imazethapyr controls both all weeds controlled by this product alone and all weeds controlled by imazethapyr alone. Refer to the **HELMET Herbicide Applied Alone** section for weeds controlled by this product and to the imazethapyr label for weeds controlled by imazethapyr.

Refer to the respective labels for application methods, timing, rates, restrictions, and use precautions; and use in accordance with the most restrictive label. Do not exceed the label rate of either product. This product will not control emerged weeds.

TANK MIXTURE WITH ETHAFLURALIN

The tank mixture controls all weeds controlled by HELMET Herbicide alone and by ethafluralin alone. Refer to the **HELMET Herbicide Applied Alone** section for weeds controlled by this product and to the ethafluralin label for weeds controlled by ethafluralin.

Apply HELMET Herbicide + ethafluralin preplant incorporated, using the appropriate rate from the table below. Follow label recommended soil preparation and soil-incorporation procedures for ethafluralin.

Table 4: HELMET Herbicide + Ethafluralin – Peanuts

Soil Texture	Broadcast Rates Per Acre (pts.)			
	Southeast		NM, OK, TX	
	HELMET HERBICIDE	Ethafluralin	HELMET HERBICIDE	Ethafluralin
COARSE	1.0-1.33	Label rate	0.85-1.33	Label rate
MEDIUM	1.0-1.33	Label rate	0.85-1.33	Label rate
FINE	1.0-1.33	Label rate	0.85-1.33	Label rate

Follow all use directions, restrictions, and use precautions regarding application to peanuts on this product and ethafluralin labels.

TANK MIXTURE WITH PENDIMETHALIN

HELMET Herbicide + pendimethalin applied preplant incorporated controls all weeds controlled by this product alone plus Texas panicum, field sandbur, johnsongrass from seed, lambsquarters, kochia, annual spurge, and other species on the pendimethalin label. Apply HELMET Herbicide + pendimethalin by ground or by aerial equipment within 14 days before planting. Incorporate into the top 1 to 2 inches of soil before planting and within 7 days of application, using a finishing disk or similar implement capable of providing uniform incorporation. If peanuts will be planted on beds, apply and incorporate after bed formation. Refer to the **Incorporation** instructions of the respective labels for additional directions.

Apply HELMET Herbicide + pendimethalin preplant incorporated, using the appropriate rates from the table below.

Table 5: HELMET Herbicide + pendimethalin – Peanuts

Soil Texture	Broadcast Rates of HELMET HERBICIDE (pints per acre)			
	NM, OK, TX		Other Peanut Growing States	
	HELMET HERBICIDE	Pendimethalin	HELMET HERBICIDE	Pendimethalin
Sand, Loamy sand	0.85	Label rate	1.0-1.33	Label rate
Sandy loam	0.85-1.0	Label rate	1.0-1.33	Label rate
Fine soil	1.33	Label rate	1.33	Label rate

Follow all use directions, restrictions, and use precautions regarding application to peanuts on HELMET Herbicide and pendimethalin labels.

TANK MIXTURE OR SEQUENTIALLY WITH BENTAZON/ACIFLUORFEN

HELMET Herbicide + bentazon/acifluorfen applied at ground cracking through 2 expanded tetrafoliate leaves or HELMET Herbicide applied according to the directions for **HELMET Herbicide Alone** and followed with an at-cracking through postemergence treatment of bentazon/acifluorfen as specified on its label will control species on the bentazon/acifluorfen label and provide residual control of species listed in the **HELMET Herbicide Applied Alone** section of this label. This product will not control emerged weeds. Refer to the **Peanuts – HELMET Herbicide Alone** section and to the bentazon/acifluorfen label and follow all directions, use precautions, and restrictions for each product.

CROP GROUP 6 LEGUME VEGETABLES (succulent and dried) – HELMET HERBICIDE ALONE

Crop Group 6 – Legume Vegetables (Succulent or Dried) Group – Beans, peas and lentils (includes grain lupin, sweet lupin, white lupin, and white sweet lupin, field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean, adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean, Broad bean (fava bean), Chickpea (garbanzo bean), Guar, Jackbean, Lablab bean, Lentil, dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea, Pigeon pea, and Sword bean.)

*On English peas, use only preemergence applications. Do not use on English peas in Northeastern U.S., or injury may occur.

Spring Application: Apply HELMET Herbicide either preplant incorporated or preemergence, using the appropriate rate specified below.

Preplant Incorporated or Preemergence: Follow instructions for use of this product alone under **Application Procedures**. On *coarse soils* with less than 3% organic matter, apply 1 to 1.33 pts./A of HELMET Herbicide or 1.33 pts./A if organic matter is 3% or greater. On *medium soils*, apply 1.33 to 1.67 pts./A of this product. On *fine soils*, apply 1.33 to 1.67 pts./A of this product if organic matter content is less than 3%, or 1.67 to 2 pts./A if organic matter content is 3% or greater.

RESTRICTIONS: To avoid possible illegal residues,

1. Do not cut for hay within 120 days following application of this product.
2. Do not use for forage within 60 days following application of this product.
3. Do not apply more than 3 pts./A of this product during any one crop year.

CROP GROUP 6 LEGUME VEGETABLES (succulent and dried) – HELMET HERBICIDE COMBINATIONS

TANK MIXTURE AND SEQUENTIAL APPLICATIONS WITH EPTC – BEANS (GREEN OR DRY) This mixture controls all weeds controlled by HELMET Herbicide alone and by EPTC alone. Refer to the **HELMET Herbicide Applied Alone** section of this label for weeds controlled by this product alone and to the EPTC label for weeds controlled by EPTC.

Preplant Incorporated: Follow instructions for use of this product alone under **Application Procedures**.

Sequential: Apply EPTC alone preplant incorporated, as specified on that label. Follow with a preemergence application of this product at rates specified for this product alone, during planting (behind the planter) or after planting, but before the weeds or crop emerge.

CALIFORNIA ONLY

Preplant Incorporated: See the **SPECIAL APPLICATION PROCEDURES** Section of this label.

Refer to the **Product Information** section of this label and to the EPTC label for weather, cultural practices, and all other use precautions and restrictions that affect performance of these products.

Apply the labeled rate of EPTC* with HELMET Herbicide as specified. On *coarse soils*, apply 0.85 pts./A of this product if organic matter content is less than 3%, or 1 pt./A if organic matter content is 3% or greater. On *medium soils*, apply 1 pt./A of HELMET Herbicide if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. On *fine soils*, apply 1.33 pts./A of HELMET Herbicide if organic matter is less than 3%, or 1.33 to 1.67 pts./A if organic matter is 3% or greater.

*Refer to the EPTC label for rate limitations depending on geographical area, and for species and varietal restrictions.

RESTRICTIONS:

1. DO NOT exceed the label rate of EPTC on small white beans or green beans grown on coarse-textured soils.
2. DO NOT cut for hay within 120 days following application, or illegal residues may result.

TANK MIXTURE WITH TRIFLURALIN – BEANS (DRY – KIDNEY, NAVY, PINTO, ETC.; LIMA; AND SNAP)

HELMET Herbicide + trifluralin tank mix applied preplant incorporated controls those weeds listed under **HELMET Herbicide Applied Alone** and those weeds listed for trifluralin alone on the trifluralin label. HELMET Herbicide + trifluralin may be applied by ground or by aerial equipment and incorporated up to 14 days prior to planting. Follow the procedures on this label and on the respective trifluralin label, using equipment that provides uniform 2-inch incorporation.

Apply HELMET Herbicide + trifluralin tank mix, using the appropriate label rate of this product, and the trifluralin specified label rate. Choose the product rate for the specific soil texture/organic matter classification and weed species expected.

Follow all restrictions and use precautions on the respective trifluralin label and in the Crop Group 6 Legume Vegetables (succulent and dried) – **HELMET Herbicide Alone** section of this label.

POTATOES – HELMET HERBICIDE ALONE

Apply HELMET Herbicide, either incorporated, preemergence, or after hilling/lay-by, according to directions specified below for control of weeds listed under the **Product Information** section. Within a rate range, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil.

Incorporated: Apply HELMET Herbicide at 1 to 2 pts./A to the soil and incorporate into the top 3 inches before planting, using a finishing disk, harrow, rolling cultivator, or similar implement. Planting and later cultural practices should not bring untreated soil to the surface. Postplant incorporated application may be made any time after planting to drag-off, but before potato emergence. Use an implement that evenly distributes this product in the top 2 inches of soil. Do not damage potato seed pieces or sprouts with incorporation equipment.

Preemergence: Apply HELMET Herbicide at 1 to 2 pts./A, either after planting as a preemergence, delayed preemergence, after drag-off or hilling treatment, but before weeds emerge. Up to 2.75 pts./A of this product alone may be used where soil organic matter is between 6% and 20%.

After Hilling/Lay-by: Apply 1.67 pts./A of HELMET Herbicide after hilling/at lay-by to control species sensitive to this product for remainder of the growing season. This application will not control emerged weeds. It may be applied over a previous application of this product, but do not apply more than 3.7 pts./A of this product in a single crop season.

RESTRICTIONS:

- (1) Potatoes treated with this product must not be harvested within 60 days after the at-planting to drag-off application, or within 40 days after a lay-by application, or illegal residues may result.
- (2) Do not use on muck or peat soils. If cool, wet soil conditions occur after application, this product may delay maturity and/or reduce yield of Superior and other early maturing potato varieties.
- (3) To avoid crop injury,
 - a. Do not use on sweet potatoes or yams;
 - b. Do not apply both as a preemergence and an incorporated treatment;
- (4) Do not use in Kern County, CA.

POTATOES – HELMET HERBICIDE COMBINATIONS

TANK MIXTURE WITH METRIBUZIN

In addition to those weeds controlled by HELMET Herbicide alone, this product applied in tank mix combination with, or sequentially with, any of the registered metribuzin formulations, also controls the following broadleaf weeds: cocklebur*, hairy nightshade*, hemp sesbania, jimsonweed*, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, venice mallow, and wild mustard.

*Partially controlled.

HELMET Herbicide at 1 to 2 pts./A plus metribuzin at the labeled use rate may be used preemergence through after last hilling. Apply 1 to 1.33 pts./A of HELMET Herbicide on *coarse soils* and 1.33 to 2 pts./A on other soil textures. Within this rate range, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil. This product will not control emerged weeds.

Refer to the metribuzin label for precautionary statements, restrictions, application information, weeds controlled, and varietal limitations.

RESTRICTIONS:

- (1) Potatoes treated with this product in tank mixture with metribuzin cannot be harvested within 60 days after application, or illegal residues may result.
- (2) Potatoes must not be harvested within 40 days after a lay-by application of this product, or illegal residues may result.
- (3) DO NOT apply to sweet potatoes or yams.
- (4) DO NOT use this tank mixture on muck or peat soils.
- (5) DO NOT use this product + metribuzin on potatoes in Kern County, CA
- (6) Postemergence applications to potatoes should be made only as a directed or semi-directed spray to avoid chlorosis, minor necrosis, or leaf distortion.

HELMET HERBICIDE + LINURON TANK MIXTURE (EAST OF ROCKY MOUNTAINS)

HELMET Herbicide may be applied in a tank-mix combination with any of the registered linuron formulations as a preemergence broadcast application to potatoes. Apply to the soil surface after planting and before emergence of the crop or after final drag-off, according to the rates specified in the table below.

TABLE 6: HELMET HERBICIDE + LINURON – POTATOES (EAST OF ROCKY MOUNTAINS)

Soil Texture	Broadcast Rates Per Acre			
	1% to Less Than 3% Organic Matter		3-5% Organic Matter	
	HELMET HERBICIDE	Linuron	HELMET HERBICIDE	Linuron
COARSE Sandy loam	1 pt.	Label rate	1.33 pts.	Label rate
MEDIUM Loam, Silt loam, Silt	1.33 pts.	Label rate	1.67-2 pts.	Label rate

RESTRICTIONS:

To avoid crop injury,

1. Do not use on sands or loamy sands, and
2. Do not incorporate or spray over the top of emerged potatoes.

Refer to the **Product Information** section of this label and to the linuron label for precautionary statements, restrictions, application information, and weeds controlled.

TANK MIXTURE WITH PENDIMETHALIN

In addition to the weeds controlled by HELMET Herbicide alone, this tank mixture with pendimethalin controls such problem species as kochia, lambsquarters, purslane, annual spurge, stinging nettle, and others specified on the pendimethalin label. Apply HELMET Herbicide + pendimethalin preemergence, preemergence incorporated or early postemergence according to the specific directions on the pendimethalin label, using the rates in the table below.

TABLE 7: HELMET HERBICIDE + PENDIMETHALIN – POTATOES

Soil Texture	Broadcast Rates Per Acre (pts.)	
	Less Than 3% Organic Matter	More Than 3% Organic Matter
	HELMET HERBICIDE + pendimethalin	HELMET HERBICIDE + pendimethalin
COARSE	1.0-1.33 + label rate	1.0-1.33 + label rate
MEDIUM	1.33 + label rate	1.33-1.67 + label rate
FINE	1.33-1.67 + label rate	1.67 + label rate

Refer to HELMET Herbicide and pendimethalin labels and observe all directions, timings, use precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

TANK MIXTURE WITH PENDIMETHALIN + EPTC

In addition to the weeds controlled by HELMET Herbicide alone, this tank mixture will control those species on the pendimethalin and EPTC labels. Refer to the HELMET Herbicide, pendimethalin and EPTC labels for rates of those products (depending on geographical area); and observe all directions, use precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

SAFFLOWERS – HELMET HERBICIDE ALONE

Preplant Incorporated or Preemergence: Follow instructions for use of HELMET Herbicide alone under **Application Procedures**.

On *coarse soils*, apply 1 to 1.33 pts./A of HELMET Herbicide if organic matter content is less than 3%, or 1.33 pts./A if organic matter is 3% or greater. On *medium soils*, apply 1.33 to 1.67 pts./A of this product. On *fine soils*, apply 1.33 to 1.67 pts./A of this product if organic matter content is less than 3%, or 1.67 to 2 pts./A if organic matter content is 3% or greater.

CALIFORNIA ONLY

Preplant Incorporated: See the **SPECIAL APPLICATION PROCEDURES** Section of this label.

SORGHUM – HELMET HERBICIDE ALONE**USE ONLY ON SORGHUM (GRAIN OR FORAGE) SEED TREATED WITH CONCEP® OR SCREEN®**

Apply HELMET Herbicide, either preplant surface, preplant incorporated, or preemergence, using the appropriate rate specified below. Apply this product alone only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

Pre-plant Surface Applied: Refer to instructions for this product under **Application Procedures**. For minimum-tillage or no-tillage systems only, HELMET Herbicide may be applied up to 45 days before planting in CO, IA, IL, KS, MO, NE, and SD. Use only split applications for treatments made 30 to 45 days prior to planting, with two-thirds of the broadcast rate applied initially and the remaining one-third at planting. Apply 1.5 pts./A of this product on *medium soils* or 1.67 pts./A on *fine soils*. Treatments less than 30 days prior to planting may be either as a split or single application. Apply 1.33 pts./A of this product on *coarse soils* not more than 2 weeks prior to planting. Under dry conditions, irrigation after application is recommended to move this product into the soil.

Preplant Incorporated or Preemergence: Refer to instructions for use of HELMET Herbicide under **Application Procedures**. Broadcast 1 to 1.33 pts./A of this product on *coarse soils*, 1.33 to 1.5 pts./A on *medium soils*, or 1.33 to 1.67 pts./A on *fine soils*.

RESTRICTIONS:

1. If sorghum seed is not properly treated with Concep or Screen seed treatment, this product will severely injure the crop.
2. Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of this product. The crop will normally outgrow this effect.
3. DO NOT use this product on sorghum grown under dry mulch tillage, or injury may occur.
4. Except for the split preplant surface treatment, DO NOT make more than one application per year, or illegal residues may result.

SORGHUM – HELMET HERBICIDE COMBINATIONS**USE ONLY ON SORGHUM (GRAIN OR FORAGE) SEED TREATED WITH CONCEP® OR SCREEN®**

HELMET Herbicide tank mixtures with atrazine may be applied in water or fluid fertilizer. Apply this product in tank mixtures only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

IMPORTANT: FOR TANK MIXTURES WITH ATRAZINE – If applying this product in tank mixture with atrazine, all the restrictions and rate limitations on the atrazine label must be followed if more restrictive than those on this label. In addition, if atrazine is/must be applied at rates lower than the label rate, broadleaf weed control may be affected. Refer to the atrazine label for weeds controlled at the reduced rates.

RESTRICTIONS:

- 1) If sorghum seed is not properly treated with Concep or Screen seed treatment, this product + atrazine may severely injure the crop.
- 2) Applications of this product + atrazine on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may cause sorghum injury.
- 3) Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of this product + atrazine. The crop will normally outgrow this effect.
- 4) DO NOT use this product + atrazine on sorghum grown under dry mulch tillage, or injury may occur.
- 5) Except for the split preplant surface treatment, DO NOT make more than one application per year, or illegal residues may result.

TANK MIXTURE WITH ATRAZINE

In addition to the weeds controlled by HELMET Herbicide alone, HELMET Herbicide + atrazine also controls the following broadleaf weeds when applied either preplant surface, preplant incorporated, or preemergence: cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf.

Preplant Surface-Applied: Refer to instructions for use of HELMET Herbicide under **Application Procedures**. For minimum-tillage or no-tillage systems only, HELMET Herbicide + atrazine may be applied up to 45 days prior to planting in IA, IL, Eastern KS, MO, NE, and SD. Use only split applications for treatments made 30 to 45 days prior to planting, with two-thirds of the broadcast rate applied initially and the remaining one-third at planting. Apply 1.5 pts./A of HELMET Herbicide + the label rate of atrazine on *medium soils* with 1.5% organic matter or greater. Apply 1.5 pts./A of HELMET Herbicide + the label rate of atrazine on *fine soils* with less than 1.5% organic matter, or apply 1.67 pts./A of HELMET Herbicide + the label rate of atrazine on *fine soils* with 1.5% organic matter or greater. Treatments less than 30 days prior to planting may be made either as a split or single application. Under dry conditions, irrigation after application is recommended to move HELMET Herbicide + atrazine into the soil.

RESTRICTIONS:

To avoid crop injury,

1. Do not use on coarse soils,
2. Do not use on medium soils with less than 1.5% organic matter.

Preplant Incorporated or Preemergence: Refer to instructions for use of HELMET Herbicide under **Application Procedures**. On *medium soils* with 1.5% organic matter or greater, apply 1 pt./A of HELMET Herbicide + the label rate of atrazine. On *fine soils* with less than 1.5% organic matter, apply 1 pt./A of HELMET Herbicide + the label rate of atrazine. On *fine soils* with 1.5% organic matter or greater, apply 1.2-1.33 pts./A of HELMET Herbicide + the label rate of atrazine.

RESTRICTIONS:

To avoid crop injury,

1. DO NOT use on coarse soils;
2. DO NOT use on medium soils with less than 1.5% organic matter;
3. DO NOT use in NM, OK, or TX, except in Northeast OK and the TX Gulf Coast and Blacklands areas;
4. DO NOT apply preplant incorporated in AZ or the Imperial Valley of CA.

MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS**TANK MIXTURE OF HELMET HERBICIDE OR HELMET HERBICIDE + ATRAZINE WITH PARAQUAT, GLYPHOSATE/2, 4-D OR GLYPHOSATE**

In minimum-tillage or no-tillage systems where sorghum (seed treated with Concep or Screen) is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides paraquat, glyphosate/2, 4-D or glyphosate may be tank mixed with HELMET Herbicide or HELMET Herbicide + atrazine. Mix with paraquat for control of most emerged annual weeds and suppression of perennial weeds; or with glyphosate/2, 4-D for suppression of emerged field bindweed and control or suppression of annual weeds; or with glyphosate for control of most emerged annual and perennial weeds. HELMET Herbicide or HELMET Herbicide plus atrazine portion of the tank mixture provides preemergence control of the weeds listed on this label under the respective sections.

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

Application: Apply before, during, or after planting, but before sorghum emerges, at the appropriate rates listed under **Sorghum (Grain or Forage) – HELMET Herbicide Alone** or **– HELMET Herbicide in Combinations – Tank Mixture with atrazine**, respectively. Add paraquat, glyphosate/2, 4-D, or glyphosate at the following broadcast rates:

Paraquat: Use the labeled rate. Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50 to 74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6 inches.

Glyphosate/2, 4-D: Use the labeled rate depending on weed species and size. See the glyphosate/2, 4-D label for weeds controlled, rates for specific weeds, and other information concerning use.

Glyphosate: See the glyphosate label for weeds controlled, rates, and other use directions. Apply in a minimum of 20 gals. of water per acre with conventional spray equipment.

SOYBEANS – HELMET HERBICIDE ALONE

Apply HELMET Herbicide, either preplant surface-applied, preplant incorporated, preemergence, or post emergence using the appropriate rate specified below.

Preplant Surface-Applied, Preplant Incorporated, Preemergence, or Postemergence: Follow instructions for use of this product alone under **Application Procedures**.

Preplant Surface-Applied**Fall Application**

- Apply after September 30 in MN, ND, SD, WI, and North of Route 30 in IA
- Apply after October 15 North of Route 91 in NE and South of Route 30 in IA
- Apply after October 31 North of Route 136 in IL

In all locations, apply HELMET Herbicide to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67 to 2 pts./A on *medium-textured* and 2 pts./A on *fine-textured soils*. Do not apply to frozen ground. A tillage operation may precede the application. A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2 to 3 inches. Minimize furrow and ridge formation in the tillage operations.

Preplant Surface – Spring Application

Use on *medium* and *fine* soils with minimum-tillage or no-tillage systems in CO, CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, MT, ND, NE, NH, NY, OH, PA, RI, SD, TN, VA, VT, WI, WV, and WY. Apply two-thirds of the specified rate of HELMET Herbicide (1.67 pts./A on *medium soils* and 2 pts./A on *fine soils*) as a split treatment 30 to 45 days prior to planting and the remainder at planting. Applications made less than 30 days before planting may be as either a split or single treatment. Apply 1.33 pts./A on *coarse soils* not more than 2 weeks before planting.

Preplant Incorporated or Preemergence: On *coarse soils*, apply 1 to 1.33 pts./A of HELMET Herbicide if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. On *medium soils*, apply 1.33 to 1.67 pts./A of this product. On *fine soils*, apply 1.33 to 1.67 pts./A of this product if organic matter content is less than 3%, or 1.67 to 2 pts./A if organic matter content is 3% or greater.

On soybeans, HELMET Herbicide may be used up to 2.75 pts./A as a preplant surface-applied, preplant incorporated, or preemergence treatment on soils having an organic matter content between 6% and 20%. The total rate of this product applied to soybeans during any one crop season must not exceed 2.75 pts./A.

RESTRICTIONS: (Preplant surface applied, preplant incorporated, preemergence):

1. On soybeans, use up to 2.5 pints / acre of HELMET Herbicide preplant incorporated or preemergence treatment on soils having an organic matter content between 6% and 20%.
2. The total HELMET Herbicide rate applied to must not exceed 2.75 pints / acre per year.
3. If a pre-plant surface, pre-plant incorporated or pre-emergence application of metolachlor products has already been applied, a postemergence application of this product cannot be used.
4. DO NOT graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment, or illegal residues may result.
5. If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate on soybeans, or illegal residues may result.
6. DO NOT apply to frozen ground.

POSTEMERGENCE APPLICATIONS –

Postemergence (From emergence up through the 5th trifoliate leaf stage)

For postemergence treatments, apply 1.0 to 1.33 pints per acre to soybeans from emergence through the 5th trifoliate leaf stage. This product will not control emerged weeds, it must be applied to a weed free surface or in tank mixture with products that provide postemergence control of weeds present at the time of application.

Make postemergence applications at least 90 days before harvest.

RESTRICTIONS (Postemergence)

1. To prevent illegal residues, DO NOT apply more than 1.33 pints per acre postemergence.
2. DO NOT graze or feed treated soybean forage or soybean hay to livestock following a postemergence application of this product;
3. DO NOT apply a postemergence application of this product if a pre-plant surface, pre-plant incorporated or pre-emergence application of metolachlor products has already been applied.
4. **NOT FOR USE IN CALIFORNIA**

SOYBEANS – HELMET HERBICIDE COMBINATIONS

Preplant Incorporated or Pre-emergence

Water or fluid fertilizer may be used as carrier for HELMET Herbicide in combination with metribuzin, linuron, metribuzin / chlorimuron-ethyl, imazethapyr, imazaquin, ethafluralin, or clomazone.

RESTRICTIONS:

- 1) For all of the following combinations, this product may be used up to 2.5 pts./A on soils having an organic matter content between 6% and 20%.
- 2) The total rate of this product applied to soybeans during any one crop year must not exceed 2.75 pts./A.
- 3) DO NOT apply to frozen ground.

TANK MIXTURE WITH METRIBUZIN

In addition to those weeds controlled by HELMET Herbicide alone, HELMET Herbicide + metribuzin, when applied as directed, also controls the following broadleaf weeds: cocklebur*, hairy nightshade, hemp sesbania, jimsonweed*, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, venice mallow, and wild mustard.

*Partially controlled.

Preplant Incorporated or Preemergence: Follow instructions for use of this product alone under **Application Procedures**.

Sequential: Apply HELMET Herbicide alone **Preplant Incorporated**, as specified in the table below. Follow with a preemergence application of metribuzin during planting (behind the planter) or after planting, but before weeds or soybeans emerge.

Refer to the metribuzin label for planting details and soybean variety restrictions.

TABLE 8: HELMET HERBICIDE + METRIBUZIN – SOYBEANS

Soil Texture*	Broadcast Rates Per Acre			
	0.5 to Less Than 3% Organic Matter		3% Organic Matter or Greater	
	HELMET HERBICIDE	Metribuzin	HELMET HERBICIDE	Metribuzin
COARSE	0.85-1.0 pt.	Label rate	1.0 pt.	Label rate
MEDIUM	1.0-1.33 pts.	Label rate	1.33 pts.	Label rate
FINE	1.33 pts.	Label rate	1.33-1.67 pts.	Label rate
Mississippi Delta only Silty clay, Clay	1.33 pts.	Label rate	1.33-1.67 pts.	Label rate
DO NOT USE ON MUCK OR PEAT (SOILS WITH MORE THAN 20% ORGANIC MATTER)				

* On all sand and on loamy sand with less than 2% organic matter, do not use this tank mixture preemergence or the sequential treatment. Do not use the tank mixture preplant incorporated on any sand, loamy sand, or sandy loam, or crop injury may occur.

RESTRICTION:

1. Do not use the tank mix or sequential application on soil with less than 0.5% organic matter or on alkaline soil with a pH over 7.4, or crop injury may occur.

PRECAUTION:

1. If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days.

TANK MIXTURE WITH LINURON

In addition to those weeds controlled by HELMET Herbicide alone, HELMET Herbicide + linuron, applied preemergence, also controls the following broadleaf weeds: cocklebur*, jimsonweed*, lambsquarters, morningglory*, prickly sida, ragweed, smartweed, velvetleaf*, venice mallow, and wild mustard.

*Partially controlled.

Preemergence: Apply during planting (behind planter) or after planting, but before weeds or soybeans emerge. Refer to the linuron label for planting details. Apply the appropriate rates from the table below.

RESTRICTIONS:

1. Do not use on soil with less than 0.5% organic matter, or crop injury may occur.

TABLE 9: HELMET HERBICIDE + LINURON – SOYBEANS

Soil Texture*	Broadcast Rates Per Acre			
	0.5 to Less Than 3% Organic Matter		3% Organic Matter or Greater	
	HELMET HERBICIDE	Linuron	HELMET HERBICIDE	Linuron
COARSE**	0.85 pt.	Label rate	1.0 pt.	Label rate
MEDIUM	1.0 pt.	Label rate	1.33 pts.	Label rate
FINE	1.33 pts.	Label rate	1.33-1.67 pts.	Label rate
DO NOT USE ON MUCK OR PEAT (SOILS WITH MORE THAN 20% ORGANIC MATTER)				

* Do not use on sand, gravelly soils, or exposed subsoils.

** Do not use on loamy sand, except in the Northeastern U.S. on loamy sand with over 1% organic matter.

TANK MIXTURE WITH TRIFLURALIN

HELMET Herbicide + trifluralin tank mix applied preplant incorporated controls those weeds listed under the **HELMET Herbicide Applied Alone** section and those weeds listed for trifluralin alone on the respective trifluralin label. HELMET Herbicide + trifluralin may be applied by ground or by aerial equipment and incorporated up to 14 days before planting. Follow the procedures on the trifluralin and HELMET Herbicide labels, using equipment that provides uniform 2-inch incorporation.

Apply HELMET Herbicide + trifluralin tank mix, using the appropriate rate from the **Soybeans – HELMET Herbicide Alone** section of this label and the appropriate section of the trifluralin label for the specific soil texture/organic matter classification and weed species expected.

To control DNA-resistant goosegrass* and other species on the respective labels where the soil organic matter is 3% or less, apply the rate in the table below.

TABLE 10: HELMET HERBICIDE + TRIFLURALIN – SOYBEANS (Organic Matter Content Less Than 3%)

Soil Texture	Broadcast Rates Per Acre (pts.)		
	HELMET HERBICIDE	Trifluralin	
	Organic Matter Less Than 3%	Organic Matter	
		Less Than 2%	2-3%
COARSE*	0.85-1.0	Lower label rate	Higher label rate
MEDIUM	1.0	Lower label rate	Higher label rate
FINE	1.33	Lower label rate	Higher label rate

* Where a range of rates is given for this product use the minimum rate where DNA-resistant goosegrass is the predominant species.

Follow all restrictions and use precautions on the respective trifluralin label and in the **Soybeans – HELMET Herbicide Alone** section of this label.

TANK MIXTURE WITH IMAZAQUIN

This tank mixture controls all weeds controlled by HELMET Herbicide alone and by imazaquin alone. Refer to the HELMET Herbicide Applied Alone section for weeds controlled by this product and to the imazaquin label for weeds controlled by imazaquin. Refer to the imazaquin label for geographical locations where this tank mixture may be applied.

Apply HELMET Herbicide + imazaquin preplant incorporated or preemergence, using rates in the table below. Follow use directions under **Application Instructions** on the imazaquin label. For preplant incorporated applications, apply and incorporate within 30 days before planting. Observe all other use precautions and restrictions on the imazaquin labels.

TABLE 11: HELMET HERBICIDE + IMAZAQUIN – SOYBEANS

Soil Texture	Broadcast Rates Per Acre (pts.)			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	HELMET HERBICIDE	Imazaquin	HELMET HERBICIDE	Imazaquin
COARSE	0.85	Label rate	1.0	Label rate
MEDIUM	1.0	Label rate	1.33	Label rate
FINE	1.33	Label rate	1.33-1.67*	Label rate
DO NOT USE ON MUCK OR PEAT (SOILS WITH MORE THAN 20% ORGANIC MATTER)				

* Use the higher rate of this product if heavy weed infestations are expected.

RESTRICTIONS:

1. DO NOT apply within 90 days of harvest, and
2. DO NOT graze or feed treated soybean forage, hay, or straw to livestock, or illegal residues may result.

TANK MIXTURE WITH LINURON/CHLORIMURON-ETHYL

This tank mixture controls all weeds controlled by HELMET Herbicide alone and by linuron / chlorimuron-ethyl alone. Refer to the HELMET Herbicide Applied Alone section for weeds controlled by HELMET Herbicide and to the linuron / chlorimuron-ethyl label for weeds controlled.

Apply HELMET Herbicide + linuron / chlorimuron-ethyl preemergence after planting, but before soybeans emerge, using rates in the table below

Follow all use directions, restrictions, and use precautions regarding application to soybeans, and rotational restrictions on HELMET Herbicide and linuron / chlorimuron-ethyl labels.

TABLE 12: HELMET HERBICIDE + LINURON / CHLORIMURON-ETHYL — SOYBEANS

Soil Texture	Broadcast Rates Per Acre	
	0.5 to 3% Organic Matter	
	HELMET HERBICIDE	Linuron / Chlorimuron-ethyl
COARSE	0.85 pt.	Label rate
MEDIUM	1.0 pt.	Label rate
FINE	1.33 pts.	Label rate

RESTRICTION:

1. Do not apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 6.8.

TANK MIXTURE WITH METRIBUZIN / CHLORIMURON-ETHYL

This tank mixture controls all weeds controlled by HELMET Herbicide alone and by metribuzin / chlorimuron-ethyl alone. Refer to the **HELMET Herbicide Applied Alone** section for weeds controlled by this product and to the metribuzin / chlorimuron-ethyl label for weeds controlled by metribuzin / chlorimuron-ethyl.

Apply preplant incorporated or preemergence, using the appropriate rates from the table below.

Preplant Incorporated: Apply within 2 weeks of planting. Uniformly incorporate into the top 1 to 2 inches of soil before planting soybeans.

Preemergence: Apply after planting, but before soybeans emerge.

Follow all use directions, restrictions, and use precautions regarding application to soybeans, and rotational restrictions on HELMET Herbicide and metribuzin / chlorimuron-ethyl labels.

TABLE 13: HELMET HERBICIDE + METRIBUZIN / CHLORIMURON-ETHYL — SOYBEANS

Soil Texture	Broadcast Rates Per Acre (pts.)			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	HELMET HERBICIDE	Metribuzin / Chlorimuron-ethyl	HELMET HERBICIDE	Metribuzin / Chlorimuron-ethyl
COARSE	0.85 pt.	Label rate	1.0 pt.	Label rate
MEDIUM*	1.0 pt.	Label rate	1.33 pts.	Label rate
FINE*	1.33 pts.	Label rate	1.33-1.67 pts.	Label rate

*Refer to the metribuzin / chlorimuron-ethyl label for appropriate rate according to geographical location, soil and organic matter classification, and pH limitations.

RESTRICTION:

- Do not apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 7, except as noted on the metribuzin / chlorimuron-ethyl label.

TANK MIXTURE WITH CLOMAZONE

This tank mixture controls all weeds controlled by HELMET Herbicide alone and by clomazone alone. Refer to the **HELMET Herbicide Applied Alone** section for weeds controlled by HELMET Herbicide and to the clomazone label for weeds controlled by clomazone.

Apply HELMET Herbicide + clomazone preplant incorporated, using rates in the table below. Follow all clomazone application instructions as to incorporation interval, geographical location, equipment operation, soil moisture conditions, etc.

Before making applications, read and strictly follow all use directions, restrictions, and use precautions regarding application to soybeans, and rotational restrictions on HELMET Herbicide and clomazone labels.

TABLE 14: HELMET HERBICIDE + CLOMAZONE — SOYBEANS

Soil Texture	Broadcast Rates Per Acre (pts.)			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	HELMET HERBICIDE	Clomazone	HELMET HERBICIDE	Clomazone
COARSE	0.85 pt.	Label rate	1.0 pt.	Label rate
MEDIUM*	1.0 pt.	Label rate	1.33 pts.	Label rate
FINE*	1.33 pts.	Label rate	1.33-1.67 pts.	Label rate

TANK MIXTURE WITH ETHAFLURALIN

This tank mixture controls all weeds controlled by HELMET Herbicide alone and by ethafluralin alone. Refer to the **HELMET Herbicide Applied Alone** section for weeds controlled by HELMET Herbicide and to the ethafluralin label for weeds controlled by ethafluralin.

Apply HELMET Herbicide and ethafluralin preplant incorporated, using the appropriate rates from the table below.

Preplant Incorporated: Follow label recommended soil preparation and soil-incorporation procedures for ethafluralin.

Sequential: Apply ethafluralin alone preplant incorporated as specified on the ethafluralin label. Follow with a preemergence application of this product during planting (behind the planter) or after planting, but before weeds or soybeans emerge.

TABLE 15: HELMET HERBICIDE + ETHAFLURALIN – SOYBEANS

Soil Texture	Broadcast Rates Per Acre (pts.)			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	HELMET HERBICIDE	Ethafluralin	HELMET HERBICIDE	Ethafluralin
COARSE	1.0-1.33	Label rate	1.33	Label rate
MEDIUM*	1.33-1.67	Label rate	1.33-1.67	Label rate
FINE*	1.33-1.67	Label rate	1.67-2.0	Label rate
DO NOT USE ON MUCK OR PEAT (SOILS WITH MORE THAN 20% ORGANIC MATTER)				

*For Eastern black nightshade on these soils, apply ethafluralin at 3.0 pts./A on *medium* and 3.5 pts./A on *fine-textured soils*, and follow with 2 incorporation passes.

Follow all use directions, restrictions, and use precautions regarding application to soybeans on the HELMET Herbicide and ethafluralin labels.

TANK MIXTURE WITH IMAZETHAPYR

This tank mixture controls all weeds controlled by HELMET Herbicide alone and by imazethapyr alone. Refer to the **HELMET Herbicide Applied Alone** section for weeds controlled by HELMET Herbicide and to the imazethapyr label for weeds controlled by imazethapyr. Refer to the imazethapyr label for geographical locations where this tank mixture may be applied.

Apply HELMET Herbicide + imazethapyr early preplant, preplant incorporated, or preemergence after planting, using rates in the table below. Application can be made in water or liquid fertilizer. For early preplant and preplant incorporated applications, apply within 30 days before planting.

Follow all use directions, restrictions, and use precautions regarding application to soybeans, and rotational restrictions on the HELMET Herbicide and imazethapyr labels.

TABLE 16: HELMET HERBICIDE + IMAZETHAPYR – SOYBEANS

Soil Texture	Broadcast Rates Per Acre (pts.)			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	HELMET HERBICIDE	Imazethapyr	HELMET HERBICIDE	Imazethapyr
COARSE	0.85	Label rate	1.0	Label rate
MEDIUM	1.0	Label rate	1.33	Label rate
FINE	1.33	Label rate	1.33-1.67	Label rate

Sequential: Apply HELMET Herbicide early preplant, preplant incorporated, or preemergence after planting at 0.85 pt./A on *coarse soils* and 1 pt./A on *medium- and fine-textured soils*. Follow with a sequential postemergence application of imazethapyr to control emerged weeds according to the imazethapyr label. HELMET Herbicide will improve the consistency and level of control from imazethapyr on most grass species. Refer to the imazethapyr postemergence label for a listing of weeds controlled, application rate, and growth stage limitations.

MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS

TANK MIXTURES WITH METRIBUZIN, IMAZAQUIN, LINURON, LINURON / CHLORIMURON-ETHYL, PRODIAMINE / ISOXABEN, METRIBUZIN / CHLORIMURON-ETHYL, OR IMAZETHAPYR, PLUS PARAQUAT OR GLYPHOSATE

In minimum-tillage or no-tillage systems where soybeans are planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides paraquat or glyphosate may be added to a tank mix of either HELMET Herbicide + metribuzin, HELMET Herbicide + imazaquin, HELMET Herbicide + linuron, HELMET Herbicide + linuron / chlorimuron-ethyl, HELMET Herbicide + prodiamine / isoxaben, HELMET Herbicide + metribuzin / chlorimuron-ethyl, or HELMET Herbicide + imazethapyr.

When used as directed, the paraquat portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds.

Glyphosate combinations will control emerged annual and perennial weeds when applied as directed on the glyphosate label.

HELMET Herbicide + metribuzin, imazaquin, linuron, linuron / chlorimuron-ethyl, prodiamine / isoxaben, metribuzin / chlorimuron-ethyl, or imazethapyr portion of the tank mixture provides preemergence control of the weeds listed on this label in the tank mixture section for HELMET Herbicide + metribuzin, HELMET Herbicide + imazaquin, HELMET Herbicide + linuron, HELMET Herbicide + linuron / chlorimuron-ethyl, HELMET Herbicide + prodiamine / isoxaben, HELMET Herbicide + metribuzin / chlorimuron-ethyl, and HELMET Herbicide + imazethapyr, respectively.

Application: Apply before, during, or after planting, but before the soybeans emerge, at the rates specified in the chart below.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

For all tank mix partners - Refer to the label of each product used in combination and observe the planting details, soybean variety restrictions, information regarding application to soybeans, geographical restrictions, soil and organic matter classification, pH limitations and all other use precautions and restrictions.

Paraquat: Use the labeled rate. Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50 to 74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6 inches.

RESTRICTION: Do not apply combinations containing paraquat in suspension-type liquid fertilizers, as the activity of paraquat will be reduced.

Tank Mix Partners	HELMET HERBICIDE Rates Per Acre (pts.)			Tank Mix Partner	RESTRICTIONS
	Coarse Soil	Medium Soil	Fine Soil	Pints Per Acre	
Metribuzin + Paraquat Or Glyphosate	1.0	1.33	1.33 - 1.67	Labeled Rate	To avoid crop injury, Do not use this tank mixture on soil with less than 0.5% organic matter, on alkaline soil with a pH over 7.4, or on all sand and on loamy sand with less than 2% organic matter. If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days, or where the seeding slit has not been properly closed.
Imazaquin + Paraquat Or Glyphosate	1.0	1.33	1.67	Labeled Rate	Do not apply within 90 days of harvest, Do not graze or feed treated soybean forage, hay, or straw to livestock, or illegal residues may result.
Linuron + Paraquat Or Glyphosate	1.0	1.33	1.33 - 1.67	Labeled Rate	Do not use on loamy sand, except in the Northeastern U.S. on loamy sand with over 1% organic matter, or injury may occur. Do not use on sand, gravelly soils, or exposed subsoils, or injury may occur. Do not use on soil with less than 0.5% organic matter, or crop injury may occur.
Linuron / Chlorimuron- Ethyl + Paraquat Or Glyphosate	1.0	1.33	1.33 - 1.67	Labeled Rate	Use only where soils have 0.5 to 3% organic matter. Do not apply to sand or to any soil with pH greater than 6.8
Metribuzin / Chlorimuron- Ethyl + Paraquat Or Glyphosate	Do not use on sand.	1.33	1.33 - 1.67	Labeled Rate	Use only where soils have 0.5 to 5% organic matter. DO NOT apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 6.8, except as noted on the metribuzin / chlorimuron-ethyl label.
Imazethapyr + Paraquat Or Glyphosate	1.0	1.33	1.67		None

SOYBEANS – HELMET HERBICIDE COMBINATIONS POSTEMERGENCE

TANK MIXTURE OF HELMET HERBICIDE WITH GLYPHOSATE FOR USE ON GLYPHOSATE TOLERANT SOYBEANS

HELMET Herbicide may be tank mixed with glyphosate in water and applied postemergence over-the top or postemergence-directed spray only up through the 5th trifoliate leaf stage of soybean varieties or cultivars warranted as tolerant to glyphosate. This tank mixture will control emerged weeds listed on the glyphosate label and residual preemergence control of weeds listed on this label.

See the **Soybean – HELMET Herbicide Alone – Postemergence** section for proper rates and timing of **HELMET Herbicide**. Also follow the glyphosate label for appropriate use rate, method of application, and restrictions of application timing. For postemergence over-the-top application, do not add any adjuvants, surfactants, fertilizers, or other pesticides to this tank mixture as unacceptable injury may occur.

RESTRICTIONS:

- DO NOT apply this tank mixture postemergence to any soybean variety unless it is designated glyphosate tolerant and unless the glyphosate formulation being used is registered for postemergence use in Roundup Ready Soybeans or glyphosate tolerant soybeans.
- DO NOT apply more than 1.33 pints per acre postemergence.
- Do not apply a postemergence application of this product if a preplant surface, preplant incorporated, or preemergence application of metolachlor products has already been applied
- Following a postemergence application of this product, DO NOT graze or feed treated soybean forage or soybean hay to livestock.
- Postemergence applications must be made at least 90 days before harvest.
- **NOT FOR USE IN CALIFORNIA**

TANK MIXTURE OF HELMET HERBICIDE WITH GLUFOSINATE FOR USE ON GLUFOSINATE RESISTANT SOYBEANS

HELMET Herbicide may be tank mixed with glufosinate in water and applied postemergence over-the top or postemergence-directed spray only up through the 5th trifoliate leaf stage of soybean varieties or cultivars warranted as resistant to glufosinate. This tank mixture will control emerged weeds listed on the glufosinate label and provide residual preemergence control of weeds listed on this label.

See the **Soybean – HELMET Herbicide Alone – Postemergence** section for proper rates and timing of **HELMET Herbicide**. Also follow the glufosinate label for appropriate use rate, method of application, and restrictions of application timing. For postemergence over-the-top application, do not add any adjuvants, surfactants, fertilizers, or other pesticides to this tank mixture as unacceptable injury may occur.

RESTRICTIONS:

- DO NOT apply this tank mixture postemergence to any soybean variety unless it is designated glufosinate resistant and unless the glufosinate formulation being used is registered for postemergence use in Liberty Link Soybeans or glufosinate resistant soybeans.
- DO NOT apply more than 1.33 pints per acre postemergence.
- Following a postemergence application of this product, DO NOT graze or feed treated soybean forage or soybean hay to livestock.

TOMATOES – HELMET HERBICIDE ALONE

TRANSPLANTED TOMATOES

HELMET Herbicide may be applied preplant incorporated or preplant before transplanting. If the latter method is used, keep soil disturbance to a minimum during transplanting. Application may also be made post-directed to transplants after the first settling rain or irrigation. When an application is made post-directed, apply in a minimum of 20 gallons of water per acre and minimum contact with tomato plants. This product will not control emerged weeds. In bedded transplanted tomatoes, apply this product preplant non-incorporated to the top of the pressed bed, as the last step, prior to laying plastic. **HELMET Herbicide** may also be used to treat row-middles in bedded tomatoes, as long as the total amount of this product does not exceed the maximum allowed per crop.

SEEDED TOMATOES

HELMET Herbicide may be applied post-directed to direct seeded tomatoes. Tomato plants must be at least 4 inches tall at the time of application and the product must be applied in a minimum of 20 gallons of water per acre. Minimize spray contact with tomato plants. This product will not control emerged weeds.

TOMATO USE RATES

Soil Texture	Broadcast Rates Per Acre (pts.)	
	Less Than 3% Organic Matter	3% or More Organic Matter
	HELMET HERBICIDE	HELMET HERBICIDE
COARSE	1.0 – 1.33 pints/acre	1.33 pints/acre
MEDIUM	1.33 pints/acre	1.33 pints/acre
FINE	1.33 – 1.67 pints/acre	1.67 – 2.0 pints/acre

RESTRICTIONS

To avoid possible illegal residues:

1. DO NOT apply this product within 90 days of tomato harvest.
2. DO NOT exceed the maximum label rate for the soil texture per year.
3. Apply only by ground application.

PRECAUTIONS

1. DO NOT apply to varieties or cultivars with unknown tolerance to HELMET Herbicide.
2. This product may damage transplants that have been weakened by any cause. To prevent damage, plant only healthy transplants. Do not plant when wet, cool, or unfavorable growing conditions exist.
3. In transplanted tomatoes, if this product is applied preplant incorporated, incorporate to a depth less than the depth of transplanting, and use the lower end of the rate range for the given soil type, or damage may occur.
4. For row middle applications where tomatoes are grown on sandy soils and where high soil moisture conditions can exist (i.e. low binding and high evaporation conditions), as may be found in the States of Florida, Georgia, Maryland, and Virginia, there is potential for crop injury in the form of leaf epinasty. The risk of this type of injury can be reduced by:
 - a) incorporating this product immediately following application,
 - b) applying this product seven or more days before transplanting (but only after the beds have been formed),
 - c) minimizing the application of this product onto the plastic of the bed, or
 - d) any combination of the above.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: This product may be stored at temperatures down to -30°F. 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.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Open dumping is prohibited. 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 HANDLING:

For Containers < 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, by incineration.

For Minibulk Containers for nonrefillable containers > 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container or pressure rinse promptly after emptying. Triple rinse as follow: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

Follow Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of HELM Agro US, Inc. or Seller. To the extent of applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold HELM Agro US, Inc. and Seller harmless for any claims relating to such factors.

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