CHLORIMURON ETHYL	GROUP	2	HERBICIDE
SULFENTRAZONE	GROUP	14	HERBICIDE



For selective early preplant, preplant burndown, preplant incorporated and preemergence weed control in soybeans.

ACTIVE INGREDIENTS:	% BY WT.
Sulfentrazone	
OTHER INGREDIENTS:	
TOTAL	100.0%

ZONE MAXX HERBICIDE contains 0.62 lb of sulfentrazone and 0.04 lb of chlorimuron ethyl per pound of product

EPA Reg. No. 74530-95

# KEEP OUT OF REACH OF CHILDREN CAUTION Si usted no entiende la etiqueta busque a alguien para que se la explique a usted en detaille.

(If you do not understand the label find someone to explain it to you in detail) SEE LABEL BOOKLET FOR FIRST AID, PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE INCLUDING STORAGE AND DISPOSAL

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

Manufactured For

HELM Agro US, Inc. 401 E. Jackson St., Suite 1400 Tampa, FL 33602

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Avoid contact with eyes or clothing.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt, long pants
- Protective eyewear
- Shoes plus socks

• Chemical-resistant gloves made of Barrier laminate, Butyl rubber ≥ 14 mils, Nitrile rubber ≥ 14 mils, Neoprene rubber ≥ 14 mils, Natural rubber ≥ 14 mils, Polyvinyl chloride ≥ 14 mils or Viton ≥ 14 mils

Follow the manufacturer's label instructions for cleaning/maintaining PPE. In the event there are no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

# ENGINEERING CONTROL STATEMENTS

Handlers using enclosed cabs or closed systems in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.607(d-e)], may reduce or modify the handler PPE requirements as specified in the WPS.

	FIRST AID
lf swallowed	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
If in eyes	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.
	HOT LINE NUMBER
For 24 Hour Modical	Emergency Accistance (Human or Animal) Or Chemical Emergency Accistance (Snill Look Eiro or Accident) Call CHEMTREC 1 900 424 9200

For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call CHEMTREC 1-800-424-9300

#### PHYSICAL/CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur.

## USER SAFETY RECOMMENDATIONS

- Users Should:
- 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**

This pesticide is toxic to marine/estuarine invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to terrestrial and aquatic plants in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

Surface Water Advisory: This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of chlorimuron-ethyl from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Ground Water Advisory: Sulfentrazone is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Do not use on coarse soils classified as sand which have less than 1% organic matter. Chlorimuron-ethyl is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

#### **Runoff Prevention**

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

#### Windblown Soil Particles

Understanding the risks associated with the application of ZONE MAXX HERBICIDE essential to aid in preventing off-site injury to desirable vegetation and agricultural crops. The risk of off-site movement both during and after application may be affected by a number of site specific factors such as the nature, texture and stability of the soil, the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, drainage patterns, and other local physical and environmental conditions. A careful evaluation of the potential for off-site movement from the intended application site, including movement of treated soil by wind or water erosion, must be made prior to using ZONE MAXX HERBICIDE. This evaluation is particularly critical where desirable vegetation or crops are grown on neighboring land for which the use of ZONE MAXX HERBICIDE is not labeled. If prevailing local conditions may be expected to result in off-site movement and cause damage to neighboring desirable vegetation or agricultural crops, do not apply ZONE MAXX HERBICIDE.

Leave treated soil undisturbed to reduce the potential for ZONE MAXX HERBICIDE movement by soil erosion due to wind or water.

Before applying ZONE MAXX HERBICIDE the user must read and understand all label directions, precautions and restrictions completely, including these requirements for a site specific evaluation. If you do not understand any of the instructions or precautions on the label, or are unable to make a site specific evaluation yourself, consult your local agricultural dealer, cooperative extension service, land managers, professional consultants, or other qualified authorities familiar with the area to be treated. If you still have questions regarding the need for site specific considerations, please call HELM Agro US Inc.

## **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area at the time of application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

# STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal or cleaning of equipment.

# Pesticide Storage

Store product in original container only. Keep container closed when not in use, away from food or feed, fertilizer and other pesticides. Store in a cool dry place and avoid excess heat. Do not store below 30°F degrees.

## **Pesticide Disposal**

Wastes resulting from the use of this product that cannot be used must be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, State or local procedures. For more information contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

#### Container Disposal

Nonrefillable container - Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: (For containers 50 pounds or less) Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Returnable/Refillable Containers - Refill this container with ZONE MAXX HERBICIDE only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

# 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 into treated areas during the restricted entry interval (REI) of 12 hours.

- 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, is: • Coveralls
- Chemical- resistant gloves made of Barrier laminate, Butyl rubber ≥ 14 mils, Nitrile rubber ≥ 14 mils, Neoprene rubber ≥ 14 mils, Natural rubber ≥ 14 mils, Polyvinyl chloride ≥ 14 mils or Viton ≥ 14 mil
- · Shoes plus socks

Prior to using ZONE MAXX HERBICIDE, consideration should be given to crop rotation plans. Crops other than soybeans may be extremely sensitive to low concentrations of ZONE MAXX HERBICIDE remaining in the soil the next planting season. Choice of rotation crop is restricted following application of ZONE MAXX HERBICIDE. (See "ROTATIONAL CROP GUIDELINES" for your geographical region.)

## IMPORTANT TO OBSERVE THE FOLLOWING

Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Injury or loss of desirable trees or vegetation may result. Do not use on lawns, walks, driveways, tennis courts or similar areas. Prevent drift of spray to desirable plants. Keep from contact with fertilizers, insecticides, fungicides and seeds during storage. Do not contaminate any body of water.

Thoroughly clean ZONE MAXX HERBICIDE from application equipment immediately after use and prior to spraying crops other than soybeans. Injury may result to subsequent crops if failure to remove even small amounts of ZONE MAXX HERBICIDE from application equipment.

Proper Handling Instructions: Do not mix or load this product within 50-feet of any well to include abandoned and drainage wells, streams and rivers, lakes and reservoirs. This 50-feet perimeter does not apply to capped or plugged wells. It does not apply to dikes that are properly constructed around mixing or loading areas.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet 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. Any such pad used for this purpose must be constructed to be able to contain: Product spills – Equipment leaks – equipment rinsate or wash – container leaks – rain water that collects on the pad. This pad must be self-contained. Pads that are constructed with roofs must be able to provide a minimum containment capacity of 100%. Pads without roofs must have a capacity to contain a minimum of 110% capacity of the largest container or application equipment/vehicles that are delivering pesticide shipments to the loading or mixing site. Always check with your state regulatory official since each state may have different or additional well set-backs and or containment operation guidelines.

This product must be used in a way to prevent any back siphoning into wells. It must be used in a manner to prevent spills, improper disposal of pesticide, rinsates and or spray mixtures into wells or any water source.

## PRODUCT INFORMATION

ZONE MAXX HERBICIDE is a dispersible granule formulation to be mixed with water and sprayed for selective early preplant, preplant, preplant incorporated or preemergence weed control in soybeans. When applied according to the instructions on this label, it will control many broadleaf weeds and provide partial control of annual grasses.

Applications of ZONE MAXX HERBICIDE require rainfall or sprinkler irrigation to activate the herbicide. Degree of control and duration of effect depend on; rate used, weed spectrum, growing conditions at and following time of treatment, soil pH, texture, organic matter, moisture and precipitation. This label also contains use information which is applicable to all ZONE MAXX HERBICIDE use geography.

## **BIOLOGICAL ACTIVITY**

ZONE MAXX HERBICIDE rapidly inhibits the growth of susceptible weeds. Following an application, susceptible weeds may germinate and emerge, but growth then ceases and leaves become yellow 3 to 5 days after emergence. Death of leaf tissue and growing point will follow in some species while others will remain green but stunted and noncompetitive. ZONE MAXX HERBICIDE provides partial control of some annual grasses when used as an early preplant, preplant burndown, preplant incorporated or preemergence application, but other products may be needed to ensure adequate grass control.

Poor growing conditions such as excessive moisture, cool temperatures, and soil compaction or the presence of various pathogens may impact seedling vigor. Under these conditions the active ingredients in ZONE MAXX HERBICIDE, like other soil applied herbicides, may injure soybeans. Best results are obtained if ZONE MAXX HERBICIDE is followed by rainfall or irrigation before weeds germinate. Several small rainfalls of less than 1/4 inch each are not as beneficial as one large rainfall of 1/2 to 1 inch. If moisture is insufficient to activate the herbicide, a rotary hoeing or shallow cultivation should be made after emergence of the crop while weeds are small enough to be controlled by mechanical means.

## ROTATIONAL RESTRICTIONS FOR ALL ZONE MAXX HERBICIDE APPLICATIONS

The table below describes the minimum length in months from the time of ZONE MAXX HERBICIDE application until ZONE MAXX HERBICIDE treated soil can be replanted to the crops listed in the table. When a recommended tank mix is used, consult the tank mix partner labels for re-cropping instructions and follow the directions that are most restrictive.

Cover crops for soil health and erosion control can be planted at any time after an application of ZONE MAXX HERBICIDE, but do not use for food or feed. Residual activity of ZONE MAXX HERBICIDE may result in injury to some cover crop species if planted too soon following application. Consult your local University extension service for cover crop sensitivity to ZONE MAXX HER-BICIDE, Prior to using ZONE MAXX HERBICIDE consideration should be given to crop rotation plans. Crops other than soybeans may be extremely sensitive to low concentrations of ZONE MAXX HERBICIDE remaining in the soil the next planting season. Choice of rotation crop is restricted following application of ZONE MAXX HERBICIDE.

## **Table 1 - ROTATIONAL RESTRICTIONS**

Refer to Importance of Soil pH section for additional information

	Rotation Interval A For use only in AL, AR, GA, IL, IN, KS, KY, LA, MO, MS, NE (east of Highway 281 and south of Highway 30), NC, OH,	Rotation Interval B For use only in DE, IA, MD, MI, MN, NE (west of Highway 281 and north of Highway 30), NJ, VA, WI and WV	Rotation Interval C For use only in DE, IA, MD, MI, MN, NE (west of Highway 281 and north of Highway 30), NJ, VA, WI and WV
Сгор	OK, PA, SC, TN and TX	where soil pH is < 6.8 and rates are < 5 oz/A	where soil pH is 6.8 to 7.6 and/or rates are > 5 oz/A
		Recropping Interval in Months	
Soybean (1)	Anytime	Anytime	Anytime
Wheat, Barley, Rye	4	4	4
Oats	12	12	18
Alfalfa	12	12	18
Rice	10	10	18
Тоbассо	10	10	18
Tomato (transplant)	15	15	18
Field Corn <sup>(2)</sup>	10	10	18
Dry Beans	12	12	18
Cotton	18 or 12 <sup>(3)</sup>	18 or 12 <sup>(3)</sup>	18
Peanuts	9	18	18
Sorghum	18 or 10 <sup>(4)</sup>	18 or 10 <sup>(4)</sup>	18
Cabbage, Clover, Cucumber, Flax, Lentils, Mustard, Pumpkin, Sunflower, Popcorn, Sweet Corn, Watermelon	18	18	18
Canola (rapeseed), Carrot, Onion, Potato, Sugar Beets and any other crop not listed	36	36	36

Use rotational interval C above, if an application of ZONE MAXX HERBICIDE is applied in the states of AL, AR, GA, KY, LA, MO Bootheel, MS, NC, OK, SC, TN and TX where soil pH is greater than 6.8. Crops that have rotational intervals greater than 12 months after a ZONE MAXX HERBICIDE application are the result of crop injury concerns. The crops should only be planted after a successful bioassay.

<sup>1</sup> Do not feed treated soybean forage or soybean hay to livestock.

<sup>2</sup> Field corn includes corn grown for grain, silage, popcorn, seed corn.
<sup>3</sup> Cotton may be planted after 12 months where ZONE MAXX HERBICIDE was applied at rates 5 oz/acre or less and meets the following conditions:

· Medium and fine soils

• nH < 72

Rainfall or irrigation must exceed 15" after application of ZONE MAXX HERBICIDE to rotate to cotton

Sorghum may be planted after 10 months where ZONE MAXX HERBICIDE was applied at rates 6.4 oz/acre or less.

## WEEDS CONTROLLED-PREEMERGE

When used as directed ZONE MAXX HERBICIDE will provide control of the following weed species:

Carpetweed	Nutsedge, Purple
Copperleaf, Hophornbeam	Nutsedge, Yellow
Copperleaf, Virginia	Pigweed
Florida beggarweed	- Palmer amaranth
Jimsonweed	- Redroot
Kochia	- Smooth
Lambsquarters	Spiny amaranth
Mallow, Venice	Poinsettia, wild
Morningglory	Prickly sida (teaweed)
- Annual	Purslane, common
- lvyleaf	Senna, Coffee
- Entireleaf	Smartweed (annual)
- Smallflower	Spurge, Spotted
- Tall	Star of Bethlehem
Mustard, wild	Sunflower, wild
Nightshade, Black	Velvetleaf
Nightshade, Eastern Black	Waterhemp, common
Russian Thistle	Waterhemp, tall

ZONE MAXX HERBICIDE will provide partial control of the following weeds when used as directed:

Barnyardgrass	Mexicanweed
Burcucumber	Panicum, Texas and fall
Cocklebur	Pitted Morningglory
Crabgrass	Ragweed, common
Foxtail, species	Ragweed, giant
Goosegrass	Sesbania, Hemp
Johnsongrass, seedling	Sicklepod
Nightshade, Hairy	Signalgrass, broadleaf
Marestail (1)	Sunflower, wild

1 ZONE MAXX HERBICIDE must be tank mixed with 2,4-D, dicamba or saflufenacil for burndown of marestail.

Pitted morningglory, cocklebur, common ragweed, giant ragweed and wild sunflower may emerge at various times during the growing season. They may require cultivation or a follow up application of postemergence herbicides for season-long control.

# APPLICATION INSTRUCTIONS

# SPRAY DRIFT RESTRICTIONS

## **GROUND APPLICATIONS:**

- For boom spraying, the maximum release height must be 30 inches from the soil.
- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- When sulfentrazone is tank mixed with a contact burndown herbicide, use a minimum spray volume of 15 gallons per acre.
- Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE\* standard S-572.
- Select coarse to very coarse droplet size when sulfentrazone is used as a preemergent/preplant application.
- Select medium to very coarse droplet size when sulfentrazone is used postemergence with a contact burndown herbicide.
- Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE\* standard).
- Applicators may spray only when wind speed is between 3 and 10 mph.

#### **AERIAL APPLICATIONS:**

- Aerial application is allowed only when environmental conditions prohibit ground application. Aerial application is allowed only when the field is too wet to safely apply pesticides using ground equipment.
- When this product is allowed to be applied by air, applicator must use a minimum finished spray volume of 5 gallons per acre.
- The maximum release height must be 10 feet from the top of the crop canopy, unless a greater application height is required for pilot safety.
- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.

- Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE\* standard S-572.
- · Select coarse to very coarse droplet size when sulfentrazone is used as a preemergent/preplant application.
- Select medium to very coarse droplet size when sulfentrazone is used postemergence with a contact burndown herbicide.
- Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE\* standard).
- Applicators may spray only when wind speed is between 3 and 10 mph.
   \*ASABE American Society for Agricultural and Biological Engineers.

The following drift management requirements must be followed to avoid off target movement from aerial applications. These requirements do not apply to forestry applications, public health uses or to applications of dry materials.

- 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 downwards more than 45 degrees.
- 3. Observe the regulations of the State where applications are made.

## SPRAY DRIFT REDUCTION ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

## 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 for pesticide performance. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions. (See information on Wind, Temperature and Humidity, and Temperature Inversions in subsequent sections).

## **Controlling Spray Droplet Size**

Volume – Use high flow rate nozzles to apply the greatest practical spray volume. Nozzles with higher rated flow generally produce larger droplets.

Pressure – When higher flow rates are needed, use higher flow rate nozzles rather than increasing spray pressure. Do not exceed the nozzle manufacturer's recommended pressures. Lower pressure produces larger droplets in many types of nozzles.

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

Nozzle Orientation – For aerial application, the required practice is to orient nozzles so that the spray is released parallel to the airstream. This orientation usually produces larger droplets as compared to other nozzle orientations. Significant nozzle deflection from horizontal will reduce droplet size and increase drift potential.

Wind – Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they may potentially 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 smallsuspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the low speed and variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common during conditions of limited cloud cover and little to no wind. They often begin to form as the sun sets and may often continue into the morning. The presence of a temperature inversion may be indicated by ground fog. However, if fog is not present, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversions. Smoke that remains in layers and moves laterally in a concentrated cloud (under low speed 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 wind is blowing away from sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops).

## SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

## POLLINATOR ADVISORY STATEMENT

This product may adversely impact the forage and habitat of local pollinators, including the monarch butterfly (and its larvae), birds, or bats if reaches non-target areas. Protect pollinators by following label directions to minimize spray drift.

## MIXING INSTRUCTIONS

- 1. Fill the tank 1/4 to 1/3 full of water.
- 2. Add the required amount of ZONE MAXX HERBICIDE while agitating.
- 3. Maintain agitation and continue filling tank with water to insure ZONE MAXX HERBICIDE is fully dispersed.
- 4. Before adding any other material ZONE MAXX HERBICIDE should be thoroughly mixed with water in the spray tank. Mixing order should be the following: Fill tank half-full and add ZONE MAXX HERBICIDE while continue filling with water add other herbicide(s), recommended spray adjuvant and liquid nitrogen fertilizer if recommended.
- 5. Apply ZONE MAXX HERBICIDE spray solution within 24 hours of mixing to avoid product degradation.
- 6. If spray tank has stopped and the mixture has settled, before using re-agitate thoroughly.
- 7. When tank mixing with liquid fertilizers always prepare a slurry with water before adding to spray tank.

## PREPARATION OF SPRAY TANK

Before using ZONE MAXX HERBICIDE it is very important the spray equipment is clean and free of any previous pesticide deposits in the tank. Use the previous product's label that was used and follow Tank Cleanout procedures that are on the label. If no procedure is provided use the cleanout procedure on the ZONE MAXX HERBICIDE label marked SPRAYER CLEANOUT.

#### SPRAYER CLEANOUT

To avoid injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of ZONE MAXX HERBICIDE as follows:

- 1. Drain tank; thoroughly hose down the interior surfaces of the tank; then flush tank, boom, and hoses with clean water for a minimum of 5 minutes.
- Fill spray tank half full of water and add one of the cleaning agents listed below. Finish filling the tank with water, and then flush the cleaning solution through the boom, hoses, and nozzles. Add water to completely fill the tank and allow to agitate or recirculate for at least 10 minutes. Again, flush the boom, hoses and nozzles, and drain the tank.
- 3. Remove the nozzles and screens and clean separately in a bucket containing water and the cleaning agent.
- 4. Repeat Step 2.

5. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing water through the boom-nozzles and hoses.

- NOTE: Carefully read and follow the individual cleaning agent instructions. Use any of the following cleaning agents:
- One gallon of household ammonia (contains 3% active) per 100 gallons of water.
- · Commercial spray tank cleaner

Do not drain or flush equipment on or near desirable trees or plants.

Do not contaminate any body of water including irrigation water that may be used on other crops.

Should small quantities of ZONE MAXX HERBICIDE remain in inadequately cleaned mixing, loading, and/or spray equipment, they may be released during subsequent applications potentially causing effects to certain crops and other vegetation. Helm Agro accepts no liability for any effects due to inadequately cleaned equipment.

# WEED RESISTANCE MANAGEMENT

Sulfentrazone and chlorimuron ethyl, the active ingredients in this product, are Group 14 and Group 2 herbicides, respectively, based on the mechanism of action classification system of the Weed Science Society of America. Any weed population can contain plants naturally resistant to Group 14 or Group 2 herbicides. Any weed population may contain plants naturally resistant to Group 14 or Group 2 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance management strategies should be followed.

Consult your local company representative, state cooperative extension agent, professional consultant or other qualified authority to determine appropriate actions for controlling specific resistant weeds.

#### Weed Management Practices

Resistant populations arise when rare individual plants are uncontrolled by a normal dose of a given herbicide under normal environmental conditions. In the absence of other control measures these individuals survive, produce seed, and eventually become the dominant biotype in the field through continuous selection.

To delay herbicide resistance take one of the following steps:

- Rotate the use of ZONE HERBICIDE or other Group 14 or Group 2 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 (weedcompetitive crops or varieties) and other management practices.
- Scout for weeds before ZONE HERBICIDE application for identification and growth stage
- 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 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.
- For further information or to report suspected resistance, contact your HELM Agro representative at 813-621-8846.

## IMPORTANT PRECAUTIONS

- All direct or indirect contact (such as spray drift) to other crops or to land scheduled to be planted to crops other than soybeans should be avoided.
- Soybean stunting may occur if excessive rainfall occurs after application but before soybeans emerge. Injury is more prevalent under poor drainage or compacted conditions or when soil is
  saturated for long periods of time. Soybeans rapidly outgrow stunting once favorable growing conditions return.
- Seedling disease, nematodes, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, or drought may weaken soybean seedlings and increase the possibility
  of crop injury.
- Back to back application of ALS or ALS containing herbicides can occasionally result in residual herbicide stacking and potential crop injury. Grower should be aware of previous herbicide
  use and potential interaction it may have with ZONE MAXX HERBICIDE application.
- Thoroughly clean ZONE MAXX HERBICIDE from application equipment immediately after use and prior to spraying crops other than soybeans. Failure to remove even small amounts of ZONE MAXX HERBICIDE from application equipment may result in injury to subsequently sprayed crops.
- Ensure the seed furrow is closed and the seed covered on acres treated with ZONE MAXX HERBICIDE.

#### IMPORTANCE OF SOIL PH

Always determine soil pH by laboratory analysis using a 1:1 ratio of soil to water suspension.

Variations of soil pH in the same field can vary as much as 2 pH units is not uncommon. Therefore, it is recommended that subsampling for pH values that may be higher than a field average. Do not depend on composite soil samples taken for analysis of soil fertility since they may not detect areas of high pH.

The following is a non-inclusive list of potential high pH areas where sub-sampling is recommended:

- · Where different soil types are evident within a field, sample soil types separately.
- Where conditions vary within a field, sample areas separately, such as:
  - areas bordered by limestone gravel roads,
- river bottoms subject to flooding,
- low areas in hardpan soils where evaporative ponds may occur,
- eroded hillsides,
- along drain tile lines, and
- areas where drainage ditch spoil has been spread.
- Where lime has not been deeply incorporated, soil may exhibit significantly higher pH values in the upper 3 inches of soil. Composite soil samples taken at a 6 to 8 inch depth may not reflect the elevated pH near the surface. In these cases shallow sampling, the upper 3 inches, is advised.

## APPLICATION DIRECTIONS FOR USE ON SOYBEANS

- Apply ZONE MAXX HERBICIDE according to rates in Table 2 as directed for specific types of application and geographic areas.
- Follow all label restrictions regarding soil type, soil pH, organic matter, rotational crop intervals, geographic location, and weed pressure, in selecting the rate of ZONE MAXX HERBICIDE from Table 2.
- Use of ZONE MAXX HERBICIDE on soils which exceed pH 6.8 may result in unacceptable injury to the following rotational crop. ZONE MAXX HERBICIDE may be used on fields which are generally pH 6.8 or less, but which may contain isolated areas where the pH exceeds 6.8 only if the following rotational crop is soybeans.

#### **USE RESTRICTIONS**

- Do not apply more than 9.6 ounces (0.37 Sulfentrazone lbs AI and 0.023 Chlorimuron lbs AI) per acre of ZONE MAXX HERBICIDE in a single application.
- Do not apply more than 9.6 ounces (0.37 Sulfentrazone lbs AI and 0.023 Chlorimuron lbs AI) per acre of ZONE MAXX HERBICIDE in a 12-month period.
- Split application: Two applications totaling the 9.6 ounces (0.37 Sulfentrazone lbs Al and 0.023 Chlorimuron lbs Al) per acre of ZONE MAXX HERBICIDE (see Table 2) may be made per year.
   This product is for use only in AL, AR, DE, GA, IA, IL, IN, KS, KY, LA, MD, MI, MN, MO, MS, NC, NE, NJ, OH, OK, PA, SC, TN, TX, VA, WI, and WV.
- Do not apply to black belt soil of Alabama or Mississippi with a soil pH >6.8 or history of nutrient deficiency such as iron chlorosis, as injury may occur.
- Do not follow ZONE MAXX HERBICIDE with a post-emergence application of another chlorimuron-ethyl containing herbicide in the same cropping season.
- Do not apply ZONE MAXX HERBICIDE to soils with soil pH greater than 7.6.
- Do not apply this product through any type of irrigation system.
- · Do not feed treated soybean forage or soybean hay to livestock.
- Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots, or injury to desirable trees and plants may occur.
- Do not tank mix ZONE MAXX HERBICIDE with organophosphate insecticides.
- Do not apply ZONE MAXX HERBICIDE within 14 days before or after an application of an organophosphate insecticide, as severe crop injury may occur.
- Do not apply ZONE MAXX HERBICIDE if there are visible signs of cracking due to soybean emergence, or serious crop injury may result.
- . When tank mixing this product with other pesticides, follow the most restrictive of the labeling limitations and precautions of all products used in the mixture.

#### Herbicide Use Rate

#### Table 2: Fall application, Early Pre-plant, Pre-plant Burndown, Pre-plant Incorporated, and Pre-emergence: No-Till, Minimum-till, Conventional tillage

	Organic Matter		
Soil Texture	0.5 – 2%	2-4%	
	Ounces Product Per Acre (Pounds A.I. Per Acre)		
Coarse <sup>(1)</sup> : Loamy Sand, Sandy Loam	5.0 – 6.0 (0.19 – 0.23 Sulfentrazone Ibs Al) (0.012 – 0.015 Chlorimuron Ibs Al)	6.0 – 7.0 (0.23 – 0.27 Sulfentrazone Ibs AI) (0.015 – 0.017 Chlorimuron Ibs AI)	
Medium: Loam, Silt Loam, Silt, Sandy Clay Loam	6.5 – 7.5 (0.25 – 0.29 Sulfentrazone Ibs Al) (0.016 – 0.018 Chlorimuron Ibs Al)	7.0 – 8.0 (0.27 – 0.31 Sulfentrazone Al) (0.017 – 0.02 Chlorimuron Al)	
Fine: Silty Clay Loam, Clay Loam, Clay	7.0 – 8.0 (0.27 – 0.31 Sulfentrazone lbs Al) (0.017 – 0.02 Chlorimuron lbs Al)	8.0 – 9.6 (0.31 – 0.37 Sulfentrazone Ibs AI) (0.02 – 0.023 Chlorimuron Ibs AI)	
<sup>1</sup> Do not use this product in coarse sand soils with < 1% organic matter. Apply ZONE MAXX HERBICIDE according to Rate Tables for types of application and specific geographic areas.			

#### **APPLICATION METHODS**

Do not apply ZONE MAXX HERBICIDE after the soybean crop has emerged or severe injury or death of the crop may occur. ZONE MAXX HERBICIDE may be applied by any of the methods listed below. CONSERVATION TILLAGE

#### Early Pre-Plant in No-Till, Minimum Till, or Stale Seedbed

ZONE MAXX HERBICIDE applied early Pre-plant will provide burndown of many existing weeds as well as preemergence broadleaf weed control. When applied as a burndown treatment, ZONE MAXX HERBICIDE is rainfast after one hour. 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. For burndown or control of existing vegetation, an appropriate burndown herbicide at labeled rates is recommended such as 2,4-D, glyphosate, glufosinate, paraquat, dicamba or saflufenacil and should be applied in combination with ZONE MAXX HERBICIDE. Follow all label directions for the burndown herbicide including application timing, spray volume, adjuvants to achieve control of targeted weeds. For applications of ZONE MAXX HERBICIDE made from 30 to 60 days before planting apply the higher rate in the appropriate soil range from Table 2 depending on the soybean system being grown.

#### PREPLANT INCORPORATED

Uniformly incorporate ZONE MAXX HERBICIDE or ZONE MAXX HERBICIDE tank mixes no deeper than 2" prior to planting soybeans. If tank-mixing ZONE MAXX HERBICIDE with a companion herbicide, follow all label instructions for the companion herbicide, including proper incorporation of the companion herbicide in the top 2" of soil. Improper incorporation can result in erratic weed control or potential crop injury.

## PRE-EMERGENCE

ZONE MAXX HERBICIDE may be applied at planting time or within 3 days after planting, but before seed emergence. ZONE MAXX HERBICIDE may be applied alone or in tank mix combinations with other registered soybean herbicides. When applied in tank mix combinations, follow applicable use directions, including application rates, precautions and restrictions of each product in the mixture. The seed furrow must be completely closed and seed covered before any applications of ZONE MAXX HERBICIDE.

# FALL APPLICATIONS

ZONE MAXX HERBICIDE may be applied as a fall treatment to the stubble of harvested crops for the burndown of existing vegetation and pre-emergence control of labeled weeds the following spring in no-till and conservation tillage production systems. If weeds are emerged at the time of application, utilize a tank mixture with a suitable burndown herbicide such as glyphosate, or glufosinate at labeled rates. Fall applied burndown treatments should be made with a minimum of 10 gallons per acre to achieve adequate coverage of the weeds being treated. Applications volume should be increased to 15 to 20 gallons per acre or more where weed density is high or heavy crop residue levels are present. When making burndown applications to emerged weeds, the addition of adjuvants such as COC, NIS, or MSO to the spray mixture can be used to enhance the burndown activity of the application. Refer to product labels for use rates and instructions.

## FALL APPLICATION AND SPRING PRE-PLANT BURNDOWN OF BROADLEAF WEEDS

ZONE MAXX HERBICIDE can provide for some increased burndown activity on emerged weeds in no-till applications, but is not intended to replace part or all of an appropriate preplant burndown program. For control of the weeds listed below in no-till / minimum till fields, ZONE MAXX HERBICIDE must be tank-mixed or used in combination with a full burndown program. This may include 2,4-D alone or in combination with carfentrazone, dicamba, glyphosate, glufosinate, paraquat, or other appropriate burndown herbicides in tank-mixes at their appropriate rate for the size and species of weeds present. Reduced rates of ZONE MAXX HERBICIDE and/or the corresponding burndown partner herbicides can result in weed escapes and unsatisfactory performance.

Chickweed (1)	Nightshade species	
Dandelion	Pennycress	
Garlic, wild	Pigweeds	
Henbit	Ragweed, common	
Lambsquarters	Ragweed, giant	
Lettuce, prickly	Shepherd's-purse	
Marestail (2)	Smartweeds, annual	
Mustard, tansy	Sunflower	
Mustard, wild	Waterhemp species	
<sup>1</sup> For chickweed control add glyphosate or Tribenuron methyl or Dicamba. <sup>2</sup> For glyphosate resistant biotypes, include an alternative and effective mode of action to achieve complete burndown		

For Burndown control, pick the appropriate rate from Rate Table 2 and apply with:

- For complete burndown of emerged annual grasses or broadleaf weeds or for burndown of weeds not listed above, ZONE MAXX HERBICIDE must be tank mixed with: saflufenacil, glyphosate, glufosinate, paraquat, 2,4-D alone or in combination with carfentrazone or other appropriate burndown herbicides. Some weed species have developed resistance to one or more herbicide classes. The burndown tank-mix with ZONE MAXX HERBICIDE must contain one or more herbicides that will control targeted weed species and resistant bio-types.
- Crop Oil Concentrate (COC) or Methylated Seed Oil (MSO) at 1% v/v 1 gallon per 100 gallons of spray solution, or Non-ionic surfactant (NIS) at 1 qt./100 gallon of spray solution.
- In addition to the specific adjuvants above, other adjuvants may be used if they provide the same or similar functions as those previously mentioned. The addition of other adjuvants or fertilizers such as ammonium sulfate (AMS) may aid in control of weeds when used with appropriate companion herbicides. Consult specific companion herbicides for additional adjuvant, and fertilizer recommendations when applying for burndown of existing vegetation.
- Use flat fan nozzles or other appropriate nozzle types and a minimum of 15 gallons of water per acre. Where dense vegetation or heavy crop residues are present, increasing the spray volume to 15 to 20 gallons per acre or more may improve spray coverage and weed control.

To select the proper tank mix product, identify the weeds which need to be controlled and consult the product labels to determine which product is needed. Consult the companion tank mix herbicide label for use instructions, rates, precautions, restrictions, and other use information.

For instructions on how to prevent spray drift see Spray Drift section.

# FOR HERBICIDE ACTIVATION RAINFALL REQUIREMENT

Best results are obtained if ZONE MAXX HERBICIDE is followed by rainfall or irrigation before weeds germinate. Several small rainfalls of less than 1/4" each are not as beneficial as one large rainfall of 1/2-1". If moisture is not sufficient to activate the herbicide, a rotary hoeing or shallow cultivation should be made after emergence of the crop while weeds are small enough to be controlled by mechanical means.

## 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 and Seller harmless for any claims relating to such factors. Helm warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Helm, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, HELM MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.** 

To the extent consistent with applicable law, in no event shall Helm or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF HELM AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF HELM OR SELLER, THE REPLACEMENT OF THE PRODUCT.

Helm and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of Helm.

(RV090420)

Manufactured for:



HELM AGRO Inc. 401 E. Jackson St., Suite 1400 Tampa, FL 33602 info@helmagro.com Tel. 813-621-8846