



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

89167-57

Date of Issuance:

9/18/17

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

AX SULF-SMET Herbicide

Name and Address of Registrant (include ZIP Code):

Mary Beth Endres
Axion Ag Products, LLC
4850 Hahns Peak Drive Suite 200
Loeland, CO 80538

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Kathryn Montague, Product Manager 23
Herbicide Branch, Registration Division (7505P)

Date:

9/18/17

2. You are required to comply with the data requirements described in the DCI identified below:
 - a. S-metolachlor GDCI- GDCI-108800-1508

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, “EPA Reg. No. 89167-57.”
4. Submit one copy of the final printed label for the record before you release the product for shipment.

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.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 6/12/2017

If you have any questions, please contact Autumn Metzger at 703-305-5314, or Metzger.autumn@epa.gov.

Enclosure

ACCEPTED
 09/18/2017
 Under the Federal Insecticide, Fungicide
 and Rodenticide Act as amended, for the
 pesticide registered under
 EPA Reg. No. 89167-57

GROUP 14 15 HERBICIDES

AX SULF-SMET Herbicide

For Use in Dry Shelled Beans and Peas, Horseradish, Soybeans and Sunflowers

ACTIVE INGREDIENTS:	% BY WT.
Sulfentrazone	7.55%
S-metolachlor	68.25%
OTHER INGREDIENTS:	<u>24.20%</u>
TOTAL:	100.00%

Contains a total of 7.0 lb/gal which include 0.7 lb ai sulfentrazone and 6.3 lb ai s-metolachlor per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION / PRECAUCIÓN
 Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
 (If you don't understand the label, find someone to explain it to you in detail).

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

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS.

EPA Reg. No.: 89167-LT

EPA Est. No.: _____

Net Contents: ____ Gal. (____ L)

Formulated For:
 AXION AG PRODUCTS, LLC
 4850 Hahns Peak Drive, Suite 200
 Loveland, CO 80538

090717

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by the poison control center or doctor. • Do not give anything to an unconscious person.
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 or your poison control center at 1-800-222-1222. For Chemical Spill, Leak, Fire or Exposure, call CHEMTREC 800-424-9300.</p>	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, 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.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Coveralls over short-sleeved, shirt and short pants; chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, or Viton ≥14 mils; chemical-resistant footwear plus socks; and chemical-resistant apron when cleaning equipment, mixing, or loading.

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

Engineering Controls

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), 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
<p>Users should:</p> <ul style="list-style-type: none"> • Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

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

Groundwater Advisory

The active ingredients in this product are known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Do not use on coarse soils classified as sand, which have less than 1% organic matter.

Surface Water Advisory

This product can contaminate surface water through spray drift. Under some conditions, this product may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

MIXING/LOADING INSTRUCTIONS

Care must be taken when using this product to prevent back-siphoning into wells, spills or improper disposal of excess pesticide, spray mixtures, or rinsates. Check-valves or antisiphoning devices must be used on all mixing and/or irrigation equipment.

AX SULF-SMET Herbicide may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. 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.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above 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.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store 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. 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.

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. These requirements 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-sleeve shirt and short pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride ≥ 14 mils, and chemical-resistant footwear plus socks.

RESISTANCE MANAGEMENT

This product is a combination of sulfentrazone (Group 14) and s-metolachlor (Group 15). Any weed population may contain plants naturally resistant to a Group 14 and/or Group 15 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

Weed Management

To minimize the occurrence of resistant biotypes, observe the following general weed management practices:

- Scout application site before and after herbicide applications.
- Start with a clean application site, using either a burndown herbicide application or tillage.
- 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.
- Add other herbicides (e.g. a selective and/or a residual herbicide) and cultural practices (e.g. tillage or crop rotation) where appropriate.
- Utilize the specified label rate for the most difficult to control weed in your field. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture directions that encourage application rates of this product below the label directions.
- 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.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Report any incidence of repeated non-performance of this product on a particular weed to local extension specialists, certified crop advisors, or your LIBERTY representative.

Management of Resistant Biotypes

Since the occurrence of resistant weeds cannot be determined until after product use and scientific confirmation, manufacturer is not responsible for any losses that may result from the failure of this product to control resistant weed biotypes.

The following good agronomic practices are recommended to reduce the spread of resistant biotypes:

- If a naturally occurring resistant biotype is present in your application site, this product should be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices (e.g. crop rotation or tillage) may also be used as appropriate.
- Scout treated application site after herbicide applications and control escaping weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

PRODUCT INFORMATION

AX SULF-SMET 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 AX SULF-SMET 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 AX SULF-SMET 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 AX SULF-SMET Herbicide. Tank mixtures are permitted only in those states where the tank mix partner is registered. AX SULF-SMET 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. 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.

Under normal growing conditions, AX SULF-SMET Herbicide exhibits excellent crop safety. Soil applications of AX SULF-SMET Herbicide must be made before crop seed germination to prevent injury to the emerging crop seedlings. AX SULF-SMET 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 AX SULF-SMET Herbicide can contribute to crop response. Refer to the specific directions of use for a particular crop or use pattern as set forth below for additional information.

Important Precautions

1. Ensure the seed furrow is closed and the seed covered on acres treated with this product.
2. Soybean stunting may occur if excessive rainfall occurs after application but before soybeans emerge. Injury is more prevalent under poor drainage or compacted conditions or when soil is saturated for long periods of time. Soybeans outgrow stunting once favorable growing conditions return.
3. Do not apply if there are visible signs of cracking due to soybean emergence, or serious crop injury may result, such as but not limited to stand loss.
4. Seedling disease, nematodes, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, or drought may weaken soybean seedlings and increase the possibility of crop injury.
5. When tank mixing, follow the most restrictive use rates and precautions of the mixing partners.

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 AX SULF-SMET Herbicide to soil, germinating seeds and seedlings take up AX SULF-SMET Herbicide from the soil solution. The amount of AX SULF-SMET Herbicide in soil solution available for weed uptake is determined primarily by soil type, soil organic matter and soil pH. Similar to other herbicides, AX SULF-SMET 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 AX SULF-SMET 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 AX SULF-SMET 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 AX SULF-SMET 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 AX SULF-SMET Herbicide soil application can also significantly increase the amount of AX SULF-SMET 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 AX SULF-SMET 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.

SOIL TEXTURE CLASSIFICATION CHART

Table 1

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	

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 1/2 inch of rainfall has occurred between application and the first irrigation.

Restrictions for Ground Application

- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- When tank mixed with a contact down herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre.
- For boom spraying, the maximum release height is 30 inches from the soil for ground applications.

Restrictions for Aerial Application

- Aerial application is allowed only when environmental conditions prohibit ground application. Aerial application will be allowed when the field is too wet to safely apply pesticides using ground equipment.
- When this product is allowed to be applied by air, applicator must use a minimum finished spray volume of 5 gallons per acre.
- The maximum release height must be 10 feet from the top of the crop canopy, unless a greater application height is required for pilot safety.

Chemigation Application

Apply AX SULF-SMET 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. AX SULF-SMET 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.

AX SULF-SMET Herbicide should be metered into the irrigation system continuously for the duration of the water application. AX SULF-SMET 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 AX SULF-SMET 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. AX SULF-SMET 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 an AX SULF-SMET 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

AX SULF-SMET Herbicide may be applied impregnated on dry fertilizers. When applied as directed with adequate soil coverage, AX SULF-SMET Herbicide dry bulk fertilizer mixtures will provide satisfactory weed control.

Follow all AX SULF-SMET Herbicide label directions regarding product use rates per acre, registered crops, incorporation, special instructions and precautions. Apply AX SULF-SMET 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 AX SULF-SMET Herbicide/dry fertilizer mixture.

Impregnation Directions

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

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

Refer to the appropriate crop section of the AX SULF-SMET Herbicide label to determine the rate of AX SULF-SMET Herbicide to be applied per acre. Use the following table to determine the amount of AX SULF-SMET 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.

[For those rates not listed in the table below, RATE CHART FOR IMPREGNATION OF DRY BULK FERTILIZERS WITH LIBERTY SULFENT/R-MET, calculate the amount of LIBERTY SULFENT/R-MET to be impregnated on a ton of dry bulk fertilizer using the following formula:]

RATE CHART FOR IMPREGNATION OF DRY BULK FERTILIZERS WITH AX SULF-SMET HERBICIDE

Table 2

Dry fertilizer rate per acre lb/acre	Fluid Ounces AX SULF-SMET per ton of fertilizer		
	AX SULF-SMET Use Rate Per 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

Precaution

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

Restrictions

- Do not impregnate AX SULF-SMET 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 AX SULF-SMET Herbicide alone or in mixtures on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated.

Application with Liquid Fertilizer

AX SULF-SMET 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.

Mixing Instructions for Liquid Fertilizer Applications

Fill the clean spray tank to one half of the total volume with the fertilizer solution. Start the spray tank agitation system. Pre-slurry AX SULF-SMET Herbicide with water prior to adding to the spray tank. Carefully rinse the empty container, adding the rinsate to the spray tank.

Complete filling the spray tank to the desired level. Sufficient and continuous spray tank agitation is required at all times to maintain a homogenous spray solution. The spray system must be designed such that there is sufficient flow capacity to uniformly apply the spray mixture and maintain adequate tank agitation. Some systems may require separate pumps to simultaneously supply the spray system and the spray tank agitation system. Ensure the AX SULF-SMET Herbicide slurry is thoroughly mixed before application.

For tank mixtures with other herbicide(s), a compatibility test must be conducted to insure product compatibility before mixing. Read and follow all the directions, precautions and restrictions of the tank mixture products prior to mixing.

Apply the AX SULF-SMET Herbicide spray mixture immediately after mixing. It is not recommended to store the sprayer overnight or for any extended period of time with the AX SULF-SMET Herbicide spray mixture remaining in the tank. Thoroughly re-agitate spray mixture if product is left sitting in the tank for extended period of time.

If AX SULF-SMET Herbicide is mixed and loaded in nurse tanks, thorough agitation of spray solution is required prior to off-loading and application.

Follow all AX SULF-SMET Herbicide 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 AX SULF-SMET Herbicide and fertilizer mixture.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations:

- The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.
- When states have more stringent regulations, they must be observed.

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage for pesticide performance. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions. (See information on Wind, Temperature and Humidity, and Temperature Inversions in subsequent sections).

Controlling Droplet Size

Volume - Nozzles with higher rated flow generally produce larger droplets.

Pressure - When higher flow rates are needed, use higher flow rate nozzles rather than increasing spray pressure. Avoid spray pressures >40 psi unless specified by the manufacturer of drift reducing spray tips and nozzles. Do not exceed the nozzle manufacturer's recommended pressures. Lower pressure produces larger droplets in many types of nozzles.

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

Nozzle Type - Use nozzles to provide uniform coverage that are designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles for both ground and aerial applications.

Spray Nozzles and Droplet Size - Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE Standard S-572. Select coarse to very coarse droplet size when product is used as a preemergent/preplant application. Select medium to very coarse droplet size when product is used postemergence with a contact burndown herbicide. Applicators may spray only when wind speed is between 3 and 10 mph. Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE standard).

Boom Length - For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height - Aerial applications should not be made at a height greater than 10 feet above the top of the target plant canopy unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment- When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

Wind - Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence

wind patterns. Every applicator should be familiar with local wind patterns and how they may potentially affect spray drift.

Temperature and Humidity- When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions- Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the low speed and variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common during conditions of limited cloud cover and little to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas - The pesticide should only be applied when the wind is blowing away from sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops). To assure that spray will not adversely affect adjacent sensitive non-target plants, apply this product by aircraft at a minimum upwind distance of 400 ft. from sensitive plants. Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

Off-Target Movement of AX SULF-SMET Herbicide

Drift of dilute spray mixtures containing AX SULF-SMET Herbicide must be prevented. Observation of the environmental conditions, correct application equipment design, calibration and application practices will reduce the risk of off-target spray drift. AX SULF-SMET Herbicide can cause damage by drift on to sensitive crops and other plants. This symptomology may manifest initially as discreet, localized spots where contacted by AX SULF-SMET Herbicide drift mixtures. Depending on sensitivity of the plants, the concentration of the spray solution and droplets size these spots or lesions may or may not coalesce. These effects will usually not have lasting effects on plant growth, but can reduce the value of affected fruit or foliage where grade or quality is associated with appearance. In drift instances with sensitive crops, defoliation of affected foliage could result.

MAXIMUM ALLOWABLE AX SULF-SMET 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 preemerge treatments.

Table 3

Crop	AX SULF-SMET Herbicide fl. oz./A	Total Lb ai/A	Lb ai sulfentrazone/A	Lb ai s-metolachlor/A
Dry Beans and Peas	38.7	2.12	0.21	1.90
Horseradish	25.0	1.36	0.13	1.23
Soybeans	38.7	2.12	0.21	1.90
Sunflowers	38.7	2.12	0.21	1.90

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 4 shows the minimum interval in months from the time of the last AX SULF-SMET Herbicide application until AX SULF-SMET Herbicide treated soil can be replanted to the crops listed. When

AX SULF-SMET 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 AX SULF-SMET 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 AX SULF-SMET Herbicide.

Restriction

- Do not rotate to food or feed crops other than those listed on the label.

CROP ROTATIONAL RESTRICTIONS*

Table 4

Crop	Interval (Months)
Alfalfa*	12
Barley	4 1/2
Cabbage (transplant only)	2
Cereal Grains (Oats, Pearl Millet, Proso Millet, Teosinte, Wild Rice)	12
Buckwheat	12
Corn, Field	10, 4***
Corn, Pop	10†
Corn, Sweet	10†
Cotton	18 or 12**
Cowpea (succulent)	8
Dry Shell Peas and Beans	Anytime
Horseradish	Anytime
Limas Beans-Tennessee Only	Anytime
Peanuts	Anytime
Potatoes	Anytime
Rice	10
Rye	4 1/2
Sorghum	10
Soybeans	Anytime
Succulent peas	8
Sugar Beets	36
Sunflowers	Anytime
Triticale	4 1/2
Tobacco	10
Tomato	Anytime
Wheat	4 1/2

* To avoid injury to rotational alfalfa, (1) Do not apply more than 1.9 lb ai s-metolachlor per acre in the previous crop, and (2) Do not make lay-by or other postemergent applications of products containing s-metolachlor in the previous crop.

** Cotton may be planted after 12 months where this prouduct was applied at rates 36 fl oz/acre or less and meets the following conditions:

- Medium and fine soils
- Soil pH <7.2
- Rainfall or irrigation must exceed 15" after application of AX SULF-SMET Herbicide to rotate to cotton

***Field corn may be planted after 4 months where this product was applied at 28 fl oz/acre or less.

† Popcorn and sweet corn may be planted after 10 months where F7583-3 Herbicide was applied at 28 oz/acre or less.

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 crops fails to produce a stand, only crops labeled for AX SULF-SMET 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 AX SULF-SMET 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.

BAND TREATMENT APPLICATIONS

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

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

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

MIXING AND LOADING INSTRUCTIONS

AX SULF-SMET Herbicide may be applied alone, or in tank mixtures with other labeled herbicides for the control of additional weed species. Mixtures with some other pesticides have not been tested. Conduct appropriate compatibility tests prior to tank mixing with other pesticides. Follow all precautions and restrictions on the tank mix partner label.

It is important that spray equipment is clean and free of existing pesticide residues before preparing AX SULF-SMET Herbicide spray mixtures. For all tanks containing spray solution follow the spray tank clean out procedures specified on the label of the product or products previously applied.

For best results fill spray tank with one half of the volume of clean water needed for the field to be treated. Start agitation system. Slowly add the AX SULF-SMET Herbicide to the spray tank. Carefully rinse the empty container, adding the rinsate to the spray tank. Complete filling the spray tank to the desired level. Continuous spray tank agitation is required at all times to maintain a uniform spray solution. Make sure AX SULF-SMET Herbicide is thoroughly mixed before application.

Use the AX SULF-SMET Herbicide spray mixture immediately after mixing. Avoid storing the sprayer overnight or for any extended period of time with the AX SULF-SMET Herbicide spray mixture remaining in the tank.

If AX SULF-SMET Herbicide is tank mixed with other labeled herbicides, all additional directions, restrictions and precautions for the tank mixture herbicides must be followed. 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.

SPRAYER EQUIPMENT CLEAN-OUT

As soon as possible after spraying AX SULF-SMET Herbicide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned to avoid potential crop affects using the following procedure. Residues left in mixing equipment, spray tanks, hoses, spray booms and nozzles can cause crop effects if they are not properly cleaned. In addition, users must take appropriate steps to ensure proper

equipment clean-out for any other products mixed with AX SULF-SMET Herbicide as required on the other product labels. More complete cleaning can be achieved if the spray system is cleaned immediately following the application.

1. Drain sprayer tank, hoses, spray boom and spray nozzles. Use a high-pressure detergent wash to remove physical sediment and residues from the inside of the sprayer tank and thoroughly rinse. Then, thoroughly flush sprayer hoses, spray boom and spray nozzles with a clean water rinse. Remove and clean spray tips and all filters and screens (tank, spray hose and spray tips) separately in the ammonia solution of Step 2.
2. Next, prepare a sprayer cleaning solution by adding three gallons of ammonia (containing at least 3% active) per 100 gallons of clean water. Prepare sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom and spray nozzles.
3. Convenient and thorough cleaning of the sprayer can be achieved if the ammonia solution or fresh water is left in the spray tank, hoses, spray booms and spray nozzles overnight or during storage.
4. Before using the sprayer, completely drain the sprayer system. Rinse the tank with clean water and flush through the hoses, spray boom, and spray nozzles with clean water. Remove and clean spray tips and all filters and screens (tank, spray hose and spray tip) separately in an ammonia solution.
5. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State, and local regulations and guidelines.

If the sprayer has been stored or idle, purge the spray boom and nozzles with clean water before beginning any application.

Should small quantities of AX SULF-SMET Herbicide remain in inadequately cleaned mixing, loading and/or spray equipment, they may be released during subsequent applications potentially causing effects to certain crops and other vegetation. AXION accepts no liability for any effects due to inadequately cleaned equipment.

Restrictions

- Do not apply sprayer cleaning solutions or rinsate to sensitive crops.
- Do not store the sprayer overnight or for any extended period of time with AX SULF-SMET Herbicide solution remaining in the tank, spray lines, spray boom plumbing, spray nozzles or strainers.
- Do not drain or flush equipment on or near desirable trees or plants.
- Do not contaminate any body of water including irrigation water that may be used on other crops.

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.

Table 5

AX SULF-SMET Herbicide Use Rate (Dry Shelled Beans and Peas)			
Fall or Spring Early Preplant, Preemergence and Preplant Incorporated Applications			
Broadcast Rate	Fluid Ounces of AX SULF-SMET Herbicide per acre		
% Organic Matter	Soil Texture		
	Coarse	Medium	Fine
< 1.5	13 – 17	17 – 26	17 – 26
1.5 – 3.0	17 – 26	21 – 34	26 – 34
>3	21 – 34	26 – 38.7	30 – 38.7
Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories. For soil with pH >7.2 use the lowest rate for that specific soil texture and organic matter.			

Weeds Controlled

The following is a general list of weeds for which AX SULF-SMET Herbicide has shown control or suppression. The level of control will vary per use rate, cropping system, environmental conditions, moisture levels and soil type. AX SULF-SMET Herbicide may not control all of the weeds listed under all crop conditions. For crops where lower use rates are needed for crop tolerance refer to their specific weed list.

Amaranth, Palmer	Morningglory, tall
Barnyardgrass	Nightshade, black
Fall Panicum	Nightshade, Eastern black
Foxtail, giant	Pigweed, red root
Foxtail, green	Pigweed, smooth
Foxtail, yellow	Thistle, Russian
Kochia (ALS and Triazine Resistant)	Waterhemp, common
Lambsquarters, common	Waterhemp, tall
Morningglory, ivyleaf	Witch grass

Note: Partial control will occur under dry conditions, under heavy pest pressure or at low use rates under 26 fl oz. Under these conditions plan to use a labeled post-emergence herbicide for improved control.

FALL APPLICATION

AX SULF-SMET Herbicide may be applied in the fall following crop harvest or in existing fallow fields to control or suppress weeds the following season. AX SULF-SMET Herbicide should be applied to the harvested crop stubble or soil surface without incorporation. Moisture in the form of rain or snow will move and activate the product. Do not mechanically incorporate in the fall or spring after application because this activity may destroy the herbicide barrier and weed escapes can occur. Do not apply to frozen soils to prevent AX SULF-SMET Herbicide runoff from rain or snow that may occur following application. AX SULF-SMET Herbicide may be tank mixed with other labeled herbicides to control emerged weeds. 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 1.0") is not received AX SULF-SMET Herbicide will provide a reduced and inconsistent level of control of susceptible germinating weeds. If dry conditions persist, weed control may be reduced. Fall application of AX SULF-SMET Herbicide may require a follow up grass herbicide treatment as grass escapes may occur.

AX SULF-SMET Herbicide should be applied 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

- Apply after September 30 in ND, SD, MN and 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

AX SULF-SMET Herbicide can be tank mixed with other labeled herbicides. Observe all restrictions, 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.

Early Preplant and Preemergence (Spring Applications)

AX SULF-SMET Herbicide can be applied early preplant or preemergence up to 3 days after planting if seedlings have not broken the soil surface and if the seed furrow is completely closed and completely covered with soil. Adequate moisture (1/2" to 1") is required for herbicide activation from rainfall. If adequate moisture is not received within 7 to 10 days after the AX SULF-SMET Herbicide treatment, a shallow incorporation (less than 2 inches) 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 1.0") is not received AX SULF-SMET Herbicide will provide a reduced and inconsistent level of control of susceptible germinating weeds. If dry conditions persist, weed control may be reduced.

If weeds are emerged at the time of AX SULF-SMET Herbicide application, use a burndown herbicide such as carfentrazone-ethyl, glyphosate or paraquat at the full-labeled rate in combination with AX SULF-SMET Herbicide as needed.

Preplant Incorporated (PPI)

AX SULF-SMET Herbicide can be applied as a Preplant Incorporated treatment in the spring prior to planting in reduced and conventional tillage dry beans and peas. AX SULF-SMET Herbicide should be shallowly incorporated in the soil no deeper than 2 inches. Incorporating AX SULF-SMET Herbicide deeper than 2 inches can result in inconsistent weed control. Minimize furrow and ridge formation in the tillage operations. Use the appropriate rate from Table 5 above for the soil texture, soil organic matter, and soil pH level.

Precautions

- Under extended periods of dry weather, adequate weed control may not be achieved. Adequate moisture (1/2" to 1") is required for herbicide activation from rainfall. If adequate moisture is not received within 7 to 10 days after the AX SULF-SMET Herbicide treatment, a shallow incorporation 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 AX SULF-SMET Herbicide will provide a reduced and inconsistent level of control of susceptible germinating If dry conditions persist, weed control may be reduced.
- Adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.2 or higher, or on highly eroded soils, hilltops, or in areas of calcareous outcroppings. AX SULF-SMET Herbicide use rates should be reduced to 13 fl oz in those areas or not applied in these areas at all. Inadequate seed furrow closure or shallow planting (less than 1.5 inch) may result in undesirable crop response and this product should not be applied. Poor growing conditions such as excessive moisture, low temperatures, soil compaction and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of AX SULF-SMET Herbicide and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, AX SULF-SMET Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weeds Controlled, Crop Liability Disclaimer and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with AX SULF-SMET Herbicide. Consult seed companies and university or extension weed management personnel for additional information on specific local varieties or cultivars and any other pertinent information on AX SULF-SMET Herbicide under specific local conditions.

Restrictions

- Do not apply more than 38.7 fl oz per acre of this product per crop year.
- Do not apply additional sulfentrazone containing products to dry field beans and peas if AX SULF-SMET Herbicide has been previously applied within the same twelve-month period.
- Do not apply after crop emerges, or if the seedling is close to the soil surface.
- Do not incorporate to depths greater than 2 inches.
- Do not apply to frozen soils or to existing snow cover to prevent AX SULF-SMET Herbicide runoff from rain or snow melt that may occur following application.
- Do not use on soils classified as sand, which have less than 1% organic matter.
- Do not use for forage within 60 days after an application of this product.
- Do not cut for hay within 120 days after an application of this product.

HORSERADISH

Apply a single application of AX SULF-SMET Herbicide at a broadcast rate of 19-25 fluid ounces per acre to the soil surface after planting but before weed or crop emergence. Use listed lower rates on soils relatively coarse- textured and listed higher rates on fine textured soils.

Apply in at least 10 gallons per acre finished spray solution by ground.

Following the application of AX SULF-SMET Herbicide to soil, germinating seeds and seedlings take up this product from the soil solution. The amount of this product in soil solution available for weed uptake is determined primarily by soil type, soil organic matter and soil pH. Similar to other herbicides, this product adsorbs to the clay and organic matter (OM) fractions of soils; effectively limiting the amount of active ingredient immediately available to control weeds. Adequate moisture is required for herbicide activation (1/2" to 1" of rainfall or irrigation). If an activating rainfall (1/2" to 1") is not received AX SULF-SMET Herbicide will provide a reduced level of control of susceptible germinating weeds.

Weeds Controlled:

The following is a general list of weeds for which AX SULF-SMET Herbicide has shown control or suppression. The level of control will vary per use rate, cropping system, environmental conditions, moisture levels and soil type. AX SULF-SMET Herbicide may not control all of the weeds listed under all crop conditions. For crops where lower use rates are needed for crop tolerance refer to their specific weed list.

- | | |
|---------------------------|------------------------|
| Barnyardgrass | Nightshade, black |
| Fall panicum | Nightshade, eastern |
| Foxtail, giant | Black palmer amaranth |
| Foxtail, green | Pennsylvania smartweed |
| Foxtail, yellow | Pigweed, red root |
| Morningglory, entireleaf | Pigweed, smooth |
| Morningglory, ivyleaf | Waterhemp, common |
| Morningglory, pitted | Waterhemp, tall |
| Morningglory, smallflower | |

Restrictions

- Do not exceed 25 fl oz/ per acre per cropping season.
- Do not use on soils classified as sand, which have less than 1% organic matter.
- Do not apply directly on the crop after the crop emerges or if the seedling sprouts are close to the soil surface.
- Harvest horseradish at normal timing.

SOYBEANS

Table 6

AX SULF-SMET Herbicide Use Rate (Soybeans)			
Fall, Spring Early Preplant, Preemergence and Preplant Incorporated Applications			
Broadcast Rate	Fluid Ounces of AX SULF-SMET Herbicide per acre		
	Soil Texture		
% Organic Matter	Coarse	Medium	Fine
< 1.5	19 – 25	25 – 32	25 – 32
1.5 – 3.0	25	25 – 32	25 – 32
>3	25	25 – 32	32 – 38.7
Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories. For soil with pH >7.2 use the lowest rate for that specific soil texture and organic matter.			

Weeds Controlled

The following is a general list of weeds for which AX SULF-SMET Herbicide has shown control or suppression. The level of control will vary per use rate, cropping system, environmental conditions, moisture levels and soil type. AX SULF-SMET Herbicide may not control all of the weeds listed under all crop conditions.

Common Name	Scientific Name
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, spiny	<i>Amaranthus, spinosus</i>
Amaranth, spleen	<i>Amaranthus dubius</i>

Barnyardgrass	<i>Echinochloa crus-galli (L.) Beauv.</i>
Broadleaf signalgrass	<i>Urochloa platyphylla (Nash) R. D. Webster</i>
Copperleaf, hophornbeam	<i>Acalypha ostryifolia Riddell</i>
Crabgrass spp.	<i>Digitaria spp.</i>
Crowfootgrass	<i>Dactyloctenium aegyptium (L.) Willd.</i>
Cupgrass, Prairie	<i>Eriochloa contracta Hitchc.</i>
Cupgrass, Southwestern	<i>Eriochloa acuminata (J. Presl) Kunth</i>
Fall Panicum	<i>Panicum dichotomiflorum Michx.</i>
Florida Pusley	<i>Richardia scabra L.</i>
Foxtail, Giant	<i>Setaria faberi Herrm.</i>
Foxtail, Green	<i>Setaria viridis (L.) Beauv.</i>
Foxtail, Robust	<i>Setaria viridis var. robusta</i>
Foxtail, Yellow	<i>Setaria glauca (L.) Beauv.</i>
Foxtail, bristly	<i>Setaria verticillata (L.) Beauv.</i>
Goosegrass	<i>Eleusine indica (L.) Gaertn.</i>
Groundcherry, cutleaf	<i>Physalis angulata L.</i>
Hairy galinsoga	<i>Galinsoga ciliata (Raf.) Blake</i>
Kochia (ALS and Triazine Resistant)	<i>Kochia scoparia (L.) Schrad.</i>
Lambsquarters, common	<i>Chenopodium album</i>
Morningglory, entireleaf	<i>Ipomea hederacea integrusc</i>
Morningglory, ivyleaf	<i>Ipomea hederacea hederacea</i>
Morningglory, Palmleaf	<i>Ipomea Wrightii</i>
Morningglory, pitted	<i>Ipomoea lacunosa L.</i>
Morningglory, purple	<i>Ipomea turbinate</i>
Morningglory, red	<i>Ipomea coccinea</i>
Morningglory, scarlet	<i>Ipomea hederifolia</i>
Morningglory, small flower	<i>Jacquemontia tamnifolia (L.) Griseb.</i>
Morningglory, tall	<i>Ipomea, purpurea</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, Eastern black	<i>Solanum americanum</i>
Pigweed, red root	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, spiny	<i>Amaranthus</i>
Sida, prickly	<i>Sida spinosa L.</i>
Smartweed, Pennsylvania (seedling)	<i>Polygonum pensylvanicum L.</i>
Star of Bethlehem	<i>Ornithogalum umbellatum L.</i>
Texas panicum	<i>Panicum texanum L</i>
Thistle, Russian	<i>Salsola tragus L.</i>
Tropical Spiderwort	<i>Commelina benghalensis L.</i>
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatos</i>
Witch grass	<i>Panicum capillare L.</i>
SEDGES (suppression only)	
Nutsedge, purple	<i>Cyperus rotundus</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Sedge, annual	<i>Cares spp.</i>

Fall Applications

AX SULF-SMET 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 AX SULF-SMET 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°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.

Early Preplant, Preplant Incorporated and Preemergence Applications (Spring Applications):

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, WY. AX SULF-SMET Herbicide can be applied Early 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. AX SULF-SMET Herbicide applied near or after crop emergence may cause severe injury to the crop. AX SULF-SMET 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. AX SULF-SMET 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 AX SULF-SMET 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 AX SULF-SMET 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 this product per crop year.
- Do not apply within 90 days of harvest
- Do not graze or feed treated forage or hay from soybeans to livestock following a post-emergence application.
- 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 AX SULF-SMET Herbicide runoff from rain or snowmelt that may occur following application.
- Do not apply after crop seed germination.

SUNFLOWERS

Table 7

AX SULF-SMET Herbicide Use Rate (Sunflowers)			
Preemergence and Preplant Incorporated Applications			
Broadcast Rate	Fluid Ounces of AX SULF-SMET Herbicide per acre		
% Organic Matter	Soil Texture		
	Coarse	Medium	Fine
< 1.5	17 – 21	25.7	21 – 30
1.5 – 3.0	17 – 25.7	32.4	25.7 – 32.4
>3	25.7	25.7 – 32.4	32.4 – 38.7
Refer to the previous information on soil types under the COARSE, MEDIUM, and FINE categories. For soil with pH >7.2 use the lowest rate for that specific soil texture and organic matter.			

Weeds Controlled

When applied according to directions in sunflower, AX SULF-SMET Herbicide will provide control of:

Amaranth, Palmer	Morningglory, tall
Barnyardgrass	Nightshade, black
Fall Panicum	Nightshade, Eastern black
Foxtail, giant	Pigweed, red root
Foxtail, green	Pigweed, smooth
Foxtail, yellow	Thistle, Russian
Kochia (ALS and Triazine Resistant)	Waterhemp, common
Lambsquarters, common	Waterhemp, tall
Morningglory, ivyleaf	Witch grass

Note: Partial control will occur under dry conditions, under heavy pest pressure or at low use rates under 26 fl oz. Under these conditions plan to use a labeled post-emergence herbicide for improved control.

Preemergence (Spring Applications)

AX SULF-SMET Herbicide can be applied preemergence up to 3 days after planting as a soil surface application if seedlings have not broken the soil surface and if the seed furrow is completely closed and completely covered with soil. Adequate moisture (1/2" to 1") is required for herbicide activation from rainfall or irrigation. If adequate moisture is not received within 7 to 10 days after the AX SULF-SMET Herbicide treatment, a shallow incorporation may (less than 2 inches) 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 1.0") is not received AX SULF-SMET Herbicide will provide a reduced and inconsistent level of control of susceptible germinating weeds. If dry conditions persist, weed control may be reduced. If applying on coarse soils with less than 1.5% organic matter, wait a minimum of 7 days after application before planting.

If weeds are emerged at the time of AX SULF-SMET Herbicide application, use a labeled burndown herbicide such as carfentrazone-ethyl, glyphosate or paraquat at the full-labeled rate in combination with AX SULF-SMET Herbicide as needed.

Spring Preplant Incorporated (PPI)

When planting into soil treated preplant with AX SULF-SMET Herbicide minimize soil disturbance to maintain the herbicide barrier on the soil surface to achieve maximum weed control. AX SULF-SMET Herbicide can be applied as a Preplant Incorporated treatment in the spring up to 2 weeks prior to planting in reduced and conventional tillage sunflowers. AX SULF-SMET Herbicide should be shallowly incorporated in the soil no deeper than 2 inches. Incorporating AX SULF-SMET Herbicide deeper than 2 inches can result in inconsistent weed control. Use the appropriate rate from Table 7 above for the soil texture, soil organic matter, and soil pH level.

Precautions

- Plant sunflowers 1.5" deep and completely cover with soil.
- Adverse crop response may occur on coarse textured soils with low organic matter (less than 1.5%) and pH of 7.2 or higher, or on highly eroded soils, hilltops, or in areas of calcareous outcroppings. AX SULF-SMET Herbicide use rates should be reduced to 14 fl oz in those areas or not applied in these areas at all. Inadequate seed furrow closure or shallow planting (less than 1.5 inch) may result in undesirable crop response and this product should not be applied. Poor growing conditions such as excessive moisture, low temperatures, soil compaction and diseases may also cause undesirable crop response.

These Crop Specific Use directions are based upon the interactive effects of AX SULF-SMET Herbicide and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, AX SULF-SMET Herbicide Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have

been evaluated under treatment with AX SULF-SMET Herbicide. Consult seed companies and university or extension weed management personnel for additional information on specific local varieties or cultivars and any other pertinent information on AX SULF-SMET Herbicide under specific local conditions.

Restrictions

- Do not apply more than 38.7 fl oz per acre of this product per crop year
- Do not apply herbicides containing sulfentrazone to sunflowers if AX SULF-SMET Herbicide has been previously applied within the same twelve-month period.
- Do not apply to frozen soils or existing snow cover to prevent AX SULF-SMET Herbicide runoff from rain or snowmelt that may occur following application.
- Do not allow livestock to graze or feed in treated area.
- Do not apply after crop seed germination.
- Do not use on soils classified as sand, which have less than 1% organic matter.
- Do not incorporate greater than 2 inches deep.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage: Store product in original container only, away from other pesticides, fertilizer, food or feed. Do not use or store around the home. Do not store below 32°F. Product that has been frozen should be thawed and recirculated prior to its use. Store in a cool, dry place and avoid excess heat.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confirm spills. In the event of a major spill, fire, or other emergency, call CHEMTREC, **1-800-424-9300**, day or night. **To confine spill:** If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

Pesticide Disposal

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Handling

NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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. Offer for recycling, if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. 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. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

REFILLABLE CONTAINER: Refill this container with pesticide 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 from this container into application equipment or mix tank. Fill the container about 10 percent 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. After triple rinsing is complete, and the container is not suitable for

refilling or reconditioning, offer the container for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

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.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of AXION AG PRODUCTS, LLC or Seller, TO THE EXTENT CONSISTENT WITH APPLICABLE LAW All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold AXION AG PRODUCTS, LLC and Seller harmless for any claims relating to such factors.

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