



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 26, 2023

Matt Granahan  
U.S. Regulatory Leader  
HELM Agro US, Inc.  
401 E. Jackson St.  
Suite 1400  
Tampa, FL 33602

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from the Interim Decision for Metolachlor and the National Marine Fisheries Services' (NMFS) Biological Opinion on the Effects of Metolachlor on Pacific Salmonids  
*Product Name: Zone Elite*  
*EPA Registration Number: 74530-81*  
*Application Dates: 05/18/2021, 09/02/2021*  
*Decision Numbers: 575886, 588745*

Dear Matt Granahan:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Metolachlor Decision. The Agency has concluded that your submission is acceptable.

This letter also addresses the label mitigation resulting from the NMFS' Biological Opinion on the effects of Metolachlor on Pacific salmonids. The Agency has concluded that your submission is also acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40

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CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Jaclyn Pyne by email at [pyne.jaclyn@epa.gov](mailto:pyne.jaclyn@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Linda Arrington', with a stylized flourish at the end.

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

SULFENTRAZONE	GROUP	14	HERBICIDE
METOLACHLOR	GROUP	15	HERBICIDE

# ZONE ELITE

<b>Active Ingredients:</b>	<b>% By Wt.</b>
Sulfentrazone .....	7.55%
Metolachlor .....	68.25%
<b>Other Ingredients:</b> .....	<u>24.20%</u>
<b>TOTAL</b> .....	100.00%

\*Contains a total of 7.0 lbs. a.i. per gallon consisting of 0.7 lb. a.i. sulfentrazone and 6.3 lbs. a.i. metolachlor per gallon.

EPA Reg. No. 74530-81

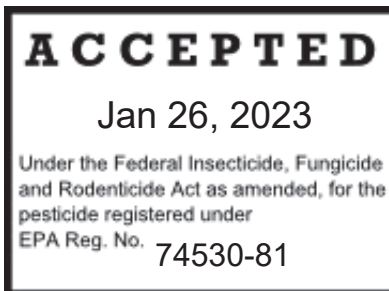
EPA Est. No. \_\_\_\_\_

Net Content: \_\_\_\_\_

## KEEP OUT OF REACH OF CHILDREN CAUTION

SEE [BACK PANEL] [NEXT PAGE] [INSIDE LABEL] [INSIDE BOOKLET] [BELOW]  
FOR ADDITIONAL PRECAUTIONARY STATEMENTS [STORAGE AND DISPOSAL]  
[AND] [DIRECTIONS FOR USE]

FIRST AID	
<b>If Swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• DO NOT induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• DO NOT give anything by mouth to an unconscious person.</li> </ul>
<b>If in Eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15- 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>HOT LINE:</b> Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For Chemical Emergency Assistance (Spill, Leak, Fire or Accident) call CHEMTREC at 1-800-424-9300.</p>	



## 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. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

### PERSONAL PROTECTIVE EQUIPEMENT (PPE)

#### Applicators and Other Handlers Must Wear:

- Waterproof gloves, except wear chemical-resistant gloves (Barrier Laminate, Nitrile Rubber  $\geq$  14 mils, Neoprene Rubber  $\geq$  14 mils, or Viton  $\geq$  14 mils gloves) when mixed with oil
- Long-sleeved shirt and long pants, socks and shoes.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Remove and wash contaminated clothing before reuse. If clothing and other absorbent materials have been drenched or heavily contaminated with this product discard and DO NOT reuse them.

### ENGINEERING CONTROLS

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

### USER SAFETY RECOMMENDATIONS

#### Users should:

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

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and marine/estuarine invertebrates. **DO NOT** apply directly to water or 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 adjacent to treated areas. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

#### Reporting Ecological Incidents:

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1 (813) 621-8846.

**DO NOT use on coarse soils classified as sand containing less than 1% organic matter.**

#### 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 weeks or months 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 metolachlor from runoff water and

sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

**Groundwater Advisory:**

Metolachlor is known to leach through soil into groundwater under certain condition 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.

**Non-Target Organism Advisory:**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

**PHYSICAL/CHEMICAL HAZARDS**

**DO NOT** store or use near heat or open flame.

**DIRECTIONS FOR USE**

**It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.**

**Read all Directions for Use carefully before applying.**

**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.

**Endangered Species Protection Requirements:**

It is a Federal offense to use any pesticide in a manner that results in an unauthorized “take” (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email [ESPP@epa.gov](mailto:ESPP@epa.gov). You must use the Bulletin valid for the month in which you will apply the product.

**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-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.
- waterproof gloves, except wear chemical-resistant gloves (Barrier Laminate, Nitrile Rubber > 14 mils, Neoprene Rubber > 14 mils, or Viton > 14 mils gloves) when mixed with oil
- chemical-resistant footwear plus socks.

## HERBICIDE RESISTANCE MANAGEMENT

Metolachlor and Sulfentrazone, the active ingredients in this product, are Group 15 and Group 14 herbicides, respectively, based on the mechanism of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 15 or Group 14 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 ELITE** or other Group 15 and Group 14 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 for weeds before applications of this product 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 US, Inc. representative at 813-621-8846.

## INSTRUCTIONS AND INFORMATION

### PRODUCT INFORMATION

ZONE ELITE is a soluble concentrate designed to be mixed with water, liquid fertilizer or mixtures of water and liquid fertilizer. It is to be sprayed preemergence or preplant incorporated in dry shelled peas and soybeans. When applied according to instructions on this label, ZONE ELITE will control broadleaf, grass and sedge weeds on this label.

ZONE ELITE is taken up by weed roots and shoots. Rainfall (or irrigation) is required to activate preemergence and preplant incorporated applications of ZONE ELITE. The amount of rainfall (or irrigation) needed to activate ZONE ELITE following application depends on existing soil moisture, organic matter content and soil texture. Erratic weed control will result unless ZONE ELITE is activated by 0.5 to 1.0 inch of rainfall (or irrigation). If 0.5 to 1.0 inch of rainfall (or irrigation) is not received within 7 to 10 days after ZONE ELITE application, a shallow cultivation may be needed to aid in activation to obtain desired weed control. When sufficient moisture is received after dry conditions, ZONE ELITE herbicide will control susceptible germinating weeds. Under extended periods of dry weather, adequate weed control may not be achieved. Activity on emerged weeds depends on weed species and depth of the root system in the soil. ZONE ELITE applications must be made before crop seed germination to prevent injury to the emerging crop seedlings. If applications are delayed after planting, injury may occur if seeds are germinating, or if they are located near the soil surface.

ZONE ELITE exhibits excellent crop safety. Factors such as poor growing conditions, excessive moisture, cool temperatures, soil compaction or the presence of seedling pathogens may affect seedling vigor. When these conditions are present, the active ingredients in ZONE ELITE, like other soil-applied herbicides, may contribute to crop response. Such early symptoms are short-lived. Observe all label instructions, crop restrictions, mixing directions, application precautions, replanting directions, rotational crop guidelines and other label information of each product when tank mixing with ZONE ELITE

**Restrictions:** **DO NOT** apply other products containing sulfentrazone or metolachlor to the crop unless specified in the individual crop sections. **DO NOT** use in nurseries, turf or landscape plantings.

**Mechanism of Action:** After application of ZONE ELITE to the soil, seedlings and germinating seeds take up the active ingredients from the soil solution. Soil type, soil organic matter and soil pH influence the amount of the active ingredients in the soil solution available for plant uptake. ZONE ELITE adheres to the clay and organic matter fractions of soil which limits the amount of active ingredients available for weed control.

**Influence of Soil Type, Organic Matter and pH on ZONE ELITE Use Rates and Crop Response:** Increased weed control and crop response from ZONE ELITE will occur in coarse textured and high pH >7.2 soils. Know the soil type and organic matter content of the field scheduled for treatment in order to determine the correct use rate of ZONE ELITE. Soil organic matter content and soil pH can vary widely and independently of soil type and requires an accurate analysis of representative soil samples or grids of soil samples within a specific field to determine its content.

### SOIL TEXTURE CLASSIFICATION CHART

COARSE	MEDIUM	FINE
Sand	Sandy clay loam	Silty clay loam
Loamy sand	Sandy clay	Silty clay
Sandy Loam	Loam	Clay loam
	Silt loam	Clay
	Silt	

Also note that highly alkaline irrigation water with a pH greater than 7.2 could result in adverse crop response. Irrigation with highly alkaline water (high pH) following a ZONE ELITE soil application can significantly increase the amount of ZONE ELITE available in the soil solution. This response will



ultimately depend on the initial ZONE ELITE application rate, timing, amount and pH of irrigation water and sensitivity of the crop and its growth stage when irrigated.

## APPLICATION GUIDELINES

### Ground Application

- Apply ZONE ELITE using a conventional low pressure herbicide boom sprayer equipped with suitable nozzles and screens.
- Use properly calibrated nozzles (10 to 40 psi) and screens and strainers no finer than 50 mesh.
- Apply using 10 to 40 gallons of spray solution per acre.
- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- When this product is tank mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre.
- **DO NOT** exceed 40 psi spray pressure unless required by the spray nozzle manufacturer.
- Water or liquid fertilizer solutions may be used as the carrier when applied alone or in tank mixtures with other registered herbicides.
- A jar test should be used to determine the compatibility of ZONE ELITE and the fertilizer solution.
- Apply ZONE ELITE spray mixture immediately after mixing.
- Agitation should be continuous until all spray mixture has been applied.
- Avoid swath overlaps.
- Always turn off spray booms while turning, slowing or stopping to avoid over application.
- **DO NOT** allow ZONE ELITE spray mixtures to sit overnight to prevent settling of product which may result in difficulty of re-suspension of product.
- To avoid injury to sensitive crops, drain and thoroughly clean spray equipment using instructions below.
- Avoid all direct, and/or indirect spray contact with non-target plants.
- Allow adequate distance between target area and desirable plants to minimize exposure.
- **DO NOT** apply near desirable vegetation.

### Aerial Application

- ZONE ELITE 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 in sufficient spray volume to achieve adequate coverage.
- Use a minimum of five (5) gallons of finished spray per acre.
- **DO NOT** apply when wind speed favors drift beyond the targeted treatment area.
- Aerial application is allowed only when environmental conditions prohibit ground application.

### Runoff and Wind Erosion Precautions

- **DO NOT** make applications when conditions favor runoff or wind erosion of soil containing ZONE ELITE to non-target areas.
- To prevent off-site movement due to runoff or wind erosion:
  - **DO NOT** treat powdery dry or light sandy soils when conditions favor wind erosion. When these conditions occur, allow the soil surface to be settled by rainfall or irrigation.
  - **DO NOT** apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered ground.
  - **DO NOT** apply to soils when saturated with water.
  - **DO NOT** use tail-water from the 1<sup>st</sup> flood or furrow irrigation of treated field to treat non-target crops unless at least ½ inch of rainfall (irrigation) has occurred between application and the first irrigation.

### Chemigation Application

ZONE ELITE may be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, solid set, or hand move irrigation systems. Apply in ¼ to 1 inch of water. Application of more irrigation water than 1 inch could move the active ingredients below the weed germination zone in the soil



and result in reduced weed control. Unless specified in the crop sections below, apply ZONE ELITE immediately after planting. Uniform distribution of water is important to avoid lack of effectiveness, illegal residues or crop injury. Contact State Extension Service specialists, equipment manufacturers or other experts for help with calibration. 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.

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. The pesticide injection pipeline must also contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. 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 withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. 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.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Meter ZONE ELITE into the irrigation system continuously for the duration of the water application. Dilute ZONE ELITE in sufficient volume to insure accurate application over the area to be treated. Use the appropriate amount of water to carry the product to the soil surface. Continuous agitation is required to maintain product suspension in the solution tank. A jar test should be conducted to ensure that phase separation would not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable weed control. Flush the lines at the completion of the application and then turn the water off promptly.

When using water from public water systems; **DO NOT APPLY ZONE ELITE THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM.** Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year. ZONE ELITE may be applied through irrigation systems, which may be supplied by a public water system only if water from the water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

It is important to note that irrigation with highly alkaline water (high pH) following a **ZONE ELITE** soil application may significantly increase the amount of sulfentrazone available in soil solution. **Irrigation with water having a pH greater than 7.2 could result in adverse crop response.**

**Restrictions: (1) DO NOT** apply this product through any other type of irrigation system and **(2) DO NOT** connect any irrigation system (including greenhouse systems) used for pesticide application to a public water system.

### **Application with Dry Fertilizers**

ZONE ELITE may be impregnated on dry fertilizers and when applied as directed will provide control of listed weeds. All label directions for ZONE ELITE use rates, specific crops, incorporation, special instructions and precautions must be followed. Use ground equipment only to apply ZONE ELITE fertilizer mixtures. All individual state regulations relating to dry bulk fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company preparing, storing, transporting, selling or applying the ZONE ELITE fertilizer mixture.

### **Impregnation Directions**

To impregnate ZONE ELITE on dry bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment.

Prepare a slurry of ZONE ELITE in a clean container using clear water. Slowly add the ZONE ELITE /water slurry to the impregnation spray tank and finish filling as needed with clear water. Spray nozzles must be placed to provide uniform coverage of ZONE ELITE onto the fertilizer during mixing. Refer to the SPRAYER EQUIPMENT CLEAN-OUT section for directions for cleaning impregnation equipment, transport equipment, loading equipment and application equipment.

Apply the ZONE ELITE dry bulk fertilizer with an accurately calibrated dry fertilizer spreader. The ZONE ELITE dry bulk fertilizer mixture must be spread uniformly on the soil surface. Uneven spreading leaving untreated areas can cause poor weed control or overlapping areas with potential increased ZONE ELITE use rates could result in possible crop response.

A minimum of 200 pounds of dry bulk fertilizer impregnated with the listed amount of ZONE ELITE must be applied per acre to achieve adequate soil coverage for satisfactory weed control.

Refer to the appropriate crop section of the ZONE ELITE label to determine the rate of ZONE ELITE to be applied per acre. Use the following table to determine the amount of ZONE ELITE to be impregnated on a ton (2000 pounds) of dry bulk fertilizer based on the rate of fertilizer that will be applied per acre.

#### **ZONE ELITE RATE CHART FOR IMPREGNATION ON DRY FERTILIZERS**

Dry fertilizer rate	Fluid Ounces of ZONE ELITE per Ton of Fertilizer		
	ZONE ELITE Use Rate Per Acre		
Lb/acre	14 fl oz/acre	26 fl oz/acre	35 fl oz/acre
200	140	260	350
250	112	208	280
300	93	173	233
350	80	148	200
400	70	130	175
450	62	114	154

**Restrictions:** (1) **DO NOT** impregnate ZONE ELITE onto coated ammonium nitrate, potassium nitrate, or sodium nitrate either alone or in blends with other fertilizers because these materials will not absorb the herbicide. (2) **DO NOT** use ZONE ELITE alone or in mixtures on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated. (3) To avoid crop injury, **DO NOT** use the herbicide/fertilizer mixture on crops where bedding occurs.

#### **Fertilizer Spray Mixtures**

Unless use directions specifically prohibit the use of ZONE ELITE with liquid fertilizers, the product can be applied alone or in recommended tank mixtures in combination with fertilizer solutions. Use the following procedure to test the compatibility of small quantities before large volume mixing occurs:

- Add 1 pint of fertilizer solution to a quart jar.
- Add the appropriate amount of herbicide(s) based on the table below.
- When more than one product is being used, add each separately using the following sequence: dry formulations (e.g., WP's, DF's) followed by liquid suspensions (e.g., F's) next and finally liquids (e.g., EC's)

<b>Mixture Compatibility Testing</b>		
Herbicide Formulation	Herbicide Field Use Rate	Amount Herbicide Added Per Pint
Wettable Powders (WP) or Dry Flowables (DF)	0.5 pound	0.75 teaspoon
	1.0 pound	1.5 teaspoon
	2.0 pound	3.0 teaspoon
	3.0 pound	4.5 teaspoon
Emulsified Concentrates	1.0 pint	0.5 teaspoon

(EC)		
Liquid Flowables (F)	1.0 quart	1.0 teaspoon
	2.0 quarts	2.0 teaspoons
	3.0 quarts	3.0 teaspoons
Based on 25 gallons per acre spray volume, adjust liquid fertilizer quantity for lower and higher spray volumes.		

- Close jar.
- Shake well.
- Observe mixture immediately after shaking, 5 and 30 minutes after shaking.
- If herbicide/fertilizer mixture remains mixed or can be remixed readily - does not permanently separate, foam, gel, become lumpy, etc. - the mixture is compatible and can be mixed in full volumes and sprayed.
- If jar test indicates compatibility, prepare spray by adding fertilizer solution to the tank first, then follow directions below.

#### **ZONE ELITE - Applied Alone with Liquid Fertilizer**

- Premix ZONE ELITE in clean water to form slurry.
- Use a minimum of one gallon of water for each container of ZONE ELITE.
- Fill spray tank one-half full with fertilizer solution.
- Add ZONE ELITE slurry to spray tank with agitator system operating by pouring through a 20-35 mesh screen.
- Agitate until slurry is completely dissolved.
- Rinse container used for slurrying.
- Add rinsate to the spray tank.
- Complete filling the sprayer tank with liquid fertilizer.
- Maintain agitation during filling, mixing and application.
- Use ZONE ELITE spray mixture immediately after mixing.

#### **ZONE ELITE - Applied in Tank Mix Combinations with Liquid Fertilizers**

- Premix ZONE ELITE in clean water to form slurry.
- Use a minimum of one gallon of water for each container of ZONE ELITE.
- Fill spray tank one-half full with fertilizer solution.
- Add ZONE ELITE slurry to spray tank with agitator system operating by pouring through a 20-35 mesh screen.
- Agitate until slurry is completely dissolved.
- Rinse container used for slurrying.
- Add rinsate to the spray tank.
- Dilute the individual tank mix partners with sufficient water to form a free flowing mixture.
- Add to spray tank of fertilizer using the following order – slurry of dry formulations (WP's, DF's) followed by dilute liquid formulations (e.g., EC's).
- After each addition, allow time for complete mixing and dispersion - adding water as necessary.
- Complete the addition of liquid fertilizer.
- Maintain agitation during filling, mixing and application.
- Apply ZONE ELITE tank mixture immediately after mixing.

Follow all ZONE ELITE label directions regarding product use rates per acre, registered crops, application instructions, incorporation directions, special instructions and all precautions. All individual state regulations relating to liquid fertilizer blending, storage, transportation, registration, labeling, and application are the responsibility of the individual and/or company preparing, selling or applying the ZONE ELITE fertilizer mixture.

## MIXING AND LOADING INSTRUCTIONS

### ZONE ELITE – Alone

- Determine the ZONE ELITE use rate from the **Use Rate** section of this label.
- Fill the spray tank with approximately one-half of the volume of water needed for the acreage being treated.
- Add required amount of ZONE ELITE for acreage being treated by measuring directly into the spray tank with the agitator system operating.
- Allow the product to fully disperse.
- Complete the addition of required spray water.
- Maintain agitation during filling, mixing and application.
- Apply ZONE ELITE spray mixture immediately after mixing.

### ZONE ELITE – Tankmix Combinations

- Determine the ZONE ELITE use rate from the **Use Rate** section of this label.
- Read and follow all use directions, precaution and restrictions on all product labels.
- Determine product compatibility using Mixture Compatibility Testing in jar test, before large volume mixing occurs.
- If the mixture is compatible in the jar test, prepare the tank mixture as follows:
- Fill the spray tank with approximately one-half of the volume of water needed for the acreage being treated.
- Add required amount of ZONE ELITE for acreage being treated by measuring directly into the spray tank with the agitator system operating.
- Allow the product to fully disperse.
- Then add the recommended dry formulations (WP's, DF's) followed by suspensions (e.g., F's, SC's) and finally liquids (e.g., EC's).
- After each addition, allow time for complete mixing and dispersion - adding water as necessary.
- Complete the addition of spray water.
- Maintain agitation during filling, mixing and application.
- Apply ZONE ELITE tank mixture immediately after mixing.

### BAND TREATMENT APPLICATIONS

For band treatments, apply the broadcast equivalent rate and volume per acre. To determine these:

$$\frac{\text{Band Width in Inches}}{\text{Row Width in Inches}} \times \text{Broadcast Rate Per Acre} = \text{Band Rate}$$

$$\frac{\text{Band Width in Inches}}{\text{Row Width in Inches}} \times \text{Broadcast Volume Per Acre} = \text{Band Volume}$$

### SPRAYER CLEANOUT

Residues left in mixing equipment, spray tanks, hoses, spray booms and nozzles can cause crop effects, if they are not properly cleaned. After applying ZONE ELITE alone and in tank-mixtures and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned using the following procedure.

1. Drain sprayer tank, hoses, and spray boom and thoroughly rinse the inside of the sprayer tank with clean water to remove sediment and residues.
2. Thoroughly flush sprayer hoses, boom and nozzles with clean water.
3. Fill the tank 1/2 full with clean water, and add appropriate detergent or ammonia (follow manufacturer's directions for use).
4. Fill the tank full and operate the sprayer for 15 minutes to flush hoses, boom, and nozzles.

5. Leave the cleaning solution in the spray tank, hoses, spray booms and spray nozzles overnight or during storage for convenient and thorough cleaning of the sprayer.
6. Before using the sprayer, drain the spray system.
7. Rinse the tank with clean water and flush through the hoses, boom, and nozzles.
8. Remove and clean spray tips and screens separately with the tank mix cleaner or ammonia solution.
9. Dispose of all cleaning solution and rinsate in accordance with Federal, State and local regulations and guidelines.
10. **DO NOT** drain or flush equipment on or near desirable trees or plants.
11. **DO NOT** contaminate any body of water including irrigation water that may be used on other crops.
12. If spray system is not cleaned adequately and small quantities of ZONE ELITE remain in the system, they may be released during subsequent applications potentially causing effects to certain crops and other vegetation.
13. HELM Agro US, Inc. accepts no liability for any effects due to inadequately cleaned equipment.

#### **HANDLING INSTRUCTIONS AT MIXING SITE**

**DO NOT** mix or load ZONE ELITE within 50 feet of wells - including abandoned wells and drainage wells, perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs, and sinkholes. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pads or properly diked mixing/loading areas.

Procedures 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. The impervious pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. The impervious pad must be self-contained and surface water must not be allowed to either flow over or from the pad. 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 specific minimum containment capacities **DO NOT** apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Use product in a manner that will prevent back siphoning into wells and prevents spill or improper disposal of excess pesticide, spray mixtures or rinsates.

#### **CROP ROTATIONAL RESTRICTIONS**

The minimum interval in months from the time of the last ZONE ELITE application until ZONE ELITE treated soil can be replanted to various crops is listed in the following Table. If ZONE ELITE is tank mixed with another product, refer to the partner label for recropping instructions and follow the directions that are most restrictive.

Rotational intervals for some crops exceed 12 months after a ZONE ELITE application due to potential crop injury. A representative field bioassay should be completed with the rotational crop to accurately determine the crops sensitivity to ZONE ELITE. A field bioassay consists of a test strip of the intended crop planted across the previously treated field and grown to maturity. Test strip should include low spots, knolls, and soil variations such as pH and type. If injury does not occur in the test strip the crop may be planted the following year.

**DO NOT rotate to food or feed crops other than those listed on the label.**

**Crop Rotational Restrictions Table** (For all other crops not listed, the rotation interval is a minimum of 12 months with a representative bioassay to determine crop safety before planting).

<b>Crop</b>	<b>Interval in Months</b>
Alfalfa <sup>1</sup>	12
Barley	4.5
Cabbage (transplant only)	2
Cereal Grains (Oats, Pearl Millet, Proso Millet, Teosinte, Wild Rice)	12
Buckwheat	12
Corn, Field	10, 4 <sup>2</sup>
Corn, Pop	18 <sup>3</sup>
Corn, Sweet	10
Cotton	18 or 12 <sup>4</sup>
Dry Shell Peas	Anytime
Horseradish	Anytime
Lima Beans – Tennessee Only	Anytime
Peanuts	Anytime
Potatoes	Anytime
Rice	10
Rye	4.5
Sorghum	10
Soybeans	Anytime
Succulent peas	8
Sugar Beets	36
Sunflowers	Anytime
Triticale	4.5
Tobacco	10
Tomato	Anytime
Wheat	4.5

1. To avoid injury to rotational alfalfa, (1) **Do not** apply more than 1.9 lb ai metolachlor per acre in the previous crop, and (2) **Do not** make lay-by or other postemergent applications of products containing metolachlor in the previous crop.
2. Field corn may be planted after 4 months where ZONE ELITE was applied at 28 oz/acre or less.
3. Popcorn and sweet corn may be planted after 10 months where ZONE ELITE was applied at 28 oz/acre or less.
4. Cotton may be planted after 12 months where ZONE ELITE was applied at rates 36 oz/acre or less and meets the following conditions: (a) medium and fine soils; (b) Ph <7.2; (C) rainfall or irrigation must exceed 15" after application of ZONE ELITE to rotate to cotton.

For all other crops not listed, the rotation interval is a minimum of 12 months with a representative bioassay to determine crop safety before planting.

## REPLANTING INSTRUCTIONS

If initial planting of labeled crop fails to produce a stand, fields treated with ZONE ELITE may be replanted with labeled crop. If ZONE ELITE is being tankmixed with another labeled product, refer to the replant instructions for all products being used.

**Restrictions: DO NOT** plant treated fields with any crop at intervals that are inconsistent with the Rotational Crop Guidelines on this label. When a tankmix is used, refer to the product's label for any additional replant instructions. **DO NOT** retreat field with ZONE ELITE or other herbicide containing sulfentrazone and metolachlor. **DO NOT** plant treated field to any crop at intervals that are inconsistent with the Rotational Crop Guidelines on this label.



## ZONE ELITE MAXIMUM ALLOWABLE USE RATES

**DO NOT** exceed the maximum allowed use rate of sulfentrazone or metolachlor on each crop as shown in the table. The total allowed maximum usage includes all applications made to the field per twelve (12) month cropping year. This includes all pre-plant and after plant pre-emerge treatments.

Crop	ZONE ELITE fl oz/A	Total Lb ai/A	Lb ai/A Sulfentrazone	Lb ai/A metolachlor
Dry Shelled Peas	38.7	2.12	0.21	1.90
Soybeans	38.7	2.12	0.21	1.90

### 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 determines 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 should be familiar with and take into account the information covered in the **Mandatory Spray Drift Management** section below.

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Aerial Applications:

- **DO NOT** release spray at a height greater than 10 ft above the ground or vegetative canopy unless a greater application height is necessary for pilot safety.
- Aerial application is allowed only when environmental conditions prohibit ground application.
- Applicators are required to select the nozzle and pressure that deliver coarse or coarser droplets (ASABE S641) when product is used as a preemergent/preplant application.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S641) when product is used as postemergence with a contact burndown herbicide.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S641) for all other applications.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply when wind speeds exceed 10 mph at the application site. The boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply during temperature inversions.

#### Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 30 inches above the ground or crop canopy.
- Applicators are required to select the nozzle and pressure that deliver coarse or coarser droplets (ASABE S572) when product is used as a preemergent/preplant application.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S572) when product is used as postemergence with a contact burndown herbicide.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets



(ASABE S572) for all other applications.

- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### **Boomless Ground Applications:**

- Applicators are required to select the nozzle and pressure that deliver coarse or coarser droplets (ASABE S572.3) when product is used as a preemergent/preplant application.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S572.3) when product is used as postemergence with a contact burndown herbicide.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S572.3) for all other applications.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.  
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### **Boomless Ground Applications:**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size – Ground Boom**

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Controlling Droplet Size – Aircraft**

- Adjust Nozzles – Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

#### **BOOM HEIGHT – Ground Boom**

- For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT - Aircraft**

- Higher release heights increase the potential for spray drift.

#### **SHIELDED SPRAYERS**

- Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### **TEMPERATURE AND HUMIDITY**

- When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## TEMPERATURE INVERSIONS

- Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

## WIND

- Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WINDCONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## Sensitive Areas

The pesticide must 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).

## DRY SHELLED BEANS AND PEAS

Dried cultivars of bean (*Lupinus*); bean (*Phaseolus*)(includes field bean, black bean, kidney bean, lima bean (dry), navy bean, pink bean, pinto bean, tepary bean), small red bean, great northern bean; bean (*Vigna*) (includes adzuki bean, blackeyed pea, catjang, cowpea, crowder pea moth bean, lentil, mung bean, rice bean, southern pea, urd bean); broad bean (dry); guar; lab lab bean; pea (*Pisum*) (includes field pea and chickpea) and pigeon pea.

## Use Rates

ZONE ELITE Use Rates for Dry Shelled Peas			
Fall or Spring Early Preplant, Preemergence, and Preplant Incorporation Applications			
Broadcast rate	Fluid Ounces of ZONE ELITE per Acre		
	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
<1.5	13 - 17	17-26	17-26
1.5 – 3.0	17-26	21-34	26-34
>3.0	21-34	26-38.7	32-38.7
Coarse = Sand, Loamy Sand, Sandy Loam Medium = Sandy Clay Loam, Sandy Clay, Loam, Silt Loam, Silt Fine = Silty Clay Loam, Silty Clay, Clay Loam, Clay			
Use higher rates for soils with pH less than 7.2 and lower rates for soils with pH greater than 7.2 within the given rate ranges in this table.			
ZONE ELITE may be tank mixed with other herbicides registered for use in dry shelled peas. Observe all precautions, instructions and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions. It is the pesticide user's responsibility to ensure that all products in the listed mixtures 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.			

### **Early Preplant and Fall Applications**

ZONE ELITE may be applied in the fall as a preplant application to control or suppress weeds prior to planting the following spring. Apply ZONE ELITE to prior crop stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. **DO NOT** mechanically incorporate in the fall or spring as this will destroy the herbicide barrier and weed escapes are likely. **DO NOT** apply to frozen soils or to existing snow cover to prevent ZONE ELITE runoff from rainfall or snow melt following application.

ZONE ELITE may be tankmixed with other residual soil applied herbicides that are labeled for fall use on dry shelled peas. If weeds are emerged at the time of ZONE ELITE application, include a burndown herbicide such as glyphosate or paraquat at the full-labeled rate as a tank mix partner. Alternatively, apply as a split application as needed.

Select the appropriate ZONE ELITE rate from the table above within the correct soil type and organic matter range. When ZONE ELITE is applied in the fall, use a mid to high rate within the rate range for the appropriate soil type and organic matter. Fall application of ZONE ELITE may require a follow up grass herbicide treatment as grass escapes may occur. Apply ZONE ELITE when the sustained soil temperature is 55°F and falling at a soil depth of 4 inches. Applications to ridge till production systems must be made after the formation of ridges or bedded.

For fall application: (1) apply after September 30 in ND, SD, MN and WI, and north of Route 30 in IA; (2) apply after October 15 north of Route 91 in NE and south of Route 30 in IA; and (3) apply after October 31 north of Route 136 in IL.

### **Early Preplant and Preemergence (Spring Applications)**

ZONE ELITE may be applied preplant on the soil surface in the spring to control weeds in dry shelled peas. ZONE ELITE may be applied early preplant prior to planting up to 3 days after planting as a preemergence soil application as long as seedlings have not broken the soil surface. Make sure the seed furrow is closed properly. ZONE ELITE may be tankmixed with other preemergence herbicides labeled for use on dry shelled peas.

When dry conditions persist following preemergence applications of ZONE ELITE, make a shallow incorporation to incorporate and activate the herbicide. If weeds are emerged at the time of ZONE ELITE application, use a burndown herbicide at the full-labeled rate in combination with ZONE ELITE. Alternatively, apply as a split application as needed.

### **Preplant Incorporated (PPI)**

ZONE ELITE may be applied as a PPI treatment in the spring prior to planting in conventional and reduced tillage dry shelled peas. **DO NOT** incorporate to depths greater than 2 inches to avoid crop injury or inconsistent weed control. ZONE ELITE use rates for PPI applications are similar to those used in preplant and preemergence applications. ZONE ELITE may be tank mixed with other soil applied herbicide labeled for use in dry shelled peas. **DO NOT** tankmix ZONE ELITE with other PPO chemistry herbicides. Observe all precautions, instructions, and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions.

### **Weeds Controlled**

When applied according to directions for use on this label, ZONE ELITE will provide control or suppression of the weeds in the following table. The control level will vary depending on many factors such as use rate, cropping system, weather, soil type and moisture. Partial control will occur under dry conditions, under heavy pest pressure or at low use rates under 26 fl. oz per acre. Under these conditions plan to use a labeled post-emergence herbicide to improve control.

Common Name	Scientific Name
<b>Broadleaves and Sedges</b>	
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Kochia (ALS and Triazine Resistant)	<i>Kochia scoparia</i>
Lambsquarters, common	<i>Chenopodium album</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea hederacea</i>
Morningglory, tall	<i>Ipomoea, purpurea</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, Eastern black	<i>Solanum ptycanthum</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Thistle, Russian	<i>Salsola tragus</i>
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatos</i>
<b>Grasses</b>	
Barnyardgrass	<i>Echinochloa crus-galli</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria glauca</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Witch grass	<i>Panicum capillare</i>

### Precautions

ZONE ELITE should not be used on coarse textured soils with low organic matter.

Rainfall (or irrigation) is required to activate preemergence and preplant incorporated applications of ZONE ELITE. The amount of rainfall (or irrigation) needed to activate ZONE ELITE following application depends on existing soil moisture, organic matter content and soil texture. Erratic weed control will result unless ZONE ELITE is activated by 0.5 to 1.0 inch of rainfall (or irrigation). If 0.5 to 1.0 inch of rainfall (or irrigation) is not received within 7 to 10 days after ZONE ELITE application, a shallow cultivation may be needed to aid in activation to obtain desired weed control. When sufficient moisture is received after dry conditions, ZONE ELITE herbicide will control susceptible germinating weeds. Under extended periods of dry weather, adequate weed control may not be achieved.

Some adverse crop response may occur on:

- coarse textured soils with low organic matter (<1.5% and pH of 7.0 or higher)
- on highly eroded soils, hilltops
- or in areas of calcareous outcroppings.

Inadequate seed furrow closure or shallow planting (less than 1.5 inch) may result in undesirable crop response. As expected poor growing conditions such as:

- Excessive moisture
- Low temperatures
- Soil compaction
- Diseases

May also cause undesirable crop response.

The use directions are based on the interactive effects of ZONE ELITE and the primary soil and environmental factors. These factors affect ZONE ELITE activity on various weed species and crop tolerance. The user must observe the instructions and recommendations presented under Application Guidelines and other sections of this label pertinent to the anticipated use.

When applying ZONE ELITE with other registered herbicides, observe all precautions, instructions, limitations, application methods, timings and rotational cropping guidelines of each product's label, including all references to potential carryover and crop injury warnings or restrictions.

**NOTE:** Not all cultivars have been tested with ZONE ELITE. Consult University or Extension specialists for additional information on specific local varieties and any other pertinent local information.

**Restrictions**

- **DO NOT** apply more than 38.7 fluid ounces (0.21 lb sulfentrazone/A, 1.90 lbs metolachlor/A) total per twelve (12) month period.
- The twelve month period is considered to begin upon the initial ZONE ELITE application.
- **DO NOT** apply additional sulfentrazone containing products to dry shelled peas if ZONE ELITE has been applied within the twelve month period.
- **DO NOT** apply after crop emerges or if seedling is close to the soil surface.
- **DO NOT** incorporate to depths greater than 2 inches.
- **DO NOT** apply to frozen soil or to existing snow cover to prevent ZONE ELITE runoff from rainfall or snow melt following application.
- **DO NOT** use on soils classified as sand having less than 1% organic matter.
- **DO NOT** use for forage within 60 days after an application of ZONE ELITE.
- **DO NOT** cut for hay within 120 days after an application of ZONE ELITE.

**SOYBEANS**

**Application Information**

ZONE ELITE may be applied to control listed weeds in conventional soybeans when applied alone or in tankmix combinations.

**Timing**

ZONE ELITE may be applied before planting up to 3 days after planting. On course soils, apply no more than 2 weeks prior to planting.

- To avoid soybean seedling injury:
  - o **DO NOT** apply ZONE ELITE if soybean seedlings are emerging or cracking the soil.
  - o **DO NOT** apply more than 3 days after planting.
  - o ZONE ELITE applied near or after crop emergence may cause severe injury to the crop.

If ZONE ELITE is applied 30 days or more pre-plant, use the highest application rate within the rate range for the appropriate soil texture and organic matter. Application may be applied preemergence or preplant incorporated. Follow ZONE ELITE application by labeled postemergence soybean herbicides for increased control of broadleaf and grass weeds. Always follow the most restrictive labeling when tankmixing.

**Use Rates**

<b>ZONE ELITE Use Rates for Soybeans</b>			
<b>Fall, Spring Preplant, Preemergence, and Preplant Incorporation Applications</b>			
<b>Broadcast rate</b>	<b>Fluid Ounces of ZONE ELITE per Acre</b>		
	<b>Soil Texture</b>		
<b>% Organic Matter</b>	<b>Coarse</b>	<b>Medium</b>	<b>Fine</b>
<1.5	19-25	25-32	25-32
1.5-3.0	25	25-32	25-32
>3.0	25	25-32	32-38.7
Coarse = Sand, Loamy Sand, Sandy Loam Medium = Sandy Clay Loam, Sandy Clay, Loam, Silt Loam, Silt Fine = Silty Clay Loam, Silty Clay, Clay Loam, Clay			

Use higher rates for soils with pH less than 7.2 and lower rates for soils with pH greater than 7.2 within the given rate ranges in this table.

ZONE ELITE may be tank mixed with other herbicides registered for use in soybeans. Observe all precautions, instructions and rotational cropping guidelines of each product's label when tank mixing, including all references to potential carryover and crop injury warnings or restrictions. 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.

### **Spring Preplant Surface Applications**

Use ZONE ELITE on medium to 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.

### **Preemergence Applications**

ZONE ELITE may be applied at planting time through 3 days after planting, but before seed germination. May be applied alone or in tank mix combinations with other registered soybean herbicides. When applied in tank mix combinations, follow use directions, including application rates, precautions and restrictions of each product in the mixture. Make sure seed furrows are properly closed before applications.

### **Preplant Incorporated Applications**

ZONE ELITE may be applied alone or in tank mix combinations with other herbicides registered for Preplant Incorporated application on soybeans. For PPI applications, incorporation must be uniform and no deeper than 2 inches. Improper soil incorporation can result in erratic weed control and/or crop injury. When ZONE ELITE is applied in tank mix combination with other soybean herbicides, follow incorporation directions for the tank mix partner(s). Follow use directions, including application rates, precautions and restrictions of each product in the tank mixture.

### **Fall Applications**

ZONE ELITE may be applied as a fall treatment to the stubble of harvested crops for preemergence control of labeled weeds the following spring in no-till and conservation tillage production systems. If emerged weeds are present at time of ZONE ELITE application apply with appropriate burndown herbicide(s) at labeled rate(s) for improved control of existing weeds. Make fall burndown treatments applications in a minimum of 15 gallons per acre to achieve adequate coverage of the weeds being treated. Increase gallonage where weed density is high or heavy crop residue levels are present. When making burndown applications to emerged weeds, include an adjuvant such as COC or MSO to the spray mixture to enhance the burndown activity of the application. Refer to product labels for use rates and instructions.

For ZONE ELITE application rates refer to use rate table above.

Apply ZONE ELITE when the sustained soil temperature is 55°F and falling at a soil depth of 4 inches. Applications to ridge till production systems must be made after the formation of ridges or bedded.

For fall application: (1) apply after September 30 in ND, SD, MN and WI, and north of Route 30 in IA; (2) apply after October 15 north of Route 91 in NE and south of Route 30 in IA; (3) apply after October 31 north of Route 136 in IL; and (4) DO NOT make fall applications south of interstate 70.

When used as directed on soybeans, ZONE ELITE will provide control or suppression of the weeds in the following table. The level of control will vary per use rate, cropping season, environmental conditions, moisture levels and soil type. ZONE ELITE may not control all of the weeds listed under all crop conditions.



Common Name	Scientific Name
<b>Broadleaves and Sedges</b>	
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, spiny	<i>Amaranthus spinosus</i>
Amaranth, spleen	<i>Amaranthus dubius</i>
Copperleaf, hophornbeam	<i>Acalypha ostryifolia</i>
Florida pusley	<i>Richardia scabra</i>
Groundcherry, cutleaf	<i>Physalis angulata</i>
Hairy galinsoga	<i>Galinsoga ciliata</i>
Kochia (ALS and Triazine Resistant)	<i>Kochia scoparia</i>
Lambsquarters, common	<i>Chenopodium album</i>
Morningglory, entireleaf	<i>Ipomoea hederacea integriuscula</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea hederacea</i>
Morningglory, palmleaf	<i>Ipomoea wrightii</i>
Morningglory, pitted	<i>Ipomoea lacunosa</i>
Morningglory, purple	<i>Ipomoea turbinata</i>
Morningglory, red	<i>Ipomoea, coccinea L.</i>
Morningglory, scarlet	<i>Ipomoea hederifolia</i>
Morningglory, tall	<i>Ipomoea, purpurea</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, Eastern black	<i>Solanum americanum</i>
Nutsedge, purple (Suppression)	<i>Cyperus rotundus</i>
Nutsedge, yellow (Suppression)	<i>Cyperus esculentus</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, spiny	<i>Amaranthus spinosus</i>
Sedge, annual (Suppression)	<i>Cares, spp.</i>
Sida, prickly (Teaweed)	<i>Sida spinosa</i>
Smartweed, Pennsylvania (seedling)	<i>Polygonum pensylvanicum</i>
Star of Bethlehem	<i>Ornithogalum umbellatum</i>
Thistle, Russian	<i>Salsola tragus</i>
Tropical Spiderwort	<i>Commelina benghalensis</i>
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatos</i>
<b>Grasses</b>	
Barnyardgrass	<i>Echinochloa crus-galli</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Crabgrass, small	<i>Digitaria ischaemum</i>
Crabgrass, southern	<i>Digitaria ciliaris</i>
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Cupgrass, prairie	<i>Eriochloa contracta</i>
Cupgrass, southwestern	<i>Eriochloa acuminata</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, robust	<i>Setaria viridis var. robusta</i>
Foxtail, yellow	<i>Setaria glauca</i>
Foxtail, bristly	<i>Setaria verticillata</i>
Goosegrass	<i>Eleusine indica</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Panicum, Texas	<i>Panicum texanum</i>
Signalgrass, broadleaf	<i>Brachiaria platyphylla</i>
Witch grass	<i>Panicum capillare</i>



## Precautions

Make sure seed furrows are closed properly when applying at planting time or before seed germination in order avoid soybean seedling injury.

The use directions are based on the interactive effects of ZONE ELITE and the primary soil and environmental factors. These factors affect ZONE ELITE activity on various weed species and crop tolerance. The user must observe the instructions and recommendations presented under Application Guidelines and other sections of this label pertinent to the anticipated use.

When applying ZONE ELITE with other registered herbicides, observe all precautions, instructions, limitations, application methods, timings and rotational cropping guidelines of each product's label, including all references to potential carryover and crop injury warnings or restrictions.

**NOTE:** Not all cultivars have been tested with ZONE ELITE. Consult University or Extension specialists for additional information on specific local varieties and any other pertinent local information.

## Restrictions

- **DO NOT** incorporate deeper than 2 inches.
- **DO NOT** apply to frozen soils or existing snow cover to prevent ZONE ELITE runoff from rain or snowmelt that may occur following application.
- **DO NOT** graze or feed treated soybean forage, soybean hay or soybean straw to livestock for 30 days after treatment.
- If other soybean herbicides containing sulfentrazone are applied, you must ensure that the sulfentrazone active ingredient rate does not exceed 0.375 lb a.i./A per year.
- **DO NOT** apply more than 2.387 lbs a.i./A metolachlor per year.
- **DO NOT** apply ZONE ELITE to soils classified as sand containing less than 1% organic matter.
- **DO NOT** apply more than 38.7 fluid ounces (0.21 lb sulfentrazone/A, 1.90 lbs metolachlor/A) of ZONE ELITE per acre per 12 (twelve) month period. This period is considered to begin with the initial sulfentrazone application.
- **DO NOT** apply after seed germination.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal or cleaning of equipment.

### Pesticide Storage and Disposal

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 32°F degrees. 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.

### In Case of Spill

If spill occurs, avoid contact. Isolate area. Keep animals and unprotected persons out of area.

Confine spills by:

- Diking surrounding area and sweep up spillage.
- Dispose of in accordance with information given under Pesticide Disposal.
- Wash area with water.
- Absorb liquid with – sand, commercial clay or other absorbent.
- Sweep up and dispose of in an approved manner.

Place damaged container in a holding container and label as hazardous waste as per labeling regulations.

### Pesticide Disposal

Pesticide waste are toxic. It is a violation of Federal law to improperly dispose of excess pesticide, spray mixture or rinsate. If these wastes cannot be disposed of according to directions on this label, contact your State Pesticide or Environmental Control Agency or Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### **Container Handling**

**Nonrefillable container - DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: (For containers greater than 5 gallons) Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Stand the container 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. (For containers 5 gallons or less) 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 1/4 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. Triple rinse (or equivalent). 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 ELITE 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.

## **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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To the extent consistent with applicable law, in no event shall HELM Agro US, Inc. or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE**

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[Optional Alternate Warranty {to be used as an optional replacement to CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY section}]

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(RV121922)



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**[OPTIONAL LANGUAGE THAT MAY APPEAR ON THE LABEL]**

[See additional Precautionary Statements and Directions for Use inside [the] [book[let].]

[Peel back [label] [book] here

[Product of \_\_\_\_\_ ] [Note: if manufactured in a country other than the US, country name will appear here]

**[NOTES TO REVIEWER:]**

[Any text found in brackets “[ ”] is optional on container label.]

[HELM Agro US, Inc..may distribute or sell this product under labeling bearing any subset of the approved directions for use, provided that in limiting the uses listed on the label, no changes would be necessary in precautionary statements, use classification, or packaging of the product.]

**[LABEL HISTORY]**

FILE NAME	REVISION MARK	COMMENTS
074530-00081.20180402.EPA SAL	(RV040218)	EPA SAL
074530-00081.20200318.EPA Accepted Notification	(RV031820)	EPA Accepted Notification
074530-00075.20210518.EPA Amendment	(RV051821)	EPA Amendment – ID
074530-00081.20210902.Label Amendment BiOp and ID	(RV090221)	EPA Amendment – BiOp and ID
074530-00081.20221117.Label Amendment	(RV111722)	US EPA Review
074530-00081.20221209.Label Amendment	9rV120922)	US EPA Review
074530-00081.20221213.Label Amendment	9rV121322)	US EPA Review
074530-00081.20221219.Label Amendment	9rV121922)	US EPA Review

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