

## **SOYBEAN (NO-TILL, MINIMUM-TILL, CONVENTIONAL TILLAGE) - 2-4% ORGANIC MATTER - MEDIUM**

### General Information

Prior to using ZONE HERBICIDE, consideration should be given to crop rotation plans. Crops other than soybeans may be extremely sensitive to low concentrations of ZONE HERBICIDE remaining in the soil the next planting season. Choice of rotation crop is restricted following application of ZONE 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 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 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 that may be on the pad. The above mentioned minimum containment capacities do not apply to 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 HERBICIDE is a dispersible granule formulated to easily mix with water, to be sprayed for selected pre-emergent and pre-plant incorporated weed control in soybeans.

Control of many broadleaf weeds and partial control of annual grasses will be attained when applied according to label instructions.

Rainfall or sprinkler irrigation is required to activate Pre-emergence and Pre-plant incorporated applications of ZONE HERBICIDE. The control and duration of effect depend on the following: Use rate, growing conditions at and following time of treatment, weed spectrum, soil pH, moisture and precipitation and organic matter. Use information which is applicable to all ZONE HERBICIDE use geography can be found within the label.

## BIOLOGICAL ACTIVITY

ZONE HERBICIDE quickly inhibits growth of susceptible weeds. Susceptible weeds may germinate and emerge following an application of pre-plant incorporation or pre-emergence treatment, but leaves become yellow 3-5 days after emergence and growth ceases. Death of growing points and leaf tissue will occur in some species while others will remain green, stunted and non-competitive. ZONE HERBICIDE will provide partial control of some annual grasses applied correctly but an additional product(s) may be warranted to provide best grass control.

Seedling vigor may be impacted if poor growing conditions prevail. If poor growing conditions are present ZONE HERBICIDE (like other soil applied herbicides) may injure soybeans.

In the event injury symptoms appear they will disappear rapidly and will not result in reductions of yield. Poor growing conditions, such as cool temperatures, presence of disease pathogens, excessive moisture and soil compaction may cause this temporary injury to soybeans.

## APPLICATION GUIDELINES

### SPRAY VOLUMES

Ground Application: Apply uniformly by ground equipment with a properly calibrated sprayer equipped with fan-type nozzles or other appropriate nozzles. Adjust spray pressures to recommendations that are appropriate for the nozzle type being utilized. Sprayer and spray nozzles should be set to minimize the risk of fine droplets (<150 microns), yet achieve adequate coverage of existing weeds. Use nozzles that require screens no finer than 50 mesh. Use 10 to 40 gals of water per acre.

Continuous agitation in the spray tank is required to keep the product in suspension. Avoid overlap and shut off spray booms while starting, turning, slowing or stopping, as injury to the crop may result.

Aerial Application: ZONE HERBICIDE may be applied by air using properly calibrated nozzle types and arrangements that will provide optimum coverage while producing minimal amounts of fine droplets. Apply sufficient spray volume to achieve adequate coverage. Apply a minimum of five (5) gallons of finished spray per acre. Do not apply when wind speed favors drift beyond the area intended for treatment.

### 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 6-8 inch depth may not reflect the elevated pH near the surface. In these cases shallow sampling, the upper 3 inches, is advised.

## RESISTANCE MANAGEMENT

When herbicides with the same mode of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant weed biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. These resistant weed biotypes may not be adequately controlled.

Cultural practices such as tillage, preventing weed escapes from going to seed, and using herbicides with different modes of action within and between crop seasons can aid in delaying the proliferation and possible dominance of herbicide resistant weed biotypes. Consult your local company representative, state cooperative extension service, professional consultants or other qualified authorities to determine appropriate actions for treating specific resistant weeds.

## Best Management Practices

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without

tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance. Scouting after a herbicide application is important because it can facilitate the early identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to implement measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in retarding the spread of resistant weed seed.

#### 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 HERBICIDE application.
- Thoroughly clean ZONE HERBICIDE from application equipment immediately after use and prior to spraying crops other than soybeans. Failure to remove even small amounts of ZONE HERBICIDE from application equipment may result in injury to subsequently sprayed crops.

#### USE RESTRICTIONS

- Apply ZONE HERBICIDE according to Rate Tables 1 or 2 as directed for specific types of application and geographic areas. Do not use the full use rate (Rate Table 1) in DE, IA, MD, MI, MN, NJ, VA, WI and WV.
- Do not use ZONE HERBICIDE in CO, WY, ND, NY or SD at any rate. Do not apply ZONE HERBICIDE in Nebraska west of US Hwy 281 and north of US Hwy 30.
- 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 HERBICIDE with a post-emergence application of another

chlorimuron-ethyl containing herbicide in the same cropping season.

- Do not apply ZONE HERBICIDE if there are visible signs of cracking due to soybean emergence, or serious crop injury may result.
- 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 use on lawns, walks, driveways, tennis courts or similar areas. Prevent drift of spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides and seeds during storage.
- Do not tank mix ZONE HERBICIDE with organophosphate insecticides. Do not apply ZONE HERBICIDE within 14 days before or after an application of an organophosphate insecticide, as severe crop injury may occur.

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 HERBICIDE from Rate Table 1 or Table 2.

Use of ZONE HERBICIDE on soils which exceed pH 6.8 may result in unacceptable injury to the following crop. ZONE 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 or Helm Agro recommended a chlorimuron ethyl resistant corn variety.

#### Limitations, Restrictions, and Exceptions

##### ADDITIONAL USE RESTRICTIONS (For Use on Soybeans)

- Do not apply this product through any type of irrigation system.
- Do not feed treated soybean forage or soybean hay to livestock.
- Single application: Do not apply a full rate of ZONE HERBICIDE more than once per season.
- Split application: Two applications totaling the full labeled rate of ZONE HERBICIDE (see Table 1) may be made per season.
- Do not apply ZONE HERBICIDE after the soybean crop has emerged or severe injury or death of the crop may occur. ZONE HERBICIDE may be applied by any of the methods listed below.

##### APPLICATION METHODS

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methods listed below.

### CONSERVATION TILLAGE

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

ZONE HERBICIDE applied Early Pre-plant must be applied in combination with the appropriate burndown herbicide such as glyphosate, glufosinate, gramoxone, and/or 2,4-D to achieve acceptable control of existing weeds during application. ZONE HERBICIDE is rainfast after one hour when applied as a burndown treatment. For burndown or control of existing vegetation, an appropriate burndown herbicide at labeled rates is recommended such as glyphosate etc. Follow all label directions for the burndown herbicide including application timing, spray volume, adjuvants to achieve control of targeted weeds. For applications of ZONE HERBICIDE made from 30 - 60 days before planting apply the higher rate in the appropriate soil range from tables 1 or 2 depending on the soybean system being grown.

### PRE-EMERGENCE

ZONE HERBICIDE may be applied at planting time or within 3 days after planting, but before seed emergence. ZONE 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 should be completely closed and seed covered before any applications of ZONE HERBICIDE.

### PRE-PLANT INCORPORATED

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

### FOR HERBICIDE ACTIVATION RAINFALL REQUIREMENT

Best results are obtained if ZONE 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.

Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

Rates

[field rates 0](#)

[field rates 1](#)

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Restricted Entry Interval

12 hours

Soils

[Medium](#)

[Loam](#)

[Silt Loam](#)

[Silt](#)

[Sandy Clay Loam](#)

Tillages

[Conventional](#)

[No-Tillage](#)

[Minimum](#)

Timings

[Preemergence \(Crop\)](#)

[Preplant](#)

[Preplant Incorporated](#)

[Preemergence \(Weed\)](#)

## Early Preplant