

## **SOYBEANS - LESS THAN 1.5% ORGANIC MATTER - COARSE**

### General Information

#### RESISTANCE MANAGEMENT

Authority Elite Herbicide provides two modes of action-Protoporphyrinogen Oxidase IX (PPO IX) and a long chain fatty-acid inhibitor. Some weeds are known to develop resistance to herbicides that have been used repeatedly. While the development of herbicide resistance is well understood, it is not easily predicted. Therefore herbicides should be used in conjunction with the resistance management strategies in the area. Consult the local or State agricultural advisors for details.

Always apply this product at the listed rates and in accordance with the use directions. Do not use less than listed label rates alone or in tank mixtures. Do not use reduced rates of the tank mix partner. For optimum performance, scout fields carefully and begin applications when weeds are smaller rather than larger. If resistance is suspected, contact the local or State agricultural advisors.

#### PRODUCT INFORMATION

Authority Elite Herbicide is a soil-applied herbicide for the control of susceptible broadleaf, grass and sedge weeds.

If adequate moisture (1/2" to 1") from rainfall or irrigation is not received within 7 to 10 days after the Authority Elite Herbicide treatment, a shallow incorporation (less than 2"), may be needed to obtain desired weed control.

When activating moisture is not received a planned post-emergence application of a labeled herbicide will be needed for optimum weed control. If an activating rainfall (1/2" to 1") is not received Authority Elite Herbicide will provide a reduced level of control of susceptible germinating weeds.

Observe all instructions, crop restrictions, mixing directions, application precautions, replanting directions, rotational crop guidelines and other label information of each product when tank mixing with Authority Elite Herbicide. Tank mixtures are permitted only in those states where the tank mix partner is registered.

Authority Elite Herbicide can be mixed with water, liquid fertilizer, or mixtures of water and liquid fertilizer and applied as a preplant or preemergence treatment to

labeled crops.

Under normal growing conditions, Authority Elite Herbicide exhibits excellent crop safety. Soil applications of Authority Elite Herbicide must be made before crop seed germination to prevent injury to the emerging crop seedlings. Authority Elite Herbicide applied after crop emergence will cause severe injury to the crop. Poor growing conditions, such as excessive soil moisture, cool temperatures, and soil compaction or the presence of various pathogens may impact seedling vigor. Under these conditions, the active ingredients in Authority Elite Herbicide can contribute to crop response. Refer to the specific directions of use for a particular crop/use pattern as set forth below for additional information.

#### Restrictions

Do not apply other products containing sulfentrazone or s-metolachlor to the crop unless specified in the individual crop section.

Do not use in nurseries, turf or landscape plantings.

#### Mechanism of Action

Following the application of Authority Elite Herbicide to soil, germinating seeds and seedlings take up Authority Elite Herbicide from the soil solution. The amount of Authority Elite Herbicide in soil solution available for weed uptake is determined primarily by soil type, soil organic matter and soil pH. Similar to other herbicides, Authority Elite Herbicide adsorbs to the clay and organic matter (OM) fractions of soils; effectively limiting the amount of active ingredient immediately available to control weeds.

#### Influence of soil type, organic matter and pH on Authority Elite Herbicide use rates and crop response

Coarse textured and high pH >7.2 soils (see Table 1) will exhibit increased weed control and crop response with Authority Elite Herbicide. It is important to know the soil type and soil pH levels of the field (or areas within a field) before application to determine the proper rate of Authority Elite Herbicide for the crop. 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.

It is important to note that irrigation with highly alkaline water (high pH) following a Authority Elite Herbicide soil application can also significantly increase the amount

of Authority Elite Herbicide available in the soil solution. Irrigation with water having a pH greater than 7.2 could result in adverse crop response. This response will ultimately depend on initial Authority Elite Herbicide application rate, timing, amount and pH of irrigation water and sensitivity of the crop and its growth stage when irrigated.

The risk of adverse crop response will lessen with the advance in growth stage among most crops.

## APPLICATION INFORMATION

### Ground and Aerial Application

Utilize a sprayer equipped with the appropriate nozzles providing optimum spray distribution and coverage at the appropriate operating pressures.

Utilize nozzles that produce minimal amounts of fine spray droplets to avoid spray drift. Apply a minimum of 10 gallons of finished spray solution per acre by ground or 5 gallons by air. The sprayer should be properly calibrated to deliver the appropriate volume of herbicide solution. Be aware that overlaps and slower ground speeds while starting, stopping or turning while spraying may result in excessive application and subsequent crop response.

### Restrictions

Do not apply when wind speed favors drift beyond the area intended for treatment. Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas. To prevent off-site movement due to runoff or wind erosion:

1. Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
2. Do not apply to impervious substrates, such as paved or highly compacted surfaces.
3. Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops, unless at least ½ inch of rainfall has occurred between application and the first irrigation.

### Chemigation Application

Apply Authority Elite Herbicide in 0.25 to 1 inch of water. Use the lower water volume on coarse textured soil and higher volume on fine textured soils. Applying >1" of irrigation water may result in reduced weed control by moving the product

below the weed germination zone in the soil. Apply immediately after planting unless specified differently in the individual crop section. Authority Elite Herbicide may be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, solid set, or hand move irrigation systems. Crop injury, lack of effectiveness or illegal residues on or in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts. 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.

Authority Elite Herbicide should be metered into the irrigation system continuously for the duration of the water application. Authority Elite Herbicide should be diluted 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 Authority Elite Herbicide 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. Authority Elite Herbicide 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 Authority Elite Herbicide 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

Do not apply this product through any other type of irrigation system. Do not connect any irrigation system (including greenhouse systems) used for pesticide application to a public water system.

## Application with Dry Fertilizers

Authority Elite Herbicide may be applied impregnated on dry fertilizers. When applied as directed with adequate soil coverage, Authority Elite Herbicide dry bulk fertilizer mixtures will provide satisfactory weed control. Follow all Authority Elite Herbicide label directions regarding product use rates per acre, registered crops, incorporation, special instructions and precautions. Apply Authority Elite Herbicide/dry fertilizer mixtures with ground equipment only. 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 Authority Elite Herbicide/dry fertilizer mixture.

## Impregnation Directions

To impregnate Authority Elite Herbicide 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 Authority Elite Herbicide in a clean container using clear water. Slowly add the Authority Elite Herbicide/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 Authority Elite Herbicide 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 Authority Elite Herbicide dry bulk fertilizer with an accurately calibrated dry fertilizer spreader. The Authority Elite Herbicide 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 Authority Elite Herbicide use rates could result in possible crop response.

A minimum of 200 pounds of dry bulk fertilizer impregnated with the listed amount of Authority Elite Herbicide must be applied per acre to achieve adequate soil coverage for satisfactory weed control. Refer to the appropriate crop section of the Authority Elite Herbicide label to determine the rate of Authority Elite Herbicide to be applied per acre. Use the following table to determine the amount of Authority

Elite Herbicide to be impregnated on a ton (2000 pounds) of dry bulk fertilizer based on the rate of fertilizer that will be applied per acre.

#### Restrictions

DO NOT impregnate Authority Elite Herbicide 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. Do not use Authority Elite Herbicide alone or in mixtures on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated.

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

#### Application with Liquid Fertilizer

Authority Elite Herbicide may be applied using liquid fertilizer or fertilizer and water mixtures as the carrier. Adequate soil coverage is essential to achieve acceptable levels of weed control.

Herbicide mixing, solution stability and/or compatibility problems may occur when liquid fertilizers are used as a carrier. Compatibility tests must be conducted prior to mixing to insure tank mixture compatibility and stability. The use of compatibility agents may be beneficial to achieve and maintain a homogenous solution.

#### MAXIMUM ALLOWABLE Authority Elite Herbicide

##### USE PER ACRE PER 12 MONTH CROPPING YEAR PERIOD

The total allowed usage includes all applications made to the field per twelve-month cropping year. This includes all pre plant and after plant pre emerge treatments.

**RESTRICTION:** Do not exceed maximum allowed use rate of sulfentrazone or s-metolachlor on each crop. Refer to the crop section of this label for specific product use directions.

#### CROP ROTATIONAL RESTRICTIONS

The following Table 3 shows the minimum interval in months from the time of the last Authority Elite Herbicide application until Authority Elite Herbicide treated soil can be replanted to the crops listed. When Authority Elite Herbicide is tank mixed with another herbicide, refer to the partner label for re-cropping instructions, following the directions that are most restrictive.

Some crops have rotational intervals greater than 12 months after a Authority Elite Herbicide application due to potential crop injury. A representative bioassay of the field shall be completed with the rotational crop to accurately determine the planned crop's sensitivity to Authority Elite Herbicide.

#### REPLANTING INSTRUCTIONS

If initial planting of labeled crops fails to produce a stand, only crops labeled for Authority Elite Herbicide or the tank mix partner; whichever is most restrictive, may be planted based on the amount of product initially applied. When replanting use minimum soil tillage to preserve the herbicide barrier and achieve maximum weed control.

#### RESTRICTIONS:

Do not retreat field with Authority Elite Herbicide or other herbicide containing sulfentrazone and s-metolachlor. Do not plant treated fields to any crop at intervals that are inconsistent with the Rotational Crop Guidelines on this label.

#### Limitations, Restrictions, and Exceptions

#### SOYBEANS

Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories

For soils with pH >7.2 use the lowest rate for that specific soil texture and organic matter.

#### Fall Applications

Authority Elite Herbicide 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. Fall applications of Authority Elite Herbicide must be made in weed control programs that include, as needed, spring application of preplant, preemergence or postemergence herbicides for the following crop season.



Applications to ridge till production systems must be made after the formation of ridges or bedded. Apply when the sustained soil temperature at a 4-inch depth is less than 55 degrees F and falling. If weeds are emerged at the time of application, utilize a tank mixture with a suitable burndown herbicide at labeled rates.

For Fall Application:

- Apply after September 30 in ND, SD, MN, WI and north of Route 30 in IA.
- Apply after October 15 north of Route 91 in NE and south of Route 30 in IA.
- Apply after October 31 north of Route 136 in IL.
- Do not make fall applications south of Interstate 70.

Preplant Surface – Spring Application:

Use 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.

Preplant Incorporated and Preemergence Applications:

Authority Elite Herbicide can be applied Preplant, Preplant Incorporated or Preemergence up to 3 days after planting but prior to emergence. For preplant incorporated applications, incorporation must be uniform and no deeper than 2 inches. Improper soil incorporation may result in erratic weed control and/or crop injury. Authority Elite Herbicide applied near or after crop emergence may cause severe injury to the crop.

Authority Elite Herbicide can be applied alone or in combination with other soybean herbicides, including those containing sulfentrazone, as long as the sulfentrazone active ingredient rate does not exceed 0.375 lb a.i./A per season. Do not apply more than 2.387 lb a.i./A s-metolachlor per season. Authority Elite Herbicide may be followed by labeled postemergence soybean herbicides for increased control of grass and broadleaf weeds. Always follow the most restrictive label when tank mixing. When using Authority Elite Herbicide in no-till or minimum till cropping systems, tank mix with an appropriate burndown herbicide for improved control of existing weeds. Apply on coarse soils no more than 2 weeks prior to planting.

## Precautions

- When applying Authority Elite Herbicide with other registered herbicides, refer to specific label information on precautions, restrictions, instructions, limitations, application methods and timings, and weeds controlled.

## Restrictions

- Do not apply more than 38.7 fl oz per acre of Authority Elite Herbicide per crop year.
- Do not graze or feed treated soybean forage, hay or straw to livestock for 30 days after treatment.
- Do not use on soils classified as sand, which have less than 1% organic matter.
- Do not apply to frozen soils or existing snow cover to prevent Authority Elite Herbicide runoff from rain or snowmelt that may occur following application.
- Do not apply after crop seed germination.

## Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Surface](#)

[Soil incorporation](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Surface](#)

[Soil incorporation](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Surface](#)

[Soil incorporation](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Surface](#)

[Soil incorporation](#)

## Rates

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Restricted Entry Interval

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.

Soils

[Coarse](#)

[Loamy Sand](#)

[Sandy Loam](#)

[Sand](#)

Timings

[Preemergence \(Crop\)](#)

[Preplant](#)

[Preplant Incorporated](#)

[At fall](#)