



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 25, 2023

Mary Beth Endres  
Regulatory Manager  
Axion Ag Products, LLC.  
1880 Fall River Drive, Suite 100  
Loveland, CO 80538

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from the Interim Decision for S-Metolachlor and the National Marine Fisheries Services' (NMFS) Biological Opinion on the Effects of S-Metolachlor on Pacific Salmonids  
*Product Name:* AX S-Met Herbicide  
*EPA Registration Number:* 89167-40  
*Application Dates:* 04/26/2021 and 08/17/2021  
*Decision Numbers:* 589607 and 589608

Dear Mary Beth Endres:

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

This letter also addresses the label mitigation resulting from the NMFS' Biological Opinion on the effects of S-Metolachlor on Pacific salmonids. The Agency has concluded that your submission is also acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Samantha Thomas at [thomas.samantha@epa.gov](mailto:thomas.samantha@epa.gov).

Sincerely,



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

Enclosure

Updated label: EPA Reg No. 89167-40

**NOTE:** Not for sale, use or distribution in Nassau County or Suffolk County, New York.

# AX S-MET Herbicide

For weed control in corn; cotton; grasses grown for seed; horseradish; peanuts; beans, peas and lentils; potatoes; pumpkin; rhubarb; safflowers; sugar beets; sunflowers; sweet, grain or forage sorghum; soybean; soybean, immature seed; and tomatoes

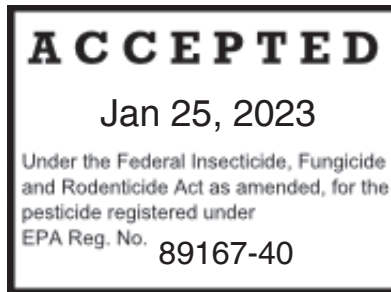
ACTIVE INGREDIENT:	% BY WT.
S-metolachlor (CAS No. 87392-12-9) .....	83.7%
<b>OTHER INGREDIENTS:</b> .....	<u>16.3%</u>
<b>TOTAL:</b> .....	100.0%

AX S-MET contains 7.62 lbs. of active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

See additional precautionary statements and directions for use inside booklet.



EPA Reg. No. 89167-40

EPA Est.: \_\_\_\_\_

**Product of Switzerland - Formulated in the USA**

**Net Contents: \_\_\_\_\_ Gallons ( \_\_\_\_\_ L)**

**Manufactured for:**  
 AXION AG PRODUCTS, LLC  
 1880 Fall River Drive, Suite 100  
 Loveland, CO 80538

120722

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

#### CAUTION

Causes moderate eye irritation. Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin, or clothing. May cause skin sensitization reactions in certain individuals.

FIRST AID	
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• <b>DO NOT</b> give any liquid to the person.</li><li>• <b>DO NOT</b> induce vomiting unless told to do so by the poison control center or doctor.</li><li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li></ul>
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment.</b>	
<b>HOTLINE NUMBER</b> For 24 Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call <b>1-800-888-8372</b>	

### Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as butyl rubber  $\geq$  14 mils, or natural rubber  $\geq$  14 mils, or neoprene rubber  $\geq$  14 mils, or nitrile rubber  $\geq$  14 mils.
- When this product is mixed with another oil-containing product, wear chemical resistant gloves made of neoprene rubber  $\geq$  14 mils or nitrile rubber  $\geq$  14 mils.
- Shoes plus socks

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 Control Statements**

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.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### **User Safety Recommendations**

#### **Users should:**

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

### **Environmental Hazards**

**DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment wash water or rinsate.

### **Groundwater Advisory**

S-metolachlor is known to leach through soil into ground water under certain conditions as a result of label use. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

### **Surface Water Advisory**

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

### **Non-Target Organism Advisory**

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

### **Reporting Ecological Incidents:**

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 844-425-8488.

### **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. This product may not be mixed or loaded within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be mixed/loaded or used within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. 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 rain water 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-specified minimum containment capacities **DO NOT** apply to vehicles when delivering pesticide shipments to the mixing/loading site.

### **DIRECTIONS FOR USE**

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

AX S-MET must be used only as described on this label or in separately published EPA accepted supplemental labeling for this product.

**DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### **Endangered Species Protection Requirements:**

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

### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry

interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.** Exception: If the product is soil-injected or 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
- Chemical-resistant gloves, such as butyl rubber  $\geq$  14 mils, or natural rubber  $\geq$  14 mils, or neoprene rubber  $\geq$  14 mils, or nitrile rubber  $\geq$  14 mils.
- When this product is mixed with another oil-containing product, wear chemical resistant gloves made of neoprene rubber  $\geq$  14 mils or nitrile rubber  $\geq$  14 mils.
- Shoes plus socks

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.**

To avoid spray drift, **DO NOT** apply under windy conditions. Avoid spray overlap, as crop injury may result.

**Restriction: Not for sale, use or distribution in Nassau County or Suffolk County, New York**

## PRODUCT INFORMATION

Observe all precautions and limitations on the labels of each product used in tank mixtures. Tank mixtures are permitted only in those states where the tank mix partner is registered. Refer to and follow the label for each tank mix product used for precautionary statements, directions for use, geographic and other restrictions.

AX S-MET is a selective herbicide that can be applied as a Preplant surface-applied, preplant incorporated, or preemergence treatment in water or fluid fertilizer for control of most annual grasses and certain broadleaf weeds in corn (all types); cotton; grasses grown for seed; peanuts; beans, peas and lentils; potatoes; safflowers; sugar beets; sunflowers; grain or forage sorghum; soybeans; soybean, immature seed; and tomatoes.

- **DO NOT** use in nurseries, turf, or landscape plantings.
- **DO NOT** apply under conditions which favor runoff or wind erosion of soil containing this product to nontarget areas.

To prevent off-site movement due to runoff or wind erosion:

- 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.
- **DO NOT** apply to impervious substrates, such as paved or highly compacted surfaces.

- **DO NOT** use tailwater from the first flood or furrow irrigation of treated fields to treat nontarget crops, unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

Where directions specify a AX S-MET tank mixture with AAtrex® formulations, other brands of atrazine may be used. Follow the rates, recommendations, and limitations on the AAtrex or respective atrazine product label if other brands of atrazine are used.

Certain states may have established rate limitations for atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

If AX S-MET is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.

Dry weather following preemergence application of AX S-MET or a tank mixture may reduce effectiveness. Cultivate if weeds develop.

Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor, or consistent control at a level below that generally considered acceptable for commercial weed control.

**Precaution:** Crop injury may occur following the use of AX S-MET under abnormally high soil moisture conditions during early development of the crop.

### **RESISTANCE-MANAGEMENT RECOMMENDATIONS**

S-metolachlor, the active ingredient in this product, is a Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 15 herbicides. The resistant biotypes 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 delay herbicide resistance, take one or more of the following steps:

- Rotate the use of this product or other Group 15 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in the field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an



alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.

- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact AXION AG PRODUCTS, LLC at 844-425-8488.

### 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.
- Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this Mode of Actions have been found in your region. **DO NOT** assume that each listed weed is being controlled by multiple mechanisms of action. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product.

### Integrated Pest (Weed) Management

This product may be integrated into an overall weed pest management strategy whenever the use of an herbicide is required. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

### SOIL TEXTURES AND HERBICIDE RATES

Where rates are based on coarse-, medium-, or fine-textured soils, it is understood that soil textural classes are generally categorized as follows:

<b>Coarse</b>	<b>Medium</b>	<b>Fine</b>
Sand	Loam	Sandy clay loam
Loamy sand	Silt loam	Silty clay loam
Sandy loam	Silt	Clay loam
		Silty clay
		Clay

Within rate ranges in the rate tables and elsewhere on this label, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter.

AX S-MET may be applied preemergence alone, or in combination with tank mix partners specified on this label, following preplant incorporated herbicides when used according to their label requirements, provided that such use is not prohibited on the respective labels.

Thoroughly clean sprayer or other application device before using. Dispose of cleaning solution in a responsible manner. **DO NOT** use a sprayer or applicator contaminated with any other materials, or crop damage or clogging of the application device may result.

**AX S-MET APPLIED ALONE  
WEEDS CONTROLLED**

AX S-MET is taken up by the shoots and/or roots of emerging weeds. This uptake results in the inhibition of shoot and root tissue growth soon after weed germination. Because of this, AX S-MET will not control emerged weeds and should be applied prior to weed emergence.

If AX S-MET is incorporated, **DO NOT** exceed a 2 to 3 inch depth. Any tillage after the AX S-MET incorporation and before planting should not exceed 2 to 3 inches.

Dry weather following application of AX S-MET may reduce weed control. Cultivate if weeds develop.

Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor, or consistent control at a level below that generally considered acceptable for commercial weed control. Control of these weeds can be erratic, due partially to variable weather conditions. The following procedures may improve the control of weeds listed as partially controlled in Table 1:

- Thoroughly till soil to destroy germinating and emerged weeds.
- Plant crop into moist soil immediately after tillage. If AX S-MET is to be used preemergence, apply at planting or immediately after planting.
- If available, sprinkler irrigate within 2 days after application. Apply 1/2 -1 inch of water. Use lower water volume (1/2 inch) on coarse-textured soils and higher volume (1 inch) on fine-textured soils. Also, refer to the section on **Center Pivot Irrigation Application** for this method of applying AX S-MET.
- If irrigation is not possible and rain does not occur within 2 days after planting and application, weed control may be decreased. Under these conditions, make a uniform, shallow cultivation as soon as weeds emerge.

**Table 1: Weeds Controlled or Partially Controlled by AX S-MET Applied Prior to Weed Emergence**

**PART 1**

Common Name	Scientific Name	Weed Type	Control (C) or Partial Control (PC)
Barnyardgrass	Echinochloa crus-galli	Grass	C
Crabgrass, large	Digitaria ischaemum	Grass	C

Crabgrass, smooth	<i>Digitaria sanguinalis</i>	Grass	C
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	Grass	C
Cupgrass, Southwestern	<i>Eriochloa acuminata</i>	Grass	C
Cupgrass, woolly	<i>Eriochloa villosa</i>	Grass	PC <sup>1</sup>
Foxtail, bristly	<i>Setaria verticillata</i>	Grass	C
Foxtail, giant	<i>Setaria faberi</i>	Grass	C
Foxtail, green	<i>Setaria viridis</i>	Grass	C
Foxtail, millet	<i>Setaria italica</i>	Grass	C
Foxtail, yellow	<i>Setaria pumila</i>	Grass	C
Goosegrass	<i>Eleusine indica</i>	Grass	C
Johnsongrass (seedling)	<i>Sorghum halepense</i>	Grass	PC
Millet, wild-proso	<i>Panicum miliaceum</i>	Grass	PC <sup>1</sup>
Panicum, fall	<i>Panicum dichotomiflorum</i>	Grass	C
Panicum, Texas	<i>Panicum texanum</i>	Grass	PC
Rice, red	<i>Oryza punctata</i>	Grass	C
Sandbur, field	<i>Cenchrus spinifex</i>	Grass	PC
Ryegrass, Italian	<i>Lolium multiflorum</i>	Grass	C
Sandbur, Southern	<i>Cenchrus echinatus</i>	Grass	PC
Shattercane	<i>Sorghum bicolor</i>	Grass	PC
Signalgrass, broadleaf	<i>Urochloa platyphylla</i>	Grass	C
Sorghum (volunteer)	<i>Sorghum bicolor</i>	Grass	PC
Witchgrass	<i>Panicum capillare</i>	Grass	C

## PART 2

Common Name	Scientific Name	Weed Type	Control (C) or Partial Control (PC)
Amaranth, Palmer	<i>Amaranthus palmeri</i>	Broadleaf	C
Amaranth, Powell	<i>Amaranthus powellii</i>	Broadleaf	C
Beggarweed, Florida	<i>Desmodium tortuosum</i>	Broadleaf	PC
Carpetweed	<i>Mollugo verticillata</i>	Broadleaf	C

Eclipta	Eclipta prostrata	Broadleaf	PC
Galinsoga, hairy	Galinsoga quadriradiata	Broadleaf	C
Galinsoga, smallflower	Galinsoga parviflora	Broadleaf	C
Nightshade, Eastern black	Solanum ptychanthum	Broadleaf	C
Nightshade, hairy	Solanum physalifolium	Broadleaf	PC
Pigweed, prostrate	Amaranthus blitoides	Broadleaf	C
Pigweed, redroot	Amaranthus retroflexus	Broadleaf	C
Pigweed, smooth	Amaranthus hybridus	Broadleaf	C
Pigweed, tumble	Amaranthus albus	Broadleaf	C
Purslane, common	Portulaca oleracea	Broadleaf	PC
Pusley, Florida	Richardia scabra	Broadleaf	C
Spiderwort, tropical	Commelina benghalensis	Broadleaf	C
Waterhemp, common	Amaranthus rudis	Broadleaf	C
Waterhemp, tall	Amaranthus tuberculatus	Broadleaf	C
Nutsedge, yellow	Cyperus esculentus	Sedge	C

<sup>1</sup> Refer to the corn section of this label for additional use directions.

## PREPLANT AND ROTATIONAL CROPS SECTION

### Replanted Crop Directions:

This section covers replant crops that may be planted following a lost crop that has had an application of AX S-MET.

If a crop treated with AX S-MET is lost, any crop on this label, or on a supplemental AX S-MET label, may be replanted immediately provided that the rate of AX S-MET applied to the previous crop was not greater than the labeled rate for the crop to be replanted. If the first application was banded and the replant crop is planted in the center of the untreated bands, a second banded treatment may be applied at the rate for the use-pattern for the replant crop, provided the application does not overlap the first application band.

### Rotational Crop Restrictions:

**DO NOT** rotate to food or feed crops other than those listed below. For all crops not listed, wait at least 12 months following the last application of AX S-MET before planting.

Barley, oats, rye, or wheat may be planted 4 1/2 months following treatment.

Alfalfa may be planted 4 months following application. Clover may be seeded 9 months following application.

**Restrictions:** 1) **DO NOT** apply more than 1.9 pounds active ingredient per acre (2.0 pints of AX S-MET) in the previous crop, and 2) **DO NOT** make lay-by or other postemergence applications of AX S-MET in the previous crop.

Tobacco, buckwheat, and rice, may be planted in the next spring following treatment.

Below in the rotational crop subsections A through C is a listing of rotational crop options that are made possible through S-metolachlor tolerances which were established by the EPA as crop groupings.

**A. If not more than 1.33 pints (1.27 lb ai) per acre of AX S-MET was applied to the field, the following crops (as well as any listed under subsections B or C below) may be planted 60 days after the last application. A second application of an S-metolachlor containing product to the following crops is prohibited within 60 days of the original application.**

**Crop Subgroup 1B Root Vegetables** - garden beet, edible burdock, carrot, celeriac, turnip-rooted chervil, chicory, ginseng, horseradish, turnip-rooted parsley, parsnip, radish, oriental radish, rutabaga, salsify, black salsify, Spanish salsify, skirret, and turnip.

**Crop Group 3 Bulb Vegetables (if to be harvested green)** - garlic, great-headed garlic, leek, green onion, Welsh onion, shallot, Winter squash (including pumpkins)

**B. If not more than 1.67 pints (1.59 lb ai) per acre of AX S-MET was applied to the field, the following crops (as well as any listed under Subsection C below) may be planted 60 days after the last application. A second application of an S-metolachlor containing product to the following crops is prohibited within 60 days of the original application.**

**Crop Group 8 Fruiting Vegetables, except Cucurbits** - eggplant, groundcherry (*Physalis* spp.), pepino, peppers (bell, chili, cooking, pimento and sweet), tomatillo and tomato.

**C. If not more than 2.0 pints (1.91 lb ai) per acre of AX S-MET was applied to the field, the following crops may be planted 60 days after the last application. A second application of an S-metolachlor containing product to the following crops is prohibited within 60 days of the original application.**

**Crop Subgroup 1C Tuberos and Corm Vegetables** - arracacha, arrowroot, Chinese artichoke, jerusalem artichoke, edible canna, bitter and sweet cassava, chayote (root), chufa, dasheen (taro), ginger, leren, potato, sweet potato, tanager, tumeric, yam bean, yam, true.

**Crop Group 3 Bulb Vegetables (if to be harvested dry)** - garlic, great-headed garlic, leek, dry bulb and green onion, Welsh onion, shallot.

**Crop Subgroup 4A Leaf Petiole Vegetables** - cardoon, celery, Chinese celery, celtuce, Florence fennel, rhubarb, and Swiss chard.

**Crop Subgroup 5A Head and Stem Brassica Vegetables** - broccoli, Chinese broccoli, brussel sprouts, cabbage, Chinese (napa) cabbage, Chinese mustard, cauliflower, cavalo broccolo and kohlrabi.

**Precautions:** 1) Rotating to crops within these crop groupings at less than 60 days may result in crop injury. 2) If the rate of AX S-MET applied in the previous crops was greater than the rate listed here (Sections A-C below), these crops cannot be planted until the following spring.

## APPLICATION PROCEDURES

### Application Timing

AX S-MET alone or in tank mixtures with other labeled herbicides may be applied for weed control in certain crops at various times. Refer to the given crop section of the label to determine which of the following application timings are allowed.

- **Preplant Surface-Applied:** For minimum-tillage or no-tillage systems only, AX S-MET alone and some AX S-MET tank mixtures may be applied up to 45 days before planting certain crops. Use only split applications for treatments made 30-45 days before planting, with 2/3 the recommended broadcast rate for the crop and soil texture applied initially and the remaining 1/3 at planting. Treatments less than 30 days before planting may be made either as a split or a single application. Refer to individual crop section on this label to determine if early preplant surface application is recommended. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone Inteon®, Touchdown® brands, or Roundup® brands). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, **DO NOT** move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.
- **Preplant Incorporated:** Apply AX S-MET to the soil and incorporate into the top 2 inches of soil within 14 days before planting, using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate AX S-MET after bed formation, unless specified otherwise.
- **Preemergence:** Apply AX S-MET during planting (behind the planter) or after planting, but before weeds or crops emerge.
- **Postemergence:** AX S-MET will not control emerged weeds so it must be applied to a weed-free soil surface or in tank mixture with products that provide postemergence control of weeds present at the time of application. Refer to the individual crop section of this label to determine if a postemergence application may be made for that crop.

### Special Application Procedures

- **CA Only (Corn, Safflowers, Beans, Peas and lentils):**

**Preplant Incorporated:** Broadcast AX S-MET alone or with tank mix partners listed on this label to the soil and thoroughly incorporate with a disk or similar implement set to till 4-6 inches deep. For more thorough incorporation, till the soil in 2 different directions (cross-till). Crops may be planted on flat surface or on beds. Caution must be used when forming the beds that only soil from the AX S-MET treated zone is used (i.e., untreated soil must not be brought to soil surface). If the application is made to preformed beds, incorporate AX S-MET with a tillage implement set to till 2 to 4 inches deep. Care should be taken during tilling to keep the tilled (AX S-MET treated) soil on the beds. **Preemergence:** Apply AX S-MET after planting. Water with sprinkler or flood irrigation within 7-10 days.

- **Fall Application for Spring Weed Control (Only in IA, MN, ND, SD, WI, and portions of NE and IL - See specific instructions in the Corn, Soybeans, and Beans, Peas, Lentils sections of this label for timing of application and other information):** **DO NOT** apply to frozen ground. Use on medium and fine soils with greater than 2.5% organic matter that will be planted to corn or soybeans the next spring. Ground may be tilled before or after application. **DO NOT** exceed a 2 to 3-inch incorporation depth if tilled after treatment. **Restriction:** If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for the specific crop, or illegal residues may result.
- **Fall Application for Italian Ryegrass Control (Corn, Cotton, Grain and Forage Sorghum, and Soybean Only - See specific instructions in the Corn, Cotton, Grain and Forage Sorghum, and Soybean sections of this label for timing of application and other information):** AX S-MET may be applied in the fall (September 1 to December 1) for residual control of glyphosate-resistant Italian ryegrass (*Lolium multiflorum*). A tillage operation may precede the application. **DO NOT** incorporate to a depth greater than 2 to 3 inches if tillage follows the application of AX S-MET.

**Restrictions:** 1) **DO NOT** apply AX S-MET to frozen ground. All crops on the AX S-MET label may be planted the following spring after application. 2) If a spring application is made, the combined total amount of AX S-MET applied in the fall plus the spring must not exceed the maximum yearly S-metolachlor rate for the specific crop planted or illegal residues may result. Refer to the crop sections on this label for specific directions.

**Ground Application:** Apply AX S-MET alone or in tank mixtures by ground equipment in a minimum of 10 gallons of spray mixture per acre, unless otherwise specified. Use sprayers that provide accurate and uniform application. For AX S-MET tank mixtures with wettable powder or dry flowable formulations, screens and strainers must be no finer than 50-mesh. Rinse sprayer thoroughly with clean water immediately after use.

Calculate the amount of herbicide needed for band treatment by the formula:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Amount needed per acre of field}$$

For information on applying in lower volumes of carrier, see **Low Carrier Application** section.

For application by air or through center pivot systems, see **Mandatory Spray Drift Management** and **Spray Drift Advisories** sections.

For information on impregnating dry fertilizer, see **Dry Bulk Granular Fertilizers** section.

<b>SPRAY EQUIPMENT</b>
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**LOW CARRIER APPLICATION**  
**For Broadcast Ground Application Only**

Use sprayers, such as Ag-Chem RoGator®, Hagie, John Deere Hi-Cycle™, Melroe Spra-Coupe, Tyler Patriot™, or Willmar Air Ride®, that provide accurate and uniform application. **Only water may be used as a carrier.** Screens in suction and in-line strainers should be 50-mesh.

Manufacturers may require that tip screens as fine as 100-mesh be used with some nozzles. Use a pump with capacity to: (1) maintain up to 35 to 40 psi at the nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension. Use a minimum of 5.0 gallons of spray mixture per acre. Maximum recommended sprayer speed is 15 mph. Rinse sprayer thoroughly with clean water immediately after each use.

**Note:** Use low pressure nozzles to reduce drift and increase application accuracy. Care should be taken when using automatic rate controlling devices to spray the material within the rated working pressure and flow ranges of the nozzles selected. Nozzle screens must be used when directed by the manufacturer. All nozzles should be placed on 20-inch centers, except flooding types which should be placed on 40-inch centers. When Flat Fan-type nozzles are used, angles of 80° or 110° must be used. Always read and follow the manufacturer's directions for optimum setup and performance of their nozzles or tips.

### **AERIAL APPLICATION**

Apply AX S-MET in water alone or in tank mixtures with AAtrex, Lorox®, or Sencor® in a minimum total volume of 2.0 gallons per acre by aircraft. AX S-MET may also be applied by air in combination with Balan®, Prowl®, or Treflan®. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft., using low-drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply AX S-MET alone or AX S-MET + AAtrex by aircraft at a minimum upwind distance of 400 ft. from sensitive plants, or apply AX S-MET Lorox, or Sencor at a minimum upwind distance of 300 ft. from sensitive plants.

### **MANDATORY SPRAY DRIFT MANAGEMENT**

#### **Aerial Applications:**

- **DO NOT** release spray at a height greater than 10 feet above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S641).
- If the wind speed is 10 miles per hour or less, applicators must use 1/2 swath displacement upwind at the downwind edge of the field. When the wind speed is between 11 to 15 miles per hour, applicators must use 3/4 swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- **DO NOT** apply during temperature inversions.

#### **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to select the nozzles and pressure that deliver medium or coarser droplets (ASABE S572).
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

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



- Applicators are required to use a medium or coarser droplet size (ASABE S572.3) for all applications.
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

### **SPRAY DRIFT ADVISORIES**

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

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

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

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

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

#### **Controlling Drop Size – Aircraft**

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

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

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

#### **Handheld Technology Applications**

Take precautions to minimize spray drift.

#### **BOOM HEIGHT – Ground Boom**

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

#### **RELEASE HEIGHT – Aircraft**

Higher release heights increase the potential for spray drift.

#### **SHIELDED SPRAYERS**

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

#### **TEMPERATURE AND HUMIDITY**

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

#### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

## WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WINDCONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### CENTER PIVOT IRRIGATION APPLICATION

AX S-MET alone or in tank mixture with other herbicides on this label, which are registered for center pivot application, may be applied in irrigation water preemergence (after planting, but before weeds or crop emerge) at rates listed on this label. AX S-MET also may be applied postemergence to the crop and preemergence to weeds in crops where postemergence applications are allowed on this label. Follow all restrictions (height, timing, rate, etc.) to avoid illegal residues. Apply this product only through a center pivot irrigation system. **DO NOT** apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension specialists, equipment manufacturers, or other experts. **DO NOT** connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place. 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.

### Operating Instructions

- 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 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 or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
- Prepare a mixture with a minimum of 1 part water to 1 part, herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
- Meter into irrigation water during entire period of water application.
- Apply in 1/2 to 1 inch of water. Use the lower water volume (1/2 inch) on coarse- textured soils and the higher volume (1 inch) on fine-textured soils. More than 1 inch of water at

application may reduce weed control by moving the herbicide below the effective zone in the soil.

**Precaution** for center pivot applications: Where sprinkler distribution patterns **DO NOT** overlap sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.

**DRY BULK GRANULAR FERTILIZERS**

Many dry bulk granular fertilizers may be impregnated or coated with AX S-MET alone or selected AX S-MET tank mixtures which are registered for preplant incorporated or preplant surface application which are used to control weeds in crops on the AX S-MET label and are not prohibited from use on dry bulk granular fertilizers.

When applying AX S-MET or AX S-MET mixtures with dry bulk granular fertilizers, follow all directions for use and precautions on the respective product labels, regarding target crops, rates per acre, soil texture, application methods (including timing of application), and rotational crops.

All individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling the herbicide/fertilizer mixture.

Prepare the herbicide/fertilizer mixtures by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray AX S-MET and AX S-MET mixtures onto the fertilizer must be placed to provide uniform spray coverage. Care must be taken to aim the spray directly onto the fertilizer only and to avoid spraying the walls of the blender.

If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® or Celatom MP-79®, or similar granular clay or diatomaceous earth materials, to obtain a dry, free-flowing mixture. Absorptive materials should be added only after the herbicide has been thoroughly blended into the fertilizer mixture. Best application results will be obtained by using a granule of 6/30 particle size or of a size similar to that of the fertilizer material being used. Generally, less than 2% by weight of absorptive material will be needed. Avoid using more than 5% absorptive material by weight.

Calculate amounts of AX S-MET, AAtrex, AAtrex + Princep®, Balance® Pro, Princep, Sencor, or Sonalan® by the following formula:

$\frac{2000}{\text{lbs. of fertilizer per acre}}$	X	pts./A of liquid or flowable product	=	pts. of liquid or flowable product per ton of fertilizer
$\frac{2000}{\text{lbs. of fertilizer per acre}}$	X	lbs./A of dry product	=	lbs. of dry product per ton of fertilizer

**Pneumatic (Compressed Air) Application (AX S-MET Alone):** High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer may cause fertilizer mixture to build up or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix AX

S-MET with Exxon Aromatic 200 at a rate of 1.0 to 4.0 pints per gallon of AX S-MET. Aromatic 200 is a noncombustible/nonflammable petroleum product. Aromatic 200 may be used in either a fertilizer blender or through direct injection systems. Drying agents must not be used when using Aromatic 200.

**Precautions:** (1) Mixtures of AX S-MET and Aromatic 200 must be used on dry fertilizer only. Poor results or crop injury may result if these mixtures are used in water or liquid fertilizer solutions for spraying applications. (2) When impregnating AX S-MET in a blender before application, a drier mixture can be attained by substituting a drying agent for Aromatic 200. Agsorb FG or drying agents of 6/30 particle size may be used. (3) Drying agents must not be used with On-The-Go impregnation equipment.

**Restrictions:** (1) **DO NOT** impregnate AX S-MET or AX S-MET mixtures on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers. (2) **DO NOT** use AX S-MET or AX S-MET mixtures on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated.

### **Application**

Apply 200-700 lbs. of the herbicide/fertilizer mixture per acre. For best results, apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury. Nonuniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve weed control. On fine- or medium-textured soils in areas where soil incorporation is not planned, i.e., reduced tillage situations or in some conventional till situations, make applications approximately 30 days before planting to allow moisture to move the herbicide/fertilizer mixture into the soil. On coarse-textured soils, make applications approximately 14 days prior to planting.

**Precaution:** To avoid crop injury, **DO NOT** use the herbicide/fertilizer mixture on crops where bedding occurs.

### **MIXING INSTRUCTIONS**

**AX S-MET Alone:** Mix AX S-MET with water or fluid fertilizer and apply as a spray. Fill the spray tank 1/2 to 3/4 full with water or fluid fertilizer, add the proper amount of AX S-MET, and then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

**Tank Mixtures:** Fill the spray tank 1/4 full with water, and start agitation; add 2,4-D, AAtrex, Balance Pro, Balan, Banvel®, Basagran®, Butoxone®, Butyrac®, Canopy®, Caparol® 4L, Command®, Cotoran®, Eptam®, Liberty® Herbicide, Liberty ATZ Herbicide, Lorox, Marksman®, MSMA, Princep, Prowl, Pursuit®, AAtrex + Princep, Scepter®, Sencor, Sonalan, or Treflan, and allow it to become dispersed; then add AX S-MET; then add Gramoxone Inteon, Landmaster® BW, Touchdown, or Roundup (glyphosate products) if these products are being used; and finally the rest of the water. For tank mixtures with AAtrex, Balance, Banvel, Canopy, Caparol 4L, Command, Cotoran\*, Eptam, Lorox, Marksman, Princep, Prowl\*, Pursuit, AAtrex + Princep, Scepter, Sencor, Sonalan, or Treflan, fluid fertilizers may replace all or part of the water as carrier, except in the AAtrex postemergence and the Banvel postemergence tank mixes. For tank mixtures with AAtrex, see additional mixing instructions on the AAtrex label. For each mixture,

check compatibility with fluid fertilizer, as described below, before mixing in spray tank. For all tank mixtures, agitate during mixing and application to maintain a uniform suspension.

\*See **Special Mixing Instructions** for tank mixtures with Cotoran, and with AAtrex or Princep + Prowl under the appropriate tank mixture section.

For directions on how to conduct a compatibility test, see the **Compatibility Test** section.

### COMPATIBILITY TEST

A jar test is recommended before tank mixing to ensure compatibility of AX S-MET with other pesticides. The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredients.

**Note:** Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray. Because liquid fertilizers vary, even within the same analysis, **always check compatibility with pesticide(s) before use**. Incompatibility of tank mixtures is more common with suspensions of fertilizer and pesticides.

#### Test Procedure

1. Add 1.0 pint of carrier (fertilizer or water) to each of 2 one qt. jars with tight lids. Use the same source of water that will be used for the tank mix and conduct the test at the temperature the tank mix will be applied.
2. To one of the jars, add 1/4 tsp. or 1.2 milliliters of a compatibility agent approved for this use, such as Envelop (1/4 tsp. is equivalent to 2.0 pints per 100 gallons spray). Shake or stir gently to mix.
3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on listed label rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.
4. After adding all ingredients, put lids on and tighten, and invert each jar ten times to mix. Let the mixtures stand 15-30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) Slurry the dry pesticide(s) in water before addition, or (b) add 1/2 the compatibility agent to the fertilizer or water and the other 1/2 to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, **DO NOT** use the mixture.
5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the **Storage and Disposal** section in this label.

## CROP USE DIRECTIONS

### CORN (ALL TYPES) - AX S-MET ALONE

Apply AX S-MET, either preplant surface, preplant incorporated, preemergence, or lay-by, using the appropriate rate specified below.

#### PREPLANT SURFACE-APPLIED

Refer to instructions for use of AX S-MET alone under **Application Procedures**.

#### Use Directions and Restrictions for Fall Application for Spring Weed Control:

- 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.

In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre on medium-textured and 2.0 pints (1.91 lb ai) per acre on fine-textured soils. **DO NOT** apply to frozen ground. A tillage operation may precede the application. A fall and/or a spring tillage may follow application, but **DO NOT** exceed an incorporation depth greater than 2 to 3 inches. Minimize furrow and ridge formation in the tillage operations.

**Restriction:** If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for corn, or illegal residues may result.

**Fall Application for Italian Ryegrass Control:** AX S-MET may be applied for residual control of glyphosate-resistant Italian ryegrass (*Lolium multiflorum*). Apply AX S-MET at 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre in the fall (September 1 to December 1) after harvest of the previous crop and prior to Italian ryegrass emergence. Use the lower AX S-MET rate for coarse textured soils and the higher rate for fine textured soils. A tillage operation may precede the application. **DO NOT** incorporate to a depth greater than 2 to 3 inches if tillage follows the application of AX S-MET. For fall applications after emergence of glyphosate-resistant Italian ryegrass, Gramoxone Inteon can be tank mixed with AX S-MET to control emerged ryegrass. Refer to the Gramoxone Inteon label for specific rates, application instructions and restrictions. Other registered herbicides may be tank mixed with AX S-MET for control or improved control of other weeds present at the time of application.

**Restrictions:** (1) **DO NOT** apply AX S-MET to frozen ground. (2) If a spring application is made, the combined total amount of AX S-MET applied in the fall plus the spring must not exceed the maximum yearly S-metolachlor rate for corn (3.9 pints (3.71 lb ai) per acre depending on soil texture), or illegal residues may result.

**Fall Application for Control or Suppression of Yellow Nutsedge (ID, OR and WA only):** For pre-emergent control or suppression of yellow nutsedge the following spring apply 1.33 pints (1.27 lb ai) per acre of AX S-MET in the fall after the harvest of the previous crop but before freeze-up. Fall applications of AX S-MET can be surface-applied or incorporated.

**Restrictions:** (1) Make no more than one fall application per crop. (2) Apply not more than 1.33 pints (1.27 lb ai) per acre in a single fall preplant application. (3) **DO NOT** apply to frozen ground.

(4) If a spring application is made, the combined total amount of AX S-MET applied in the fall plus the spring must not exceed the maximum yearly S-metolachlor rate for corn (3.9 pints (3.71 lb ai) per acre depending on soil texture).

### **Early Pre-plant Applications**

- A. Use on medium- and fine-textured soils with minimum-tillage or no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply 2/3 of the listed rate of AX S-MET (1.67 pints (1.59 lb ai) per acre on medium soils and 2.0 pints (1.91 lb ai) per acre on fine soils) as a split treatment 30-45 days before planting and the remainder at planting. Applications made less than 30 days prior to planting may be as either a split or single treatment. Apply 1.33 pints (1.27 lb ai) per acre on coarse soils not more than 2 weeks prior to planting. **Restriction:** If a spring application is made, the total rate of the fall plus spring application must not exceed the maximum total rate for corn, or illegal residues may result.
- B. On medium- and fine-textured soils with minimum- or no-tillage systems in CT, DE, MA, MD, ME, MI, NH, NY, OH, PA, RI, VA, VT, and WV, preplant surface applications may be applied following the directions for use above. If the amount of rainfall results in unsatisfactory length of weed control following the earlier treatment, a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide may be used, i.e., AAtrex, Beacon®, Bicep Magnum, Bicep II Magnum®, Exceed®, Accent®, Banvel, Basagran, bromoxynil (Buctril®), or 2,4-D. If the postemergence treatment includes the herbicide used preplant surface-applied, **DO NOT** exceed the total labeled rate for corn on a given soil texture. Observe all directions for use, precautions, and limitations on the label of the postemergent herbicide.

### **PREPLANT INCORPORATED OR PREEMERGENCE**

Follow instructions for use of AX S-MET alone under **Application Procedures**. On coarse soils, apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET if organic matter content is less than 3%, or 1.33 pints (1.27 lb ai) per acre if organic matter content is 3% or greater. On medium soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET. On fine soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET if organic matter content is less than 3%, or 1.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre if organic matter content is 3% or greater.

### **POSTEMERGENCE OR LAY-BY**

To extend the duration of weed control in corn, a maximum rate of 2.0 pints (1.91 lb ai) per acre of AX S-MET may be applied after corn emergence until the corn plants reach 40 inches in height, following any preplant surface-applied, preplant incorporated, or preemergence herbicide application, including AX S-MET. For best results, applications must be made to soil free of emerged weeds and directed toward the base of corn plants in excess of 5 inches tall. The total AX S-MET rate applied on corn during any one crop year should not exceed 3.9 pints (3.71 lb ai) per acre, depending on soil texture.

**Restrictions for all applications to corn:** (1) **DO NOT** graze or feed forage from treated areas for 30 days following application and (2) **DO NOT** harvest sweet corn ears from treated areas for 30 days following application.

### **PROBLEM WEED CONTROL DIRECTIONS**

**Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta - Partial Control:** For more consistent partial control of shattercane, wild proso millet, woolly cupgrass, or eclipta, apply 1.0

to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET preplant incorporated followed by 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET preemergence. Make the preemergence application during or after planting, but before weeds and corn emerge. Apply the 1.33 pints (1.27 lb ai) per acre rate of AX S-MET when a heavy infestation of shattercane, wild proso millet, woolly cupgrass, or eclipta is expected. A shallow cultivation may be needed to control any late emerging weeds.

**Woolly Cupgrass and Wild Proso Millet Control Program:** For control of these species, use the following 3-step program: (1) Apply AX S-MET early preplant, preplant incorporated, or preemergence at 1.67 pints (1.59 lb ai) per acre on medium soils and 2.0 pints (1.91 lb ai) per acre on fine-textured soils, up to the maximum label rate. Lightly incorporate with a rotary hoe if rainfall does not occur within 5 to 7 days; (2) Apply a postemergence tank mix of Beacon at 0.38 ounces per acre or Exceed at 1 packet per 4 acres plus Accent SP at 0.33 ounces per acre plus 1.0 quart of crop oil concentrate plus 1.0 gallon per acre of 28% nitrogen, or the equivalent amount of ammonium sulfate, when grasses are 2-3 inches tall and the corn is at least 4 inches tall; and (3) Cultivate 14 to 21 days after the postemergence application.

**Restrictions:** (1) **DO NOT** apply more than the labeled application rate for a given soil texture per year, either as a single or split treatment, or illegal residues may result. (2) In corn, AX S-MET may be used up to 2.6 pints (2.48 lb ai) per acre as either a preplant surface, preplant incorporated, or preemergence treatment on soils having an organic matter content between 6% and 20%. (3) In the event of escape of annual weeds following a preplant surface, preplant incorporated, or preemergence treatment of AX S-MET, follow with a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide, i.e., AAtrex, Beacon, Bicep II Magnum, Exceed, Accent, Banvel, Basagran, Buctril, or 2,4-D. If the postemergence treatment includes the herbicide used in the earlier treatment, **DO NOT** exceed the total labeled rate for corn on a given soil texture. (4) Buctril may be applied postemergence alone or in tank mix combination with AAtrex. **DO NOT** exceed 1.2 lb ai per acre of AAtrex in tank mix combination with Buctril postemergence. Refer to the AAtrex, and Buctril labels for specific rates and precautions. (5) **DO NOT** use AX S-MET on peat or muck soils.

#### **CORN - AX S-MET COMBINATIONS**

AX S-MET in any tank mixture for corn may be applied in water or fluid fertilizer before corn emerges. Use only water as a carrier when AX S-MET is applied after corn emergence.

**Restrictions:** For all applications to corn, (1) **DO NOT** graze or feed forage from treated areas for 30 days following application or possible illegal residues may result and (2) **DO NOT** harvest sweet corn ears from treated areas for 30 days following application.

**IMPORTANT: FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE)**  
- If applying AX S-MET in tank mixture with AAtrex, all the restrictions and rate limitations on the AAtrex label must be followed if more restrictive/protective than those on this label. In addition, if AAtrex is/must be applied at rates lower than those listed on this label, broadleaf weed control may be affected. Refer to the AAtrex label for weeds controlled at the reduced rates.



**Table 2: AX S-MET Tank Mixtures for Corn - Additional Weeds Controlled and Special Instructions**

	AX S-MET +AAtrex and/or Princep (Preplant Surface,PPI, PRE)	AX S-MET + AAtrex (Post)	AX S-MET + Banvel (Field Corn)	AX S-MET + AAtrex + Lorox	AX S-MET + AAtrex or Princep+ Prowl	AX S-MET + Marksman	AX S-MET + Balance Pro
Special Mixing Instructions					1		
Comments	2,3,4,5,7,8	2,3,4,5		2,3,4,5,6	2,3,4,5	7	2,3,7
Browntop panicum	X			X	X		
Cocklebur	X	0	0	X	X	X	
Common purslane	X			X	X	X	X
Hairy nightshade	X			X	X	X	
Jimsonweed		X	0			X	X
Kochia		X				X	X
Lambsquarters	X	X	X	X	X	X	X
Morningglory	X	0	0	X	X	X	
Mustard		X				X	X
Pigweed				X	X	X	X
Prickly sida		X				X	
Ragweed	X	X	X	X	X	X	X
Smartweed	X	X	X	X	X	X	X
Velvetleaf	X	X	0	X	X	X	0-X

x = control; 0 = partial control; 0-X= partial to full control depending on ratio of products used or on weed population

\*Field corn only

**Comments**

**1) Special Mixing Instructions for AX S-MET + AAtrex or Princep and Prowl**

- a) Fill the spray tank 1/2 full with water or fluid fertilizer and start agitation.
- b) To aid compatibility, add a compatibility agent, such as Envelop at 4.0 pints per 100 gallons of spray mixture.
- c) Then add the AAtrex or Princep and allow it to become dispersed.
- d) Then add AX S-MET and Prowl 4E.
- e) Add the rest of the water.

2) Although a single formulation for AAtrex or Princep is listed in the rate tables, other formulations may be substituted, using the following formula:

- a) 1.0 pound of AAtrex Nine-O® or Princep Caliber 90® = 1.8 pints of AAtrex 4L or Princep 4L.
- 3) Although directions specify AAtrex formulations in tank mixture with AX S-MET, other brands of atrazine may be used. Follow the rates, and other use directions and restrictions on the atrazine label.
- 4) See additional mixing instructions on the AAtrex label.
- 5) **DO NOT** exceed a total of 2.5 lb ai of atrazine per acre per year. However, certain states may have established rate limitations for atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.
- 6) Other formulations of Lorox can be used: 1.0 pound of Lorox DF = 1.0 pint of Lorox L.
- 7) In Minimum-Tillage and No-Tillage systems, mix with Gramoxone Inteon for control of most emerged annual weeds and suppression of perennial weeds; or with Landmaster BW for suppression of emerged field bindweed and control or suppression of annual weeds; or with Touchdown brands or Roundup brands for control of most emerged annual and perennial weeds.
- 8) Refer to the **Corn- AX S-MET Combinations-Tank Mixture with AAtrex; or AAtrex + 2,4-D; or AAtrex + 2,4-D + Banvel for Minimum Tillage or No-Tillage Systems** section for specific directions for 2,4-D or Banvel burndown combinations with Minimum-Tillage and No-Tillage systems.

AX S-MET in any tank mixture for corn may be applied in water or fluid fertilizer, except as restricted.

**Restrictions:** (1) For all applications to corn, **DO NOT** graze or feed forage from treated areas for 30 days following application and **DO NOT** harvest sweet corn ears from treated areas for 30 days following application, or possible illegal residues may result. (2) When applying AX S-MET in tank mixture with AAtrex, **DO NOT** exceed a total of 2.5 lb ai of atrazine per acre per year. (3) Refer to **Corn (All Types) - AX S-MET Alone** directions for sequential postemergence treatments if escape weeds develop.

**TANK MIXTURE WITH AATREX OR PRINCEP, OR AATREX + PRINCEP- PREPLANT SURFACE, PREPLANT INCORPORATED, OR PREEMERGENCE**

In addition to the weeds controlled by AX S-MET alone, AX S-MET + AAtrex or Princep, or AX S-MET +AAtrex+Princep, applied preplant surface, preplant incorporated or preemergence, and also controls the following weeds: browntop panicum, cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf.

Apply AX S-MET + AAtrex or Princep, or AX S-MET + AAtrex + Princep either preplant surface, preplant incorporated, or preemergence.

**Preplant Surface-Applied:** Follow instructions for use of AX S-MET alone under Application Procedures and under application instructions for AX S-MET alone on corn. Apply AX S-MET + AAtrex or Princep, or AX S-MET + AAtrex + Princep on medium soils (1.67 pints (1.59 lb ai) per acre of AX S-MET + 3.2 to 4.0 pints per acre of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep

4L combined) and on fine soils (1.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre of AX S-MET + 4.0 pints per acre of AAtrex 4L or 4.0 to 5.0 pints per acre of Princep 4L, or AAtrex 4L + Princep 4L combined) in minimum-tillage and no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply the tank mixtures as a split or single treatment in those states and as indicated in the **AX S-MET Alone – Preplant Surface-Applied** section of the label for corn. On coarse soils, apply 1.33 pints (1.27 lb ai) per acre of AX S-MET and 3.2 pints per acre of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep 4L combined.

**Preplant Incorporated or Preemergence:** Follow instructions for use of AX S-MET alone under **Application Procedures**. Apply AX S-MET + AAtrex or Princep, or AX S-MET + AAtrex + Princep, using the appropriate rates from Table 3.

**Restriction: DO NOT** apply more than the labeled rate for a given soil texture per year, either as a split or single treatment.

### **Shattercane and Wild Proso Millet - Partial Control**

For more consistent partial control of shattercane or wild proso millet, where AX S-MET is applied in tank mixture or sequentially with other registered corn herbicides, the following applications may be made:

- Apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET + 2.0 lb ai per acre of AAtrex or Princep preplant incorporated, followed by 1.0 to 1.33 pints (0.95 – 1.27 lb ai) of AX S-MET preemergence. Make the preemergence application during or after planting, but before weeds and corn emerge.
- Apply AX S-MET at 1.33 pints (1.27 lb ai) per acre alone or in tank mix combination with up to 2.0 lb ai per acre of AAtrex, or Princep, preplant incorporated. **DO NOT** exceed the total rate of triazine herbicide listed in combination with AX S-MET for corn grown on a given soil texture. Follow with a post-directed application of Evik® BOW at 2.5 pounds per acre. Refer to the Evik BOW label for specific directions for the post-directed application.
- Apply Eradicane® or (or equivalent EPTC or butylate formulations) at labeled rates preplant incorporated, followed by a preemergence application of AX S-MET at 1.0 to 1.33 pints (0.95 – 1.27 lb ai). **DO NOT** use Eradicane on soils where rapid degradation has been shown to occur. Make the preemergence application during or after planting, but before weeds and corn emerge.

**Precaution:** When following the application regimes in numbers 1-3 above, a shallow cultivation may be needed after the pre emergence or postemergence application to help control any late emerging shattercane or wild proso millet plants.

**Restriction: DO NOT** exceed a total of 1.9 lb ai per acre (2.0 pints of AX S-MET) in the preplant incorporated plus preemergence application on soils with less than 6% organic matter.

**Table 3: AX S-MET + AAtrex or Princep, or AX S-MET + AAtrex + Princep, Preplant Incorporated or Preemergence - Corn (All Types)**

Broadcast Rates Per Acre						
< 3% Organic Matter			3% Organic Matter or Greater			
Soil Texture	AX S-MET + AAtrex Nine-O <sup>*</sup> or Princep Caliber 90 <sup>*</sup>	Or	AX S-MET + AAtrex Nine-O <sup>**</sup> + Princep Caliber 90 <sup>**</sup>	AX S-MET + AAtrex Nine-O <sup>*</sup> or Princep Caliber 90 <sup>*</sup>	Or	AX S-MET + AAtrex Nine-O <sup>**</sup> + Princep Caliber 90 <sup>**</sup>
<b>Coarse</b>	0.8-1.0 pt. + 1.1-2.2 lbs.		0.8-1.0 pt. + 0.6-1.1 lbs. + 0.6-1.1 lbs.	1.0 pt. + 1.3-2.2 lbs.		1.0 pt. + 0.7-1.1 lbs. + 0.7-1.1 lbs.
<b>Medium</b>	1.0-1.33 pts. + 1.3-2.2 lbs.		1.0-1.33 pts. + 0.7-1.1 lbs. + 0.7-1.1 lbs.	1.33 pts. + 1.8-2.2 lbs.		1.33 pts. + 0.9-1.1 lbs. + 0.9-1.1 lbs.
<b>Fine</b>	1.33 pts. + 1.8-2.2 lbs.		1.33 pts. + 0.9-1.1 lbs. + 0.9-1.1 lbs.	1.33-1.67 pts. + 1.8-2.2 lbs. <sup>***</sup>		1.33-1.67 pts. + 0.9-1.1 lbs. <sup>***</sup> + 0.9-1.1 lbs. <sup>***</sup>
Muck or Peat (soils with >20% organic matter)	<b>DO NOT USE</b>					

\* Use Princep in preference to AAtrex when heavy infestations of crabgrass or fall panicum are expected. On soils having between 6% and 20% organic matter, AX S-MET may be used up to 2.33 pints (2.22 lb ai) per acre in tank mix combination with 2.2 pounds per acre of AAtrex Nine-O, or equivalent rates of AAtrex 4L. Refer to the AAtrex label for weeds controlled at this reduced rate.

\*\* When using the tank mixture of AX S-MET + AAtrex Nine-O + Princep Caliber 90, use equal rates of each as shown when heavy broadleaf weed infestations are expected. When heavy infestations of crabgrass or fall panicum are expected, use a 1:2 ratio of AAtrex + Princep instead of the 1:1 ratio given in Table 3.

(Example: Total AAtrex Nine-O + Princep Caliber 90 = 1.2 pounds per acre, use 0.4 pound of AAtrex + 0.8 pound of Princep, respectively.) Refer to Comment No. 2 following Table 2 for AAtrex 4L and Princep 4L conversions.

\*\*\* For cocklebur, yellow nutsedge, and velvetleaf control on fine-textured soils above 3% organic matter, apply 2.25 pounds per acre of AAtrex Nine-O, or-equivalent rates of AAtrex 4L, or the same total amount of AAtrex + Princep with 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET.

**TANK MIXTURE WITH AATREX - POSTEMERGENCE**

<u>Weeds Controlled</u>		<u>Weeds Partially Controlled</u>
Barnyardgrass (watergrass)	lambquarters	cocklebur
crabgrass	mustard	morningglory
crowfootgrass	pigweed	yellow nutsedge
fall panicum	prickly sida	

giant foxtail  
green foxtail  
yellow foxtail  
jimsonweed  
kochia

purslane  
ragweed  
smartweed  
velvetleaf

Apply 1.0 pints (0.95 lb ai) per acre of AX S-MET + 1.3 pounds per acre of AAtrex Nine-O\* on coarse soils, 1.33 pints (1.27 lb ai) per acre of AX S-MET + 1.8 pounds per acre of AAtrex Nine-O on medium soils, or 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET + 1.8 to 2.2 pounds per acre\*\* of AAtrex Nine-O on fine soils. Apply this tank mixture before grass and broadleaf weeds pass the 2-leaf stage and before corn exceeds 5 inches in height. Application to weeds larger than the 2-leaf stage will generally result in unsatisfactory control.

**Lay-by:** Apply to corn plants not more than 12 inches tall. Applications to corn in excess of 5 inches should be directed to the base of the corn plants; whereas, applications to corn plants less than 5 inches tall may be made over the top. Occasionally, some corn leaf burn may result, but this should not affect later growth or yield.

Precaution: TO AVOID CROP INJURY, **DO NOT** apply this postemergence tank mixture in fluid fertilizer.

\*When using AAtrex 4L, use equivalent rates. One pound of AAtrex Nine-O = 1.8 pints of AAtrex 4L.

\*\*For better control of cocklebur, morningglory, velvetleaf, and yellow nutsedge on fine-textured soils above 3% organic matter, apply 2.2 pounds per acre of AAtrex Nine-O, or equivalent rate of AAtrex 4L, with 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET.

Tank mixtures of AX S-MET + AAtrex may be applied following use of any registered preplant surface-applied, preplant incorporated, or preemergence corn herbicide, including AX S-MET + AAtrex.

**Restriction:** The total AX S-MET rate must not exceed 3.9 pints (3.71 lb ai) per acre, or the AAtrex rate more than 2.5 lb ai per year. Refer to the AAtrex label for geographic, soil-texture, and rotational restrictions.

#### **TANK MIXTURE WITH BANVEL**

**Preemergence:** Use this tank mixture only on field corn which is flat-planted (no furrows) in CO, IA, IL, IN, KS, MN, NE, OH, SD, and WI.

In addition to the weeds controlled by AX S-MET alone, AX S-MET + Banvel, applied preemergence, also controls lambsquarters, ragweed, smartweed, cocklebur\*, jimsonweed\*, morningglory\*, and velvetleaf\*.

\*Partially controlled.

Apply AX S-MET + Banvel preemergence. Broadcast 1.0 pint per acre of Banvel with 1.33 pints (1.27 lb ai) per acre of AX S-MET on medium soils, or with 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET on fine soils. **DO NOT** apply on coarse soils or on soils with less than 2.5% organic matter. Apply this tank mixture to the soil surface at planting or after planting, but before

corn emerges. Plant corn at least 1.5 inches deep and apply behind planting equipment, avoiding incorporation by the planter wheel or other seed covering device. **DO NOT** incorporate before corn emergence. If it is necessary to rotary hoe to break the soil crust, **DO NOT** disturb the soil more than 1/2 inch deep.

**Postemergence for Control of Pigweed (Mid-Atlantic states, including DE, MD, PA, VA, and WV):** Apply 1.0 to 1.5 pints (0.95 – 1.43 lb ai) pints per acre of AX S-MET + 0.5 to 1.0 pints per acre of Banvel or Clarity® by ground equipment when pigweed plants are less than 3 inches tall and before corn exceeds 5 inches in height in a minimum of 20 gallons of spray per acre. Use the lower rate on coarse-textured and low organic matter soils. Use the higher rate on fine-textured and high organic matter soils.

**Precaution:** TO AVOID CROP INJURY, Avoid drift to sensitive nontarget plants, such as soybeans, during application.

**Restriction:** **DO NOT** apply with aircraft.

**TANK MIXTURE WITH AATREX OR PRINCEP + PROWL FOR PROLONGED CONTROL OF LAMBSQUARTERS AND PIGWEED IN FIELD CORN ONLY (NORTHEAST U.S., INCLUDING MI, IN, KY, AND STATES EAST OF THESE)**

For prolonged control of lambsquarters and pigweed, in addition to a broad spectrum of annual broadleaf and grass weeds, AX S-MET in tank mix combination with AAtrex\* or Princep + Prowl 4E may be applied after planting, but before corn or weeds emerge. Apply by ground equipment in a minimum of 10 gallons of water or 20 gallons of liquid fertilizer. Apply by air in a minimum of 5.0 gallons of water. Refer to Table 3 of this label for rates of AX S-MET, AAtrex, or Princep to be applied. Apply Prowl 4E according to the following rates in Table 4.

**Restriction:** **\*DO NOT** apply AX S-MET in tank mix combination with AAtrex 80W + Prowl, as this combination is not compatible. Other AAtrex formulations may be used.

**Mixing Instructions:** See Comment No.1 following Table 2.

**Table 4: Prowl 4E - Broadcast Rates Per Acre**

Soil Texture	Percent Organic Matter in Soil		
	Less Than 1.5%	1.5-3%	Over 3%
Coarse	1.5-2.0 pts.	2.0 pts.	3.0 pts.
Medium	2.0 pts.	3.0 pts.	3.0 pts.
Fine	2.0 pts.	3.0 pts.	3.0 pts.

Observe all directions for use, precautions, and limitations on the respective product labels when applying these products in tank mix combination. Refer to the Prowl 4E label for replanting instructions in the event of crop loss.

**TANK MIXTURE OF AX S-MET WITH AATREX OR PRINCEP, OR AATREX + PRINCEP WITH GRAMOXONE INTEON, LANDMASTER BW, TOUCHDOWN OR ROUNDUP FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS**

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Inteon, Landmaster BW, Touchdown brands or Roundup brands should be tank mixed with AX S-MET + AAtrex, AX S-MET + Princep, or AX S-MET + AAtrex + Princep. See Comment No. 7 following Table 2. The AX S-MET, AX S-MET + AAtrex or Princep, or AX S-MET + AAtrex + Princep portion of the tank mixture provides preemergence control of the weeds listed on this label in the tank mixture section for **AX S-MET, AX S-MET + AAtrex or Princep, or AX S-MET + AAtrex + Princep - Preplant Surface, Preplant Incorporated, or Preemergence.**

**Application:** Apply before, during, or after planting, but before the corn emerges. Add Gramoxone Inteon, Landmaster BW, Touchdown brands or Roundup brands and apply as directed on the product label.

**Gramoxone Inteon:** Apply as directed on the product label. This treatment will not control weeds taller than 6 inches.

**DO NOT** apply combinations containing Gramoxone Inteon in suspension-type liquid fertilizers, because the activity of paraquat will be reduced.

**Landmaster BW:** 27 to 54 ounces per acre depending on weed species and size. See the Landmaster BW label for weeds controlled, listed rates for specific weeds, and other information concerning use.

**Touchdown Brands or Roundup Brands:** See the Touchdown brand or Roundup brand labels for weeds controlled, listed rates, and other use directions.

Apply in 20 to 60 gallons of water or fluid fertilizer per acre with ground equipment.

On coarse soils, apply 1.0 pint (0.95 lb ai) per acre of AX S-MET with 1.3 pounds of AAtrex Nine-O\* or Princep Caliber 90\*, or with 0.7 pound of AAtrex Nine-O\*\* + 0.7 pound of Princep Caliber 90\*\*. On medium soils, apply 1.33 pints (1.27 lb ai) per acre of AX S-MET with 1.8 pounds of AAtrex Nine-O or Princep Caliber 90, or with 0.9 pound of AAtrex Nine-O + 0.9 pound of Princep Caliber 90. On fine soils\*\*\*, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET with 1.8 to 2.2 pounds of AAtrex Nine-O or Princep Caliber 90, or with 0.9 to 1.1 pounds of AAtrex Nine-O + 0.9 to 1.1 pounds of Princep Caliber 90.

\* Use Princep in preference to AAtrex when heavy infestations of crabgrass or fall panicum are expected.

\*\* When using the tank mixture of AX S-MET + AAtrex Nine-O + Princep Caliber 90, use equal rates of AAtrex and Princep as shown when heavy broadleaf weed infestations are expected. When heavy infestations of crabgrass or fall panicum are expected, use a 1:2 ratio of AAtrex + Princep instead of the 1:1 ratio given.

(Example: Total AAtrex Nine-O + Princep Caliber 90 = 1.8 pounds per acre, use 0.6 pound of AAtrex + 1.2 pounds of Princep, respectively.) Refer to Comment No: 2 following Table 2 for AAtrex 4L and Princep 4L conversions.

\*\*\*For cocklebur, yellow nutsedge, and velvetleaf control on fine-textured soils above 3% organic matter, apply 2.25 pounds per acre of AAtrex Nine-O, or equivalent rate of AAtrex 4L, or the same total amount of AAtrex + Princep, with 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET.

### **TANK MIXTURE WITH AATREX; OR AATREX + 2,4-D; OR AATREX + 2,4-D + BANVEL FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS**

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, AX S-MET applied in combination with AAtrex will kill most emerged small annual weeds. Apply AX S-MET + AAtrex before, during, or after planting, but before corn emerges, according to the rates in Table 3.

Where heavy crop residues exist, add 0.8 to 1.6 pints (0.76 - .52 lb ai) per acre of an appropriately labeled 3.8 lb ai per gallon of 2,4-D amine (such as Weedar 64, Weedar 64A, DMA-4 Herbicide, Weedone® 638, or Formula 40) to the spray tank last and apply in a minimum of 25 gallons of carrier per acre.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burn down of existing weeds, and therefore are recommended instead of water. Add a surfactant such as Voyager 90/10 or Voyager 80/20 surfactant or another appropriate surfactant at its specified rate, or add crop oil concentrate plus 28% liquid nitrogen (or equivalent). Apply before weeds exceed 3 inches in height.

If alfalfa is present, add Banvel to the spray mixture at 0.33 to 0.5 pint per acre and apply before alfalfa exceeds 6 inches in height.

For fields with existing sod grasses (e.g., bromegrass, orchardgrass, rye, or timothy), when existing weeds exceed 3 inches in height or when very dry conditions exist, add Gramoxone Inteon at the rate indicated on the product label in place of or in addition to 2,4-D as indicated above. **DO NOT** apply Gramoxone Inteon in suspension-type liquid fertilizer. Observe all directions for use, precautions, and limitations on the respective product labels when applying these products in tank mix combination. Use Balance combinations only on field corn.

### **TANK MIXTURE WITH MARKSMAN IN CONSERVATION TILLAGE - FIELD AND SILAGE CORN**

In conservation tillage systems where corn is planted directly into a cover crop or previous crop residue, AX S-MET + Marksman will kill most emerged small annual weeds. Apply AX S-MET + Marksman before, during, or after planting, but before corn emergence on medium and fine soils with greater than 2.5% organic matter. For fields with existing vegetation exceeding 3 inches in height or when very dry conditions exist, add Gramoxone Inteon at its standard rate. AX S-MET + Marksman may be applied postemergence to corn less than 3 inches tall and before weedy grasses exceed the 2-leaf stage.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burn down of existing weeds. **DO NOT** apply Gramoxone Inteon in suspension-type liquid fertilizer or use on emerged corn.

Refer to the Marksman label and follow all directions, limitations, precautions, and information regarding application and use in corn.



## **TANK MIXTURE WITH BALANCE PRO - FIELD CORN ONLY**

AX S-MET and Balance PRO have a complementary crop response and weed control profile which allows various tank mix rate combinations to be considered. The addition of Balance PRO will improve the control of certain problem weeds including Texas panicum, woolly cupgrass, and wild proso millet. AX S-MET improves both the duration and spectrum of annual grass and small seeded broadleaf weed control, in particular foxtails (yellow foxtail), witchgrass, and yellow nutsedge.

**Restriction:** The Balance PRO label does not allow applications to coarse textured soils with less than 1.5% organic matter and warns about applications to all soils with less than 1.5% organic matter or with pH greater than 7.5, as well as applications made to areas in fields with clay knolls, eroded hillsides, and exposed subsoil.

Listed below are compensating rate options for combinations of AX S-MET and Balance PRO, i.e. higher rates of AX S-MET are combined with lower rates of Balance PRO, and vice versa. Select a rate option for AX S-MET plus Balance PRO by weighing the intensity of problem weed pressure (population presence and density) and your acceptance for risk of an adverse crop response. For example, where Texas panicum, woolly cupgrass, or wild proso millet are a primary target weed, use a tank mix combination with a higher Balance PRO rate for the given soil type.

Where your acceptance of an adverse crop response risk is low and/or a more general weed spectrum is targeted (especially yellow foxtail, witchgrass or yellow nutsedge), use a tank mix combination with a higher AX S-MET rate for the given soil type. Where a target weed is listed as controlled on both product labels, a tank mix combination option including intermediate rates of both products may be used. Where a target weed is listed as controlled on only one product label, **DO NOT** apply a rate of that product below what is listed for that weed on the individual product label, or unacceptable control may result. Follow all other directions for use, rate limitations, precautions and restrictions on both the AX S-MET and Balance PRO product labels.

AX S-MET plus Balance PRO tank mix rate options when applied pre-plant (incorporated or surface applied) up to 7 days before planting or preemergence in field corn:

**For coarse textured soils**, where 1.5 or 1.88 ounces per acre of Balance PRO is used, 1.0 to 1.33 pints (0.95 – 1.27 lb ai) of AX S-MET may be applied. **DO NOT** use Balance PRO on coarse textured soils with less than 1.5% organic matter.

**For medium textured soils**, where 1.5 ounces per acre of Balance PRO is used, rates as low as 1.33 pints (1.27 lb ai) per acre of AX S-MET may be applied. Where 1.88 or 2.25 ounces per acre of Balance PRO is used, rates as low as 1.0 pint (0.95 lb ai) per acre of AX S-MET may be applied. AX S-MET can be used in combinations with Balance PRO at rates up to 1.67 pints (1.59 lb ai) per acre on medium textured soils.

**For fine textured soils**, where 1.5 ounces per acre of Balance PRO is used, rates as low as 1.33 pints (1.27 lb ai) per acre of AX S-MET may be applied if the soil organic matter is less than 3% - if the soil organic matter content is 3% or greater, 1.67 pints (1.59 lb ai) per acre of AX S-MET should be applied. Where 1.88 or 2.25 ounces per acre of Balance PRO is used, rates as low as 1.33 pints (1.27 lb ai) per acre of AX S-MET may be applied. Where 3.0 ounce per acre or more of Balance PRO are used, rates as low as 1.0 pints (0.95 lb ai) per acre of AX S-MET may be applied. AX S-MET can be used in combinations with Balance PRO at rates up to 2.0 pints (1.91 lb ai) per acre on fine textured soils if the soil organic matter content is 3% or greater.

## **TANK MIXTURES FOR POSTEMERGENCE SALVAGE WEED CONTROL IN FIELD CORN ONLY**

For postemergence control of weeds in specific types of field corn, the AX S-MET combinations listed below may be used. Full season weed control from early preplant, preplant incorporated or preemergence treatments can lead to maximum yield potential under competition-free conditions. However, if control of emerged weeds is needed, a postemergence program listed below can be applied to provide residual control for the remainder of the season.

(1) Follow all label directions, instructions, precautions, and limitations for each product used. (2) **DO NOT** use fluid fertilizer with these mixtures or corn injury may occur. (3) For each tank mixture with AX S-MET, apply only to the specific field corn type specified on the tank mix product label. (4) In-row weed control may be reduced because of lack of coverage when applied to corn over 4 inches tall.

### **AX S-MET + Liberty Herbicide or Ignite® 280 SL Herbicide: Postemergence Use in LibertyLink® Corn or Corn Warranted by Bayer CropScience as Being Tolerant to Liberty Herbicide or Ignite 280 SL Herbicide**

These tank mixtures can be applied postemergence to weeds and corn from seed designated as LibertyLink or corn warranted by Bayer CropScience as being tolerant to Liberty Herbicide or Ignite 280 SL Herbicide. Liberty provides postemergence control of a broad spectrum of grass and broadleaf weeds and the AX S-MET provides residual control of grasses and certain broadleaf weeds listed in the label section **AX S-MET Applied Alone - Weeds Controlled**. Refer to the **AX S-MET Alone - Preplant Incorporated or Preemergence** section and use the minimum rate per soil texture and organic matter classification for season-long residual control from this tank mix combination with Liberty. Refer to the Liberty Herbicide or Ignite 280 SL Herbicide labels for the postemergence application rates according to weed species and their maximum height at the time of postemergence application. Where multiple weed species are present, use the highest Liberty rate listed to control the species and growth stages present.

Follow all applicable use directions, limitations, precautions, and information regarding application to corn on the AX S-MET, Liberty Herbicide, or Ignite 280 SL Herbicide labels. Where difficult species and/or severe weed populations are expected, use the maximum rate where rate ranges are listed.

### **AX S-MET + Touchdown Brands or Roundup Brands for Postemergence Application to Glyphosate Tolerant Corn (e.g., Roundup Ready® or Agrisure™ GT)**

The tank mixture of AX S-MET + Touchdown or Roundup brands can be applied postemergence to weeds and to corn designated as glyphosate tolerant. Application may be applied postemergence to glyphosate tolerant corn from emergence until corn reaches 30 inches tall or the V8 stage (8 leaves with collars), whichever comes first. This mixture will provide postemergence control of weed species on the Touchdown brand or Roundup brand label and residual control of weed species on the AX S-MET label. Use the minimum AX S-MET rate postemergence with Touchdown or Roundup in glyphosate tolerant corn as specified in the **Corn - AX S-MET Alone - Preplant Incorporated or Preemergence** section of this label according to soil texture and organic matter. Refer to the Touchdown brand or Roundup brand label and follow appropriate use directions, application procedures, precautions, and limitations. Refer to the Touchdown brand or Roundup brand label for directions for control of problem species.

Follow all applicable use directions, limitations, precautions, and information regarding application to corn on the AX S-MET and Touchdown brand or Roundup Ultra brand labels, and on the **Supplemental Labeling of Roundup Ultra for Postemergence Application to Corn with the Roundup Ready Gene**. Where difficult species and/or severe weed populations are expected, use the maximum rate where rate ranges are listed.

**AX S-MET + Touchdown Brands or Roundup Brands + AAtrex for Postemergence Application to Glyphosate Tolerant Corn (i.e., Roundup Ready or Agrisure GT)**

The tank mixture of AX S-MET + AAtrex + Touchdown brands or Roundup brands can be applied postemergence to weeds and to corn designated as glyphosate tolerant. Application may be applied postemergence to glyphosate tolerant corn from emergence up to 12 inches in height. This mixture will provide postemergence control of weed species on the Touchdown brand or Roundup brand label and residual control of weed species on the AX S-MET + AAtrex label. Use the minimum AX S-MET + AAtrex rate postemergence with Touchdown or Roundup in glyphosate tolerant corn as specified in the **Corn - AX S-MET Combinations - Tank Mixture With AAtrex or Princep, or AAtrex + Princep - Preplant Incorporated or Preemergence** section and Table 3 of this label according to soil texture and organic matter.

Follow all applicable use directions, limitations, precautions, and information regarding application to corn on the AX S-MET, AAtrex, and Touchdown brand or Roundup brand labels for application to glyphosate tolerant corn. Where difficult species and/or severe weed populations are expected, use the maximum rate where rate ranges are listed.

**COTTON - AX S-MET ALONE**

**Application:** Apply AX S-MET preemergence only in Area 1\* at the rate of 0.5 to 1.0 pints (0.48 – 0.95 lb ai) per acre on sandy loams, 0.66 to 1.33 pints (0.63 – 1.27 lb ai) per acre on medium soils, or 1.0 to 1.33 pints (0.95 – 1.27 lb ai) pints per acre on fine soils. Apply AX S-MET preplant incorporated or preemergence in Area 2\*\* at 1.0 pints (0.95 lb ai) per acre on sandy loams, 1.0 to 1.33 pints (0.95 – 1.27 lb ai) pints per acre on medium soils, or 1.33 pints (1.27 lb ai) per acre on fine soils. Apply AX S-MET postemergence to cotton and preemergence to weeds at 0.5 to 1.33 pints (0.48 – 1.27 lb ai) per acre, according to the state rate limitations in the following **Postemergence** section. **DO NOT use on sands and loamy sand.**

\*Area 1 = AR, KS, LA, MS, TN, and Bootheel of MO

\*\*Area 2 = NM, OK, and TX

**Fall Application for Italian Ryegrass Control:** AX S-MET may be applied for residual control of glyphosate-resistant Italian ryegrass (*Lolium multiflorum*). Apply AX S-MET at 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre in the fall (September 1 to December 1) after harvest of the previous crop and prior to Italian ryegrass emergence. Use the lower AX S-MET rate for coarse textured soils and the higher rate for fine textured soils. A tillage operation may precede the application. **DO NOT** incorporate to a depth greater than 2 to 3 inches if tillage follows the application of AX S-MET. For fall applications after emergence of glyphosate-resistant Italian ryegrass, Gramoxone Inteon can be tank mixed with AX S-MET to control emerged ryegrass. Refer to the Gramoxone Inteon label for specific rates, application instructions and restrictions. Other registered herbicides may be tank mixed with AX S-MET for control or improved control of other weeds present at the time of application.

**Restrictions:** (1) **DO NOT** apply AX S-MET to frozen ground. (2) If a spring application is made, the combined total amount of AX S-MET applied in the fall plus the spring must not exceed the

maximum yearly S-metolachlor rate for cotton (2.6 pints (2.48 lb ai) per acre, depending on soil texture).

**Preplant Incorporated (NM, OK, and TX Only):** Apply to the soil and incorporate into the top inch of soil immediately before planting, at planting, or after planting, but before crop or weeds emerge. Use a rolling cultivator or similar implement to uniformly incorporate not more than 1 inch deep. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. Where furrow irrigation is used, wet the top of the bed for best results. If the crop is to be planted on beds, apply and incorporate after bed formation. Cotton should be planted below the zone of incorporation; i.e., at least 1 inch on fine soils and 1.5 inches on coarse and medium soils. If incorporated prior to planting, use a planter that will result in a minimum of soil disturbance.

**Note:** For best control of yellow nutsedge and suppression of seedling johnsongrass, apply AX S-MET preplant incorporated at the maximum rate for the soil texture, whether applied alone or mixed with Caparol 4L.

**Preemergence:** Apply to the soil surface at planting or after planting, but before weeds or crop emerge.

**Postemergence:** Apply AX S-MET broadcast over-the-top or directed to the soil surface according to the rate limitations listed below by state. Over-the-top postemergence application may be made not later than 100 days before harvest, and directed-postemergence application may be made not later than 80 days before harvest. Application before weeds emerge or after clean cultivation to remove existing weeds is necessary since AX S-MET will not control emerged weeds. AX S-MET postemergence may be applied over any previous registered herbicide treatment. In sprinkler-irrigated areas, sprinkler irrigate after application with  $\frac{1}{2}$ -1 inch of water ( $\frac{1}{2}$  inch on coarse-textured soils to 1 inch on fine-textured soils) to incorporate AX S-MET. In furrow-irrigated areas, apply AX S-MET, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In nonirrigated areas, if at least  $\frac{1}{2}$  inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of AX S-MET.

**VA, NC, SC, GA, FL, and AL:** Apply AX S-MET postemergence at 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre.

**TN, AR, KS, MS, MO, and LA:** Apply AX S-MET postemergence at 0.5 to 1.33 pints (0.48 – 1.27 lb ai) per acre.

**TX, OK, NM, AZ, CA, and Clay Soils in AR:** Apply AX S-MET postemergence at 1.0 to 1.33 pints (0.95 – 1.27 lb ai) before August 1.

**Multiple Applications:** Where weed pressure is heavy, difficult to control species are expected, or reinfestation may occur, and a weed control program is used, multiple applications of AX S-MET are effective when used as part of the weed control program. Apply as a preplant incorporated or preemergence treatment and follow with an application postemergence to cotton before weeds emerge or after clean cultivation to remove existing weeds, since AX S-MET will not control emerged weeds. Apply AX S-MET postemergence over a previous preplant or preemergence AX S-MET application as shown in the following table.

### Multiple AX S-MET Applications to Cotton

State	Preplant Incorporated or Preemergence Pts./A	+	Postemergence Pts./A
MS, LA, TN, AR, KS, MO	0.5-1.33 (Preemergence Only)	+	0.5-1.33
TX, OK, NM	1.0-1.33	+	1.0-1.33 before August 1
NC, VA	1.0-1.33 (Preemergence Only)	+	1.0-1.33

In sprinkler-irrigated areas, sprinkler irrigate after application with ½-1 inch of water (½ inch on coarse-textured soils to 1 inch on fine-textured soils) to incorporate AX S-MET. In furrow-irrigated areas, apply AX S-MET, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In non-irrigated areas, if at least ½ inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of AX S-MET.

**Notes:** For best control of yellow nutsedge and suppression of seedling johnsongrass, apply AX S-MET preplant incorporated, preemergence, or postemergence to cotton and preemergence to weeds at the maximum rate for the soil texture, whether applied alone or in combinations. **DO NOT** apply more than a total of 2.0 pints (1.91 lb ai) per acre on coarse soils or 2.6 pints (2.48 lb ai) per acre of AX S-MET on medium and fine soils per year. These treatments may be applied over previous registered herbicide treatments.

**Restrictions:** (1) **DO NOT** apply on Taloka silt loam. (2) **DO NOT** use in Gaines County, TX. (3) **DO NOT** graze or feed forage or fodder from cotton to livestock.

**Precautions:** TO AVOID CROP INJURY (1) **DO NOT** apply AX S-MET on sand or loamy sand soils, or in areas where water is likely to “pond” over the bed; (2) To avoid concentration in the seed furrow, **DO NOT** make broadcast applications of AX S-MET to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width must not exceed the width of the bottom of the furrow; (3) In furrow-planted cotton, to avoid concentration in the furrow and potential injury, **DO NOT** apply AX S-MET postemergence until after first “knifing” or cultivation to level soil surface. (4) **DO NOT** apply over-the-top in fluid fertilizer or any other adjuvant, surfactant, oil, or other pesticide not listed in the cotton section of this label.

<b>COTTON - DUAL MAGNUM COMBINATIONS</b>
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**TANK MIXTURE WITH CAPAROL 4L**

AX S-MET tank mixtures with Caparol 4L may be applied preplant incorporated or preemergence in water or fluid fertilizer. When fluid fertilizer is used as a carrier for AX S-MET, either alone or in combination with Caparol 4L, mix only the amount that will be sprayed in one operation. These mixtures should not be allowed to stand without agitation. Only water may be used as a carrier for postemergence-directed application.

In addition to those weeds controlled by AX S-MET alone, AX S-MET + Caparol 4L, applied preplant incorporated or preemergence also controls the following weeds: junglerice, wild oats, annual morningglory, groundcherry, hairy nightshade, lambsquarters, malva, mustard, prickly sida (teaweed), purslane, ragweed, and shallow-germinating seedlings of cocklebur and coffeeweed. As a postemergence-directed application, Caparol provides postemergence control

and residual control of weeds on its label, while AX S-MET provides residual control of weed species on its label. AX S-MET will not control emerged weeds.

**Preplant Incorporated or Preemergence:** Apply AX S-MET + Caparol 4L, either preplant incorporated or preemergence, using the appropriate rate from Table 5. Cotton should be planted below the zone of incorporation; i.e., at least 1.0 inch on fine soils and 1.5 inches on coarse and medium soils. If incorporated before planting, use a planter that will result in a minimum of soil disturbance.

**Table 5: AX S-MET + Caparol 4L - Cotton (NM, OK, TX)**

**Broadcast Rates Per Acre**

Use Areas	Soil Texture	AX S-MET	Caparol 4L
ALL	Sand, loamy sand	DO NOT USE	DO NOT USE
OK, and Blacklands and Gulf Coast of TX	Loams	0.8-1.33 pts.	2.4 pts.
	Clays	1.33 pts.	4.8 pts.
Rio Grande Valley of TX	Loams	0.8-1.33 pts.	3.2 pts.
	Clays	1.33 pts.	4.8 pts.
NM; High Plains, Rollings Plains, Edwards Plateau of TX; and Southwest TX	Sandy loam	0.8-1.0 pt.	1.6 pts.
	Loams	0.8-1.33 pts.	2.4 pts.
	Sandy clay loams	1.33 pts.	2.4 pts.
	Other Clay soils	1.33 pts.	3.2 pts.

**Postemergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and MO):** AX S-MET may be tank mixed with Caparol 4L in water and applied postemergence- directed in cotton for control of emerged weeds listed on the Caparol 4L label and residual preemergence control of weeds controlled by AX S-MET and Caparol 4L. Or application may be made after cultivation for residual preemergence control. These treatments may be applied over previous registered treatments, including AX S-MET, provided the maximum label rate of any product is not exceeded. **DO NOT** apply over-the-top of cotton, or injury may occur.

Apply AX S-MET + Caparol 4L in a minimum of 20 gallons of spray volume per acre. Follow the directions, limitations, and precautions on the Caparol 4L label when Caparol is applied as a postemergence-directed application. Refer to the directions, limitations, and precautions for use of AX S-MET under the **Cotton - AX S-MET Alone – Postemergence** section.

**Precautions:** TO AVOID CROP INJURY; (1) **DO NOT** apply on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed; (2) **DO NOT** apply in cut areas of newly leveled fields, or in areas of excess salt; (3) **DO NOT** apply to glandless cotton varieties; (4) To avoid concentration in the seed furrow, **DO NOT** make broadcast applications of AX S-MET + Caparol 4L to cotton planted in furrows more than 2 inches deep. Band applications may be made to

cotton planted in furrows deeper than 2 inches, but band width must not exceed the width of the bottom of the furrow.

**Restrictions:** (1) **DO NOT** apply on Taloka silt loam. (2) **DO NOT** use in Gaines County, TX. (3) **DO NOT** graze or feed forage or fodder from cotton to livestock.

Refer to the Caparol 4L label for further instructions and limitations.

**TANK MIXTURE WITH COTORAN DF**

AX S-MET may be applied in tank mixture with Cotoran DF preemergence for control of those weeds controlled by AX S-MET alone and those as listed on the Cotoran DF label. This combination will also control spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge. Apply to the soil surface at planting or after planting, but before weeds or crops emerge, using the appropriate rates from Table 6. The tank mixture may be applied postemergence to cotton, but preemergence to weeds, or it may be applied postemergence to both cotton and broadleaf weeds for control of weeds on the Cotoran label. Apply as a directed, semi-directed, or over-the-top spray AX S-MET will not control emerged weeds, but will provide preemergence control of species on its label.

**Mixing Instructions:** Incompatibility may occur when tank mixing AX S-MET and Cotoran DF. To help overcome this condition, fill the spray tank 1/4 full with water or fluid fertilizer and start agitation, add the Cotoran DF and allow it to become dispersed. Add a surfactant such as VOYAGER 90/10 OR VOYAGER 80/20 at 0.5% volume/volume final spray (4.0 pints per 100 gallons), then add the AX S-MET and finally the rest of the water or fluid fertilizer. Agitate during mixing and application to maintain a uniform suspension. **DO NOT** use fluid fertilizer as a carrier for postemergence applications.

**Table 6: AX S-MET + Cotoran DF - Cotton**

**Broadcast Rates Per Acre**

	AX S-MET (pts.)	AX S-MET (pts.)	Cotoran DF*** (lbs.)
Soil Texture	Area 1*	Area 2**	
Sand, loamy sand	DO NOT USE	DO NOT USE	DO NOT USE
Sandy loam	0.5-1.0	0.8-1.0	1.2
Loam, silt loam, silt	0.66-1.33	1.0-1.33	1.2-1.9
Fine soil	1.0-1.33	1.33	1.9-2.4

\*Area 1=AR, LA, MS, Bootheel of MO and TN

\*\*Area 2=Eastern OK, Gulf Coast, Rio Grande Valley, and Eastern TX

\*\*\*When using Cotoran 4L, use equivalent rates. Multiply lbs. of Cotoran DF by 1.7 to get pts. of Cotoran 4L.

**Postemergence:** This tank mixture may be applied postemergence to cotton, but preemergence to weeds or postemergence to both cotton and weeds for control of weeds on the Cotoran label. Apply as a directed, semi-directed, or over-the-top spray. AX S-MET will not control emerged weeds, but will provide preemergence control of species on its label. Where rate ranges are given for Cotoran DF, use the higher rate when applying postemergence to weeds that are 2 inches or

less. These treatments may be applied over previous registered treatments, including AX S-MET, provided the maximum label rate of any product is not exceeded.

**Precautions:** (1) **DO NOT** apply AX S-MET + Cotoran on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed, or crop injury may occur. (2) To avoid concentration in the seed furrow, **DO NOT** make broadcast applications of AX S-MET + Cotoran to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width must not exceed the width of the bottom of the furrow. (3) The use of Cotoran following the use of a systemic insecticide at planting may result in crop injury.

**Restrictions:** (1) **DO NOT** feed treated forage or gin trash to livestock, or graze treated areas. (2) **DO NOT** use on Taloka silt loam, or crop injury may occur. (3) **DO NOT** use in Gaines County, TX;

Refer to the Cotoran labels for further instructions, precautions, and limitations.

### **TANK MIXTURE OF AX S-MET OR AX S-MET + COTORAN WITH GRAMOXONE INTEON, TOUCHDOWN BRANDS OR ROUNDUP BRANDS FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS**

In minimum-tillage or no-tillage systems where cotton is planted directly into a cover crop, stale seedbed, or previous crop residues, the contact herbicides Gramoxone Inteon, Touchdown brands or Roundup brands may be added to a tank mix of either AX S-MET or AX S-MET + Cotoran. When used as directed, the Gramoxone Inteon portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Touchdown or Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Touchdown or Roundup label. The AX S-MET and AX S-MET + Cotoran portion of the tank mixture provides preemergence control of the weeds listed on this label in the AX S-MET and AX S-MET + Cotoran sections, respectively.

Refer to the label of each product used in combination and observe the planting details, information regarding application, geographical restrictions, and all other precautions and limitations. Refer to **Mixing Instructions under Tank Mixture with Cotoran DF** section.

**Application:** Apply before, during, or after planting, but before the cotton emerges. Apply AX S-MET at 0.8 to 1.0 pint (0.76 – 0.95 lb ai) per acre on sandy loams, medium-, and fine-textured soils. Refer to Table 6 for the Cotoran DF rates.

**Gramoxone Inteon:** Apply as directed on the product label. This treatment will not control weeds taller than 6 inches.

**DO NOT** apply combinations containing Gramoxone Inteon in suspension-type liquid fertilizers, as the activity of paraquat will be reduced.

**Touchdown Brands or Roundup Brands:** See the Touchdown or Roundup label for weeds controlled, use rates, and other use directions.

**DO NOT** apply AX S-MET + Cotoran 4L + Roundup in tank mixture because of compatibility problems.



Apply in 20 to 60 gallons of water or fluid fertilizer per acre with ground equipment.

**Precautions:** (1) If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days, or where the seeding slit has not been properly closed. (2) Refer to the Cotoran labels and the **Tank Mixture with Cotoran DF** section of this label for further instructions, precautions, and limitations.

**Restriction:** **DO NOT** use in Gaines County, TX.

#### **TANK MIXTURE WITH MSMA, MSMA + CAPAROL, OR MSMA + COTORAN**

AX S-MET may be tank mixed with MSMA in water and applied postemergence directed for control of emerged weeds listed on the MSMA product label and residual preemergence control of weeds controlled by AX S-MET. The addition of Caparol or Cotoran will add control of weed species on their respective labels.

**Postemergence-Directed (AL, AR, AZ, CA, FL, GA, LA, MS, NC, NM, OK, SC, TN, TX, VA, and Bootheel of MO):** Apply AX S-MET + MSMA postemergence-directed to cotton at least 3 inches tall according to the directions, limitations, and precautions on the MSMA product label, as well as the directions, limitations, and precautions for use of AX S-MET in the section for **Cotton - AX S-MET Alone - Postemergence. DO NOT** apply after first cotton bloom. These treatments may be applied over previous registered treatments, including AX S-MET, provided the maximum label rate of any product is not exceeded. Cotoran or Caparol may be added to the AX S-MET + MSMA tank mixture according to the respective label directions for application to cotton at least 3 inches tall. When these mixtures are used, follow the mixing instructions for AX S-MET + Caparol or Cotoran and then add the MSMA product.

**Restriction:** **DO NOT** use AX S-MET in tank mix with premixes of MSMA plus herbicides other than those registered for use in tank mixture with AX S-MET on cotton.

#### **TANK MIXTURE WITH TREFLAN FOR POST-DIRECTED FOLLOWED BY SOIL INCORPORATION APPLICATIONS**

AX S-MET may be applied as a tank mixture with Treflan in cotton for improved late season weed control when used as an incorporated layby type application. This combination may be applied after the cotton is at least 3 inches tall and has reached the 4 true-leaf stage. Make the application directed to the soil surface and away from the crop foliage. Incorporate using a sweep or rolling type cultivator to provide uniform and shallow mixing into the top 2 inches of soil. Refer to each product label for the appropriate application rates by soil type and for this application timing -- and follow all product use limitations and restrictions.

#### **TANK MIXTURE WITH TOUCHDOWN BRANDS OR ROUNDUP BRANDS FOR USE ON ROUNDUP READY COTTON ONLY**

Apply AX S-MET as a tank mixture with Touchdown or Roundup in water postemergence over-the-top or postemergence-directed for control of emerged weeds listed on the Touchdown or Roundup labels and for residual preemergence control of weeds listed on the AX S-MET label. See the **Cotton - AX S-MET Alone - Postemergence** section of this label for rates and timings of AX S-MET and follow the Touchdown or Roundup label for their respective rates, application method, and application timing restrictions. **DO NOT** add additional spray adjuvants, surfactants, fertilizer additives, or pesticides to this tank mixture if applied postemergence over-the-top or unacceptable injury may occur. Refer to the Touchdown brand or Roundup brand label and follow appropriate use directions, application procedures, precautions, and limitation.

**Precaution:** Postemergence over-the-top applications of this tank mixture may cause temporary injury in the form of necrotic spotting to exposed cotton leaves, which will not affect normal plant development.

**Restrictions:** (1) **DO NOT** apply this tank mixture postemergence to any cotton variety unless it is designated Roundup Ready and unless the Touchdown or Roundup formulation is used is registered for postemergence use in Roundup Ready Cotton. (2) **DO NOT** apply Touchdown or Roundup postemergence over the-top to cotton past the growth stage limit specified on their respective labels. (3) **DO NOT** use on sand or loamy sand soils in Gaines County, TX.

<b>SOYBEAN, IMMATURE SEED</b>
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AX S-MET may be applied preplant or pre-emergence for the control or suppression of grass and small seeded broadleaf weeds in soybean, immature seed or other food grade soybeans. For specific rates, see the rate table listed below.

**Preplant Surface-Applied:** For minimum-tillage or no-tillage systems only, AX S-MET alone may be applied up to 45 days before planting. Use only split applications for treatments made 30-45 days before planting, with 2/3 the recommended broadcast rate for the crop and soil texture applied initially and the remaining 1/3 applied at planting. Treatments less than 30 days before planting may be made either as a split or a single application. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone Inteon, Touchdown, or Roundup). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, **DO NOT** move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

**Preplant Incorporated:** Apply AX S-MET to the soil and incorporate into the top 2 inches of soil within 14 days before planting; using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate AX S-MET after bed formation, unless specified otherwise.

**Preemergence:** Apply AX S-MET during planting (behind the planter) or after planting, but before weeds emerge.

**AX S-MET Broadcast Rates Per Acre**

Soil Texture	Percent Organic Matter in Soil	
	< 3%	> 3%
Coarse	1-1.33 pt	1.33 pt
Medium	1.33-1.67 pt	1.33-1.67 pt
Fine	1.33-1.67 pt	1.67-2.0 pt

**Precaution:** AX S-MET will not control emerged weeds.

**Restrictions:** (1) **DO NOT** cut for hay within 120 days following a AX S-MET application. (2) **DO NOT** use for forage within 60 days following a AX S-MET application. (3) **DO NOT** apply more than 2.0 pints (1.91 lb ai) per acre of AX S-MET per year.

**GRASSES GROWN FOR SEED (ID, OR, WA) - AX S-MET APPLIED ALONE**

To control weeds and volunteer grasses in established grasses grown for seed, apply AX S-MET to established stands of tall fescue, orchardgrass, perennial ryegrass, fine fescue, bentgrass, and Kentucky bluegrass just before, during, or immediately following the first fall rains or just before or during a late summer or early fall irrigation, but before target grasses emerge. The seed crop must have had one seed harvest or been established at least one year. The postharvest residue (straw) must be evenly spread, removed, or burned before applying AX S-MET. Rainfall or irrigation is required after application and before weed emergence for best control. AX S-MET will provide preemergence control/suppression of volunteer seedlings of perennial ryegrass, fine fescue spp., tall fescue, orchardgrass, bentgrass and Kentucky bluegrass. AX S-MET will control those weed species listed in the **AX S-MET Alone** section of the AX S-MET label and will suppress or control rattail fescue, annual bluegrass, Italian ryegrass, California brome, downy brome, and roughstalk bluegrass.

Apply AX S-MET by ground equipment in a minimum of 10 gallons of water per acre using the rate listed below according to grass species.

<b>Established Grass Crop Grown for Seed</b>	<b>Pts./A</b>
Fine fescue spp.	1.0
Perennial ryegrass	1.0
Bentgrass	1.0-1.33
Kentucky bluegrass	1.0-1.33
Orchardgrass	1.0-1.33
Tall fescue	1.0-1.33

**Precautions:** TO AVOID CROP INJURY or POOR CONTROL (1) **DO NOT** apply after the 15th of November. (2) Tank mixtures with other pesticides, or the addition of an adjuvant, can increase the risk of crop injury. (3) Application to perennial ryegrass and fine fescue stands under stress may cause crop injury. (4) If weed escapes occur following an AX S-MET application, an application of a postemergence herbicide may be necessary to control escapes. When making such an application, follow all directions, precautions, and limitations on the label of the postemergence herbicide. (5) Control may be decreased if excessive straw from the previous harvest is present at application and/or insufficient rainfall/irrigation occurs.

**Restrictions:** (1) **DO NOT** graze forage regrowth for 60 days following application west of the Cascades. (2) In areas east of the Cascades, **DO NOT** graze forage regrowth for 150 days following application. (3) Hay may be harvested anytime between seed harvest and the next application of S-metolachlor. (4) Apply AX S-MET only once per crop year.

## HORSERADISH

Apply a single application of AX S-MET at a broadcast rate of 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre to the soil surface after planting, but before weeds or crop emergence (i.e., preemergence). Use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. A band application may also be used, applying proportionally less spray mixture on the area actually treated. AX S-MET will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical means. AX S-MET alone may be applied as directed after any of the following preplant incorporated herbicides when used according to their label directions: Balan at 3.0 to 4.0 quarts per acre; Treflan E.C. at 1.0 pint per acre; Sonalan at 1.25 to 3.0 pints per acre; Pursuit at 0.25 pint per acre; or Prowl at 1.0-2.0 pints per acre.

**Restrictions:** (1) Make only one application of AX S-MET per crop. (2) **DO NOT** apply more than 1.33 pints (1.27 lb ai) per acre of AX S-MET per year. (3) Harvest horseradish at normal timing.

## PEANUTS - AX S-MET ALONE

Apply AX S-MET, either preplant incorporated, postplant incorporated, preemergence, or lay-by, using the appropriate rate specified below. **Preplant Incorporated or Preemergence:** Follow instructions for use of AX S-MET alone under **Application Procedures**. AX S-MET alone may be applied as directed after any of the following preplant incorporated herbicides when used according to their label recommendations: Balan at 3.0-4.0 quarts per acre; Treflan E.C. at 1.0 pint per acre; Sonalan at 1.25 to 3.0 pints per acre; Pursuit at 0.25 pint per acre; or Prowl at 1.0 to 2.0 pints per acre.

**Postplant Incorporated:** Apply and shallowly incorporate AX S-MET into the soil after planting, but before peanut germination. Incorporation depth and incorporating implements must be kept above the seed, or seed will be damaged.

**Lay-by:** Apply AX S-MET to the soil immediately after the last normal cultivation.

Apply AX S-MET alone, preplant incorporated, postplant incorporated, preemergence, or lay-by, at a broadcast rate of 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre in the Southeast\* and 0.8 to 1.33 pints (0.76 – 1.27 lb ai) per acre in NM, OK, and TX.

\*In the Southeast, use 1.33 to 2.0 pints (1.27 – 1.91 lb ai) per acre and apply preemergence for partial control of Florida beggarweed.

**Restrictions:** (1) **DO NOT** graze or feed peanut forage or fodder to livestock for 30 days following application, and (2) **DO NOT** apply within 90 days of harvest.

## PEANUTS - AX S-MET COMBINATIONS

### TANK MIXTURE WITH BALAN L.C.

AX S-MET + Balan tank mixture applied preplant incorporated controls those weeds listed under **AX S-MET Applied Alone** and those weeds as listed on the Balan label.

Apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET + 3.0 to 4.0 quarts per acre of Balan in a minimum of 10 gallons of spray volume per acre for ground application or in a minimum

of 5.0 gallons of spray volume per acre for aerial application. Follow the use directions on the Balan label for soil preparation and incorporation of this tank mix. Apply and incorporate AX S-MET + Balan up to 14 days prior to planting.

Follow all restrictions and precautions on the Balan label.

**Multiple Applications:** Where weed pressure is heavy or where species difficult to control are expected, AX S-MET is most effective when used as follows:

**Southeast Only (AL, FL, GA, NC, SC, VA)**

**Preplant Incorporated:** Apply AX S-MET preplant incorporated as directed under **Peanuts - AX S-MET Alone** or apply AX S-MET + Balan preplant incorporated as directed previously in this section. Refer to the respective section for weeds controlled.

**OR**

**Preemergence before "ground cracking":** Apply AX S-MET any time from preemergence up to "ground cracking" at 1.0 to 2.0 (0.95 – 1.91 lb ai) per acre for extended control of weeds not yet emerged. Refer to the **AX S-MET Applied Alone** section for a list of weeds controlled.

Follow the PPI or PRE application by:

**Lay-by:** Apply AX S-MET at lay-by as directed under **Peanuts - AX S-MET Alone**. Use only when late germinating weeds are expected to be a problem. Refer to the **AX S-MET Applied Alone** section for a list of weeds controlled.

**Restrictions:** (1) **DO NOT** apply more than the equivalent of 2.67 lb ai of AX S-MET per acre during any one year, or illegal residues may result. If Dual II Magnum is used as a sequential treatment, the pounds of active ingredient (1.0 pint = 0.95 pound) plus the pounds of active ingredient of AX S-MET must not exceed 2.67 pounds. **DO NOT use Dual II Magnum or Dual IIG Magnum after peanuts have emerged.** (2) **DO NOT** graze or feed peanut forage or fodder to livestock for 30 days following application, and (3) **DO NOT** apply within 90 days of harvest.

**Southwest Only (NM, OK, TX)**

**1st Application:** Apply AX S-MET preplant incorporated or preemergence or at cracking as directed previously in this section. Refer to the respective section for weeds controlled.

**2nd Application:** Apply AX S-MET at lay-by as directed under **Peanuts – AX S-MET Alone** on that label. Use only when late germinating weeds are expected to be a problem. Refer to the **AX S-MET Applied Alone** section for a list of weeds controlled.

**Restrictions:** (1) **DO NOT** apply more than the equivalent of 2.67 pounds of active ingredient of AX S-MET per acre during any one year. If Dual II Magnum® is used as a sequential treatment, the pounds of active ingredient (1.0 pint = 0.95 pound) plus the pounds of active ingredient of AX S-MET must not exceed 2.67 pounds. **Do not use Dual II Magnum or Dual IIG Magnum after peanuts have emerged.** (2) **DO NOT** graze or feed peanut forage or fodder to livestock for 30 days following application, and (3) **DO NOT** apply within 90 days of harvest.

**TANK MIXTURE OR SEQUENTIALLY WITH PURSUIT**

The tank mixture or sequential treatment of AX S-MET and Pursuit controls all weeds controlled by AX S-MET alone and by Pursuit alone. Refer to the **AX S-MET Applied Alone** section for weeds controlled by AX S-MET and to the Pursuit label for weeds controlled by Pursuit.

Refer to the respective labels for application methods, timing, rates, restrictions, and precautions; and use in accordance with the more restrictive label. **DO NOT** exceed the label rate of either product. AX S-MET will not control emerged weeds.

**TANK MIXTURE WITH SONALAN**

The tank mixture controls all weeds controlled by AX S-MET alone and by Sonalan alone. Refer to the **AX S-MET Applied Alone** section for weeds controlled by AX S-MET and to the Sonalan label for weeds controlled by Sonalan.

Apply AX S-MET + Sonalan preplant incorporated using the appropriate rate from Table 7. Follow directions for soil preparation procedures for Sonalan.

**Table 7: AX S-MET + Sonalan - Peanuts**

**Broadcast Rates Per Acre**

	Southeast	Southeast	NM, OK, TX	NM, OK, TX
Soil Texture	AX S-MET	Sonalan	AX S-MET	Sonalan
<b>COARSE</b>	1.0-1.33 pts.	1.25-2.0 pts.	0.8-1.33 pts.	1.25-2.0 pts.
<b>MEDIUM</b>	1.0-1.33 pts.	1.75-2.5 pts.	0.8-1.33 pts.	1.75-2.5 pts.
<b>FINE</b>	1.0-1.33 pts.	2.25-3.0 pts.	0.8-1.33 pts.	2.25-3.0 pts.

Follow all use directions, limitations, precautions, and information regarding application to peanuts on the AX S-MET and Sonalan labels.

**TANK MIXTURE WITH PROWL**

AX S-MET + Prowl applied preplant incorporated controls all weeds controlled by AX S-MET alone plus Texas panicum, field sandbur, johnsongrass from seed, lambsquarters, kochia, annual spurge, and other species on the Prowl label. Apply AX S-MET + Prowl by ground or by aerial equipment within 14 days before planting. Incorporate into the top 1-2 inches of soil before planting and within 7 days of application, using a finishing disk or similar implement capable of providing uniform incorporation. If peanuts will be planted on beds, apply and incorporate after bed formation. Refer to the **Incorporation** instructions of the respective labels for additional directions.

Apply AX S-MET + Prowl preplant incorporated, using the appropriate rates from Table 8.

**Table 8: AX S-MET + Prowl - Peanuts**

**Broadcast Rates Per Acre**

	<b>NM, OK, TX</b>	<b>Other Peanut Growing States</b>
<b>Soil Texture</b>	<b>AX S-MET + Prowl</b>	<b>AX S-MET + Prowl</b>
Sand, loamy sand	0.8 + 1.0-1.5 pts.	1.0-1.33 + +1.5-2.0 pts.
Sandy loam	0.8-1.0 + 1.0-1.5 pts.	1.0-1.33 + 1.5-2.0 pts.
Fine soil	1.33 + 1.0-1.5 pts.	1.33 + 1.5-2.0 pts.

Follow all use directions, limitations, precautions, and information regarding application to peanuts on the AX S-MET and Prowl labels.

**TANK MIXTURE OR SEQUENTIALLY WITH GRAMOXONE INTEON**

AX S-MET + Gramoxone Inteon applied at ground cracking or sequentially will control or suppress small (1-6 inch) emerged annual grass and broad leaf weeds and provide residual control of weed species listed in the **AX S-MET Applied Alone** section of this label. Apply Gramoxone Inteon plus the appropriate AX S-MET rate from the **Peanuts - AX S-MET Alone section** in a minimum spray volume of 20 gallons per acre with ground equipment. A second application of AX S-MET + Gramoxone Inteon may be made 28 days after ground cracking. (Refer to the **Peanuts - AX S-MET Combinations – Multiple Applications** section of this label for geographical areas where multiple applications are allowed.) Refer to the Gramoxone Inteon label and follow all directions, limitations, and restrictions.

**TANK MIXTURE OR SEQUENTIALLY WITH GRAMOXONE INTEON + BASAGRAN**

The addition of Basagran to the AX S-MET + Gramoxone Inteon mixture will result in improved control of such problem broadleaf weeds as prickly sida, cocklebur, smartweed, and bristly starbur. AX S-MET + Gramoxone Inteon + Basagran applied at ground cracking or sequentially will control or suppress small (1-6 inch) emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **AX S-MET Applied Alone** section of this label. Apply Basagran + Gramoxone Inteon with the appropriate AX S-MET rate from the **Peanuts - AX S-MET Alone** section in a minimum spray volume of 20 gallons per acre with ground equipment. A second application of AX S-MET + Gramoxone Inteon + Basagran may be made 28 days after ground cracking. (Refer to the **Peanuts - AX S-MET Combinations - Multiple Applications section** of this label for geographical areas where multiple applications are allowed.) Refer to the Gramoxone Inteon and Basagran labels and follow all directions, limitations, and restrictions.

**TANK MIXTURE OR SEQUENTIALLY WITH GRAMOXONE INTEON + BUTYRAC 200 OR BUTOXONE 200**

The addition of Butyrac 200 or Butoxone 200 to the AX S-MET + Gramoxone Inteon mixture will result in improved control of such problem broadleaf weeds as sicklepod, morningglory, and cocklebur. AX S-MET + Gramoxone Inteon + Butyrac 200 or Butoxone 200 applied at ground cracking or sequentially will control or suppress small (1 to 6 inch) emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **AX S-MET Applied Alone** section of this label. Apply Gramoxone Inteon + Butyrac 200 or Butoxone 200 with the appropriate AX S-MET rate from the **Peanuts - AX S-MET Alone** section in a minimum spray volume of 20 gallons per acre with ground equipment. A second application of AX S-MET + Gramoxone Inteon + Butyrac 200 or Butoxone 200 may be made 28 days after ground cracking.

(Refer to the Peanuts - **AX S-MET Combinations - Multiple Applications** section of this label for geographical areas where multiple applications are allowed.) Refer to the Gramoxone Inteon, Butyrac 200 or Butoxone 200 labels and follow all directions, limitations, and restrictions.

#### **TANK MIXTURE OR SEQUENTIALLY WITH BASAGRAN**

AX S-MET + Basagran applied at ground cracking or sequentially will control species on the Basagran label and provide residual control of species listed in the **AX S-MET Applied Alone section** of this label. Apply 1.0 to 2.0 pints per acre of Basagran in 20 gallons per acre, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate AX S-MET rate from the **Peanuts - AX S-MET Alone** section. A second application of the combination may be made before peanut pegging. (Refer to the **Peanuts - AX S-MET Combinations - Multiple Applications** section of this label for geographical areas where multiple applications are allowed.) A second Basagran application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

#### **TANK MIXTURE OR SEQUENTIALLY WITH BASAGRAN + BUTYRAC 200 OR BUTOXONE 200**

AX S-MET + Basagran + Butyrac 200 or Butoxone 200 applied at ground cracking or sequentially will control species on the Basagran label and on the Butyrac or Butoxone labels, especially morningglories. Apply 1.5 to 2.0 pints per acre of Basagran + 8.0 fluid ounces per acre of Butyrac 200 or Butoxone 200 in 20 gallons per acre, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate AX S-MET rate from the **Peanuts - AX S-MET Alone** section. A second application of the combination may be made before peanut pegging. (Refer to the **Peanuts - AX S-MET Combinations - Multiple Applications section** of this label for geographical areas where multiple applications are allowed.) A second Basagran + Butyrac 200 or Butoxone 200 application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

#### **TANK MIXTURE OR SEQUENTIALLY WITH STORM®**

AX S-MET + Storm applied at ground cracking through 2 expanded tetrafoliate leaves or AX S-MET applied according to the directions for **AX S-MET Alone** and followed with an at-cracking through postemergence treatment of Storm as specified on its label will control species on the Storm label and provide residual control of species listed in the **AX S-MET Applied Alone section** of this label. AX S-MET will not control emerged weeds. Refer to the **Peanuts - AX S-MET Alone** section and to the Storm label and follow all directions, limitations, and restrictions for each product.

#### **BEANS, PEAS AND LENTILS - AX S-MET ALONE**

Beans, peas, and lentils (including garbanzo, great northern beans, kidney beans, lima beans, mung beans, navy beans, peas (English\*; southern peas, such as blackeye, pinkeye, crowder, etc.), pinto beans, snap beans (green, wax, string), lentils, and lupines (sweet, white, white sweet, and grain).

#### **Use Directions and Restrictions 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.



In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre on medium-textured and 2.0 pints (1.91 lb ai) per acre on fine-textured soils. **DO NOT** apply to frozen ground. A tillage operation may precede the application. A fall and/or a spring tillage may follow application, but **DO NOT** exceed an incorporation depth greater than 2 to 3 inches. Minimize furrow and ridge formation in the tillage operations.

**Restriction:** If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for beans, peas, and lentils.

**Use Directions and Restrictions for Spring Application:**

Apply AX S-MET, either preplant incorporated or preemergence, using the appropriate rate specified below. **Preplant Incorporated or Preemergence:** Follow instructions for use of AX S-MET alone under **Application Procedures**. On coarse soils with less than 3% organic matter, apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET or 1.33 pints (1.27 lb ai) per acre if organic matter is 3% or greater. On medium soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET. On fine soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET if organic matter content is less than 3%, or 1.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre if organic matter content is 3% or greater.

\*On English peas, use only preemergence applications. If soils are cold and wet during pea germination and emergence, the use of AX S-MET may delay maturity and/or reduce yields.

**Restrictions:** To avoid possible illegal residues, (1) **DO NOT** cut for hay within 120 days following a AX S-MET application, (2) **DO NOT** use for forage within 60 days following a Dual II Magnum application, and (3) **DO NOT** apply more than 2.0 pints (1.91 lb ai) per acre of AX S-MET per year.

**BEANS, PEAS AND LENTILS - AX S-MET COMBINATIONS**

**Restriction:** When applying AX S-MET in combination on beans, peas, and lentils **DO NOT** cut for hay within 120 days following application, or illegal residues may result.

**TANK MIXTURE AND SEQUENTIAL APPLICATIONS WITH EPTAM - BEANS (GREEN OR DRY)**

This mixture controls all weeds controlled by AX S-MET alone and by Eptam alone. Refer to the **AX S-MET Applied Alone** section of this label for weeds controlled by AX S-MET alone and to the Eptam label for weeds controlled by Eptam.

**Preplant Incorporated:** Follow instructions for use of AX S-MET alone under **Application Procedures**. **Sequential:** Apply Eptam alone preplant incorporated, as specified on that label. Follow with a preemergence application of AX S-MET, at rates specified for AX S-MET alone, during planting (behind the planter) or after planting, but before the weeds or crop emerge.

Refer to the **Product Information** section of this label and to the Eptam label for weather, cultural practices, and all other precautions and limitations that affect performance of these products.

Apply 2.5 to 4.5 pints per acre of Eptam 7E\* with AX S-MET as specified. On coarse soils, apply 0.8 pint (0.76 lb ai) per acre of AX S-MET if organic matter content is less than 3%, or 1.0 pint

(0.95 lb ai) per acre if organic matter content is 3% or greater. On medium soils, apply 1.0 pint (0.95 lb ai) per acre of AX S-MET if organic matter content is less than 3%, or 1.33 pints (1.27 lb ai) per acre if organic matter content is 3% or greater. On fine soils, apply 1.33 pints (1.27 lb ai) per acre of AX S-MET if organic matter is less than 3%, or 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre if organic matter is 3% or greater.

\*Refer to the Eptam label for rate limitations depending on geographical area, and for species and varietal restrictions.

**Restriction:** **DO NOT** exceed 3.5 pints per acre of Eptam 7E on small white beans or green beans grown on coarse-textured soils.

### **TANK MIXTURE WITH TREFLAN - BEANS (DRY - KIDNEY, NAVY, PINTO, ETC.; LIMA; AND SNAP)**

AX S-MET + Treflan tank mix applied preplant incorporated controls those weeds listed under **AX S-MET Applied Alone** and those weeds listed for Treflan alone on the Treflan label. AX S-MET + Treflan may be applied by ground or by aerial equipment and incorporated up to 14 days prior to planting. Follow the most restrictive procedures on this label and on the respective Treflan label, using equipment that provides uniform 2-inch incorporation.

Apply AX S-MET + Treflan tank mix using the appropriate AX S-MET rate specified for AX S-MET alone, and the Treflan rate from the Dry Beans, and the Lima and Snap Beans sections of the respective Treflan label. Choose the product rate for the specific soil texture/organic matter classification and weed species expected.

Follow all restrictions and precautions on the respective Treflan label and in the **Beans, Peas, and Lentils - AX S-MET Alone** section of this label.

### **POTATOES - AX S-MET ALONE**

Apply AX S-MET, either incorporated, preemergence, or postemergence to potatoes after hilling/lay-by, according to directions specified below for control of weeds listed under the **Product Information** section. Within a rate range, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil. For applications by center pivot irrigation, see the Center Pivot Irrigation Application section of this label.

**Incorporated:** Apply AX S-MET at 1.0 to 2.0 pints (0.95 – 1.91 lb ai) per acre to the soil and incorporate into the top 3 inches before planting, using a finishing disk, harrow, rolling cultivator, or similar implement. Planting and later cultural practices should not bring untreated soil to the surface. Postplant incorporated application may be made any time after planting to drag-off, but before potato emergence. Use an implement that evenly distributes AX S-MET in the top 2 inches of soil. **DO NOT** damage potato seed pieces or sprouts with incorporation equipment.

**Preemergence:** Apply AX S-MET at 1.0 to 2.0 pints (0.95 – 1.91 lb ai) per acre, either after planting as a preemergence, delayed preemergence, after drag-off or hilling treatment, but before weeds emerge. Up to 2.6 pints (2.48 lb ai) per acre of AX S-MET alone may be used where soil organic matter is between 6% and 20%.

**Postemergence After Hilling/Lay-by:** Apply 1.67 pints (1.59 lb ai) per acre of AX S-MET postemergence to potatoes through after hilling/at lay-by to control AX S-MET - sensitive species for remainder of the growing season. This application will not control emerged weeds. It may be applied over a previous AX S-MET application, but **DO NOT** apply more than 3.6 pints (3.43 lb ai) per acre of AX S-MET per year.

**Restrictions:** (1) **DO NOT** use on muck or peat soils. If cool, wet soil conditions occur after application, AX S-MET may delay maturity and/or reduce yield of Superior and other early maturing potato varieties. (2) **DO NOT** apply both as a preemergence and an incorporated treatment.

**Pre Harvest Interval - DO NOT** harvest Potatoes treated with AX S-MET within 60 days after the at-planting to drag-off application, or within 40 days after a lay-by application, or illegal residues may result. (2) These directions for use **DO NOT** apply to sweet potatoes or yams.

## POTATOES - AX S-MET COMBINATIONS

### TANK MIXTURE WITH SENCOR

In addition to those weeds controlled by AX S-MET alone, AX S-MET applied in tank mix combination with, or sequentially with, any of the registered Sencor formulations, also controls the following broadleaf weeds: cocklebur\*, hairy nightshade\*, hemp sesbania, jimsonweed\*, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, Venice mallow, and wild mustard.

\*Partially controlled.

AX S-MET at 1.0 to 2.0 pints (0.95 – 1.91 lb ai) per acre plus the labeled Sencor use rate may be used preemergence or postemergence to potatoes through after last hilling. Apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET on coarse soils and 1.33 to 2.0 pints (1.27 – 1.91 lb ai) per acre on other soil textures. Within this rate range, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil. AX S-MET will not control emerged weeds.

Refer to the Sencor label for precautionary statements, restrictions, application information, center pivot irrigation application, weeds controlled, and varietal limitations.

**Restrictions:** (1) **DO NOT** harvest potatoes treated with AX S-MET in tank mixture with Sencor within 60 days after application. (2) Potatoes may not be harvested within 40 days after a lay-by application of AX S-MET. (3) **DO NOT** use this tank mixture on muck or peat soils. (4) Postemergence applications to potatoes, with the exception of center pivot application, must be made only as a directed or semi-directed spray to avoid chlorosis, minor necrosis, or leaf distortion. (5) These directions for use **DO NOT** apply to sweet potatoes or yams.

### AX S-MET + LOROX TANK MIXTURE (EAST OF ROCKY MOUNTAINS)

AX S-MET may be applied in a tank mix combination with any of the registered Lorox formulations as a preemergence broadcast application to potatoes. Apply to the soil surface after planting and before emergence of the crop or after final drag-off according to the rates specified in Table 9.

**Table 9: AX S-MET + Lorox - Potatoes (East of Rocky Mountains)  
Broadcast Rates Per Acre**

	1% to Less Than 3% Organic Matter	1% to Less Than 3% Organic Matter	3-5% Organic Matter	3-5% Organic Matter
<b>Soil Texture</b>	<b>AX S-MET</b>	<b>Lorox*</b>	<b>AX S-MET</b>	<b>Lorox*</b>
<b>COARSE</b> Sandy loam	1.0 pt.	1.0-1.5 lbs.	1.33 pts.	1.5-2.0 lbs.
<b>MEDIUM</b> Loam, silt loam, silt	1.33 pts.	1.5-2.0 lbs.	1.67-2.0 pts.	2.0-2.5 lbs.

\*When using Lorox L or Lorox OF, use equivalent rates. One pint of Lorox L equals 1.0 pound of Lorox DF.

**Restrictions:** (1) **DO NOT** use on sands or loamy sands, and (2) **DO NOT** incorporate or spray over the top of emerged potatoes.

Refer to the **Product Information** section of this label and to the Lorox label for precautionary statements, restrictions, application information, and weeds controlled.

**TANK MIXTURE WITH PROWL 4E**

In addition to the weeds controlled by AX S-MET alone, this tank mixture with Prowl 4E controls such problem species as kochia, lambsquarters, purslane, annual spurge, stinging nettle, and others specified on the Prowl 4E Alone label. Apply AX S-MET + Prowl 4E preemergence, preemergence incorporated, or early postemergence according to the specific directions on the Prowl4E label, using the rates in Table 10.

**Table 10: AX S-MET + Prowl 4E - Potatoes  
Broadcast Rates Per Acre**

	Less than 3% Organic Matter	More Than 3% Organic Matter
<b>Soil Texture</b>	<b>AX S-MET + Prowl 4E*</b>	<b>AX S-MET + Prowl 4E*</b>
<b>COARSE</b>	1.0-1.33 pts. + 1.0-1.5 pts.	1.0-1.33 pts. + 1.0-1.5 pts.
<b>MEDIUM</b>	1.33 pts. + 1.5-2.0 pts.	1.33-1.67 pts. + 2.0-3.0 pts.
<b>FINE</b>	1.33-1.67 pts. + 2.0-3.0 pts.	1.67-2.0 pts. + 3.0 pts.

\*When using other formulations of Prowl, use equivalent rates of active ingredient.

Refer to the AX S-MET and Prowl 4E labels and observe all directions, timings, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

**TANK MIXTURE WITH PROWL 4E + EPTAM**

In addition to the weeds controlled by AX S-MET alone, this tank mixture will control those species on the Prowl 4E and Eptam labels. Refer to the AX S-MET + Prowl 4E labels for rates of those

products and add Eptam 7E at 3.5 to 7.0 pints per acre, depending on geographical area. Refer to the respective AX S-MET, Prowl 4E, and Eptam labels and observe all directions, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

### **PUMPKIN - AX S-MET ALONE**

#### **Preemergence**

Apply AX S-MET preemergence (before the weeds have emerged) at 1.0 to 1.33 pint (0.95 – 1.27 lb ai) per acre as an inter-row or inter-hill application in pumpkin. Leave 1 foot of untreated area over the row, or 6 inches to each side of the planted hill and/or any emerged pumpkin foliage (inter-row or inter-hill means not directly over the planted seed or young pumpkin plants). Use the lower AX S-MET rate on soils light in texture (loamy sand or lighter) and low in soil organic matter (less than 3%). AX S-MET applied as a broadcast spray over the planted row or hill, or applications made directly to crop foliage will increase the risk of injury to the pumpkin crop such as stand loss, delayed maturity, and loss of yield.

**Restriction: DO NOT** apply AX S-MET closer than 30 days before pumpkin harvest.

AX S-MET will not control emerged weeds, and thus should be applied before the weeds emerge. Weeds that are present should be controlled by another means, i.e. by mechanical means or by another herbicide.

### **RHUBARB**

Apply AX S-MET at a broadcast rate of 0.67 to 1.33 pints (0.64 – 1.27 lb ai) per acre to the soil surface in early spring, prior to crop emergence. Use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. A band application may also be used, applying proportionally less spray mixture on the area actually treated. AX S-MET will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means.

**Restrictions:** (1) Make only one application of AX S-MET per crop. (2) **DO NOT** apply more than 1.33 pints (1.27 lb ai) per acre of AX S-MET per year. (3) **DO NOT** harvest rhubarb within 62 days of the AX S-MET application.

### **SAFFLOWERS - AX S-MET ALONE**

**Preplant Incorporated or Preemergence:** Follow instructions for use of AX S-MET alone under **Application Procedures**.

On coarse soils, apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET if organic matter content is less than 3%, or 1.33 pints (1.27 lb ai) per acre if organic matter is 3% or greater. On medium soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET. On fine soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET if organic matter content is less than 3%, or 1.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre if organic matter content is 3% or greater.

### **GRAIN OR FORAGE SORGHUM (SEED TREATED WITH CONCEP®) - AX S-MET ALONE**

Apply AX S-MET preplant surface, preplant incorporated, preemergence or postemergence using the appropriate rate specified below. Apply AX S-MET alone only when the sorghum seed has

been properly treated with Concep seed treatment. Preplant or preemergence applications of AX S-MET to sorghum not treated with Concep seed treatment will result in crop death.

**Fall Application for Italian Ryegrass Control:** AX S-MET may be applied for residual control of glyphosate-resistant Italian ryegrass (*Lolium multiflorum*). Apply AX S-MET at 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre in the fall (September 1 to December 1) after harvest of the previous crop and prior to Italian ryegrass emergence. Use the lower AX S-MET rate for coarse textured soils and the higher rate for fine textured soils. A tillage operation may precede the application. **DO NOT** incorporate to a depth greater than 2 to 3 inches if tillage follows the application of AX S-MET. For fall applications after emergence of glyphosate-resistant Italian ryegrass, Gramoxone Inteon can be tank mixed with AX S-MET to control emerged ryegrass. Refer to the Gramoxone Inteon label for specific rates, application instructions and restrictions. Other registered herbicides may be tank mixed with AX S-MET for control or improved control of other weeds present at the time of application.

**Restrictions:** (1) **DO NOT** apply AX S-MET to frozen ground. (2) If a spring application is made, **DO NOT** apply AX S-MET or any other product containing S-metolachlor the following spring to grain or forage sorghum.

**Preplant Surface-Applied:** Refer to instructions for use of AX S-MET under **Application Procedures section** on this label. For minimum-tillage or no-tillage systems only, AX S-MET may be applied up to 45 days before planting in CO, IA, IL, KS, MO, NE, and SD. Use only split applications for treatments made 30 to 45 days prior to planting, with 2/3 of the broadcast rate applied initially and the remaining 1/3 at planting. Apply 1.5 pints (1.43 lb ai) per acre of AX S-MET on medium soils or 1.67 pints (1.59 lb ai) per acre on fine soils. Treatments less than 30 days prior to planting may be made either as a split or single application. Apply 1.33 pints (1.27 lb ai) per acre of AX S-MET on coarse soils not more than 2 weeks prior to planting. Under dry conditions, irrigation may be made after application to move AX S-MET into the soil.

**Preplant Incorporated or Preemergence:** Refer to instructions for use of AX S-MET under Application **Procedures section** on this label. Broadcast 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET on coarse soils, 1.33 to 1.5 pints (1.27 – 1.43 lb ai) per acre on medium soils, or 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre on fine soils.

**Postemergence:** Refer to instructions for use of AX S-MET under Application **Procedures section** on this label. AX S-MET may be applied broadcast postemergence at 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre on coarse soils, 1.33 to 1.5 pints (1.27 – 1.43 lb ai) per acre on medium soils, or 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre on fine soils. AX S-MET will not control emerged weeds. Therefore, emerged weeds must be controlled by cultural or chemical means. When applied alone, AX S-MET will be safe to emerged sorghum. The risk of sorghum injury increases when adjuvants (e.g. non-ionic, crop oil), Nitrogen sources (e.g. AMS, UAN) or fertilizers are applied with AX S-MET.

**Restrictions:** (1) Except for the split preplant surface treatment, **DO NOT** make more than one application per year, or illegal residues may result. (2) **DO NOT** apply AX S-MET postemergence within 75 days of harvest.

**Precautions:** TO AVOID CROP INJURY (1) If sorghum seed is not properly treated with Concep seed treatment, preplant and preemergence applications of AX S-MET will severely injure the crop. (2) Under high soil moisture conditions prior to sorghum emergence, injury may occur following preplant and preemergence application AX S-MET. The crop will normally outgrow this

effect. (3) **DO NOT** use AX S-MET on sorghum grown under dry mulch tillage, or injury may occur.

### **GRAIN OR FORAGE SORGHUM (SEED TREATED WITH CONCEP) – AX S-MET TANK MIXTURES**

AX S-MET preplant or preemergence (prior to sorghum emergence) tank mixtures with AAtrex may be applied in water or fluid fertilizer. Apply AX S-MET preplant or preemergence tank mixtures only when the sorghum seed has been properly treated with Concep seed treatment. Preplant or preemergence applications of AX S-MET to sorghum not treated with Concep seed treatment will result in crop death.

**IMPORTANT: FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE) - If applying AX S-MET in tank mixture with AAtrex, all the restrictions and rate limitations on the AAtrex label must be followed if more restrictive/protective than those on this label. In addition, if AAtrex is/must be applied at rates lower than those listed on this label, broadleaf weed control may be affected. Refer to the AAtrex label for weeds controlled at the reduced rates.**

**Precautions:** TO AVOID CROP INJURY (1) Applications of AX S-MET + AAtrex on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may cause sorghum injury. (2) If sorghum seed is not properly treated with Concep, preplant and preemergence applications of AX S-MET + AAtrex may severely injure the crop: (3) Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of preplant and preemergence applications of AX S-MET + AAtrex. The crop will normally outgrow this effect. (4) **DO NOT** use AX S-MET + AAtrex on sorghum grown under dry mulch tillage, or injury may occur.

**Restriction:** Except for the split preplant surface treatment, **DO NOT** make more than one application per year.

#### **TANK MIXTURE WITH AATREX**

In addition to the weeds controlled by AX S-MET alone, AX S-MET + AAtrex also controls the following broadleaf weeds when applied either preplant surface, preplant incorporated, or preemergence: cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf.

**Preplant Surface-Applied:** Refer to instructions for use of AX S-MET under **Application Procedures** on this label. For minimum-tillage or no-tillage systems only, AX S-MET + AAtrex may be applied up to 45 days prior to planting in IA, IL, eastern KS, MO, NE, and SD. Use only split applications for treatments made 30 to 45 days prior to planting, with 2/3 of the broadcast rate applied initially and the remaining 1/3 at planting. Apply 1.5 pints (1.43 lb ai) per acre of AX S-MET + 1.7 to 2.0 pounds per acre of AAtrex Nine-O\* on medium soils with 1.5% organic matter or greater. Apply 1.5 pints (1.43 lb ai) per acre of AX S-MET + 1.7 to 2.0 pounds per acre of AAtrex Nine-O on fine soils with less than 1.5% organic matter, or apply 1.67 pints (1.59 lb ai) per acre of AX S-MET + 2.0 to 2.2 pounds per acre of AAtrex Nine-O on fine soils with 1.5% organic matter or greater. Treatments less than 30 days prior to planting may be made either as a split or single application. Under dry conditions, irrigation may be made after application to move AX S-MET + AAtrex into the soil.

**Precautions:** To avoid crop injury, (1) **DO NOT** use on coarse soils, and (2) **DO NOT** use on medium soils with less than 1.5% organic matter.

**Preplant Incorporated or Preemergence:** Refer to instructions for use of AX S-MET under Application **Procedures** on this label. On medium soils with 1.5% organic matter or greater, apply 1.0 pint (0.95 lb ai) per acre of AX S-MET + 1.3 pounds per acre of AAtrex Nine-O\*. On line soils with less than 1.5% organic matter, apply 1.0 pint (0.95 lb ai) per acre of AX S-MET + 1.3 pounds per acre of AAtrex Nine-O; on fine soils with 1.5% organic matter or greater, apply 1.2 to 1.33 pints (1.14 – 1.27 lb ai) per acre of AX S-MET + 1.6 to 1.8 pounds per acre of AAtrex Nine-O.

\*When using AAtrex 4L, use equivalent rates. One pound of AAtrex Nine-O = 1.8 pints of AAtrex 4L.

Precautions: To avoid crop injury, (1) **DO NOT** use on coarse soils; (2) **DO NOT** use on medium soils with less than 1.5% organic matter.

**Regional Restrictions** (1) **DO NOT** use in NM, OK, or TX, except in northeast OK and the TX Gulf Coast and Blacklands areas; and (2) **DO NOT** apply preplant incorporated in AZ or the Imperial Valley of CA.

**TANK MIXTURE OF AX S-MET OR AX S-MET + AATREX, WITH GRAMOXONE INTEON, LANDMASTER BW, TOUCHDOWN BRANDS OR ROUNDUP BRANDS FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS**

In minimum-tillage or no-tillage systems where sorghum (seed treated with Concep) is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Inteon, Landmaster BW, Touchdown or Roundup may be tank mixed with AX S-MET or AX S-MET + AAtrex. See Comment No. 7 following Table 2. The AX S-MET or AX S-MET + AAtrex portion of the tank mixture provides preemergence control of the weeds listed on this label under the respective sections.

Refer to the label of each product used in combination and observe the planting details, restrictions, and all other precautions and limitations.

**Application:** Apply before, during, or after planting, but before sorghum emerges. Add Gramoxone Inteon, Landmaster BW, Touchdown brands or Roundup brands and apply as directed on the product labels.

**Gramoxone Inteon:** Apply as directed on the product label. This treatment will not control weeds taller than 6 inches.

**Landmaster BW:** 27 to 54 ounces per acre depending on weed species and size. See the Landmaster BW label for weeds controlled, listed rates for specific weeds, and other information concerning use.

**Touchdown Brands or Roundup Brands:** See the Touchdown brand or Roundup brand label for weeds controlled, listed rates, and other use directions.

**SWEET SORGHUM (SEED TREATED WITH CONCEP)**

Apply AX S-MET, preplant surface, preplant incorporated, preemergence or postemergence using the appropriate rate specified below. Apply AX S-MET only when the sweet sorghum seed



has been properly treated with Concep seed treatment. Preplant or preemergence applications of AX S-MET to sweet sorghum not treated with Concep seed treatment will result in crop death.

**Soil-Applied:** AX S-MET may be applied up to 45 days before planting. Use only split applications for treatments made 30 to 45 days prior to planting, with 2/3 of the broadcast rate applied initially and the remaining 1/3 at planting. Treatments less than 30 days prior to planting may be made either as a split or single application. Under dry conditions, irrigation after application may be made to move AX S-MET into the soil.

**AX S-MET rates for soil applications to sweet sorghum**

Soil Type	30-45 days prior to planting <sup>1</sup>	< 30 days prior to planting	At Planting <sup>2</sup>
Coarse	DO NOT APPLY	1.33 pts	1.0-1.33 pts
Medium	1.5 pts	1.5 pts	1.33-1.5 pts
Fine	1.67 pts	1.67 pts	1.33-1.67 pts

<sup>1</sup> Use only as a split application with 2/3 of the broadcast rate applied initially and the remaining 1/3 applied at planting.

<sup>2</sup> Preplant Incorporated or pre-emergence

**Post-Applied:** AX S-MET may be applied post-emergence to sweet sorghum for residual control of grasses and small seeded broadleaf weeds. Postemergence application to sweet sorghum may be made to crop up to 5 inches in height. AX S-MET will not control emerged weeds. Therefore, emerged weeds must be controlled by cultural or chemical methods. When applied alone, AX S-MET will be safe to emerged sweet sorghum. Use of adjuvants is prohibited on sweet sorghum.

**AX S-MET rates for post-emergence applications to sweet sorghum.**

Soil Type	Post-emergence Rate
Coarse	1.0-1.33 pts
Medium	1.33 pts
Fine	1.33 pts

**Precautions:** TO AVOID CROP INJURY (1) If sweet sorghum seed is not properly treated with Concep seed treatment, soil applications of AX S-MET prior to sorghum emergence will severely injure the crop. (2) Under high soil moisture conditions prior to sweet sorghum emergence, injury may occur following soil applications of AX S-MET. The crop will normally outgrow this effect. (3) **DO NOT** use AX S-MET on sorghum grown under dry mulch tillage, or injury may occur.

**Restriction:**(1) Only one application per year is allowed. AX S-MET may be applied either as a soil applied treatment or a post-emergence treatment but not both. (2) **DO NOT** apply AX S-MET post-emergence within 90 days of harvest.

## **SOYBEANS - AX S-MET ALONE**

Apply AX S-MET, preplant surface-applied, preplant incorporated, preemergence, or postemergence using the appropriate rate specified below. Follow instructions for use of AX S-MET alone under **Application Procedures** section of this label.

### **Fall Application for Spring Weed Control**

- 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.

In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55° F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre of AX S-MET on medium-textured and 2.0 pints (1.91 lb ai) per acre of AX S-MET on fine-textured soils. **DO NOT** apply to frozen ground. A tillage operation may precede the application. A fall and/or a spring tillage may follow application, but **DO NOT** exceed an incorporation depth greater than 2 to 3 inches. Minimize furrow and ridge formation in the tillage operations. If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for soybeans of 2.6 pints (2.48 lb ai) per acre depending on soil texture or illegal residues may result.

**Fall Application for Italian Ryegrass Control:** AX S-MET may be applied for residual control of glyphosate-resistant Italian ryegrass (*Lolium multinorum*). Apply AX S-MET at 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre in the fall (September 1-December 1) after harvest of the previous crop and prior to Italian ryegrass emergence. Use the lower AX S-MET rate for coarse textured soils and the higher rate for fine textured soils. A tillage operation may precede the application. **DO NOT** incorporate to a depth greater than 2 to 3 inches if tillage follows the application of AX S-MET. For fall applications after emergence of glyphosate-resistant Italian ryegrass, Gramoxone Inteon can be tank mixed with AX S-MET to control emerged ryegrass. Refer to the Gramoxone Inteon label for specific rates, application instructions and restrictions. Other registered herbicides may be tank mixed with AX S-MET for control or improved control of other weeds present at the time of application.

**Restrictions:** (1) **DO NOT** apply AX S-MET to frozen ground. (2) If a spring application is made, the combined total amount of AX S-MET applied in the fall plus the spring must not exceed the maximum yearly S-metolachlor rate for cotton (2.6 pints (2.48 lb ai) per acre, depending on soil texture), or illegal residues may result.

**Preplant Surface - Spring Applied:** Use on medium and 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. Apply 2/3 the labeled rate of AX S-MET (1.67 pints (1.59 lb ai) per acre on medium soils and 2.0 pints (1.91 lb ai) per acre on fine soils) as a split treatment 30 to 45 days prior to planting and the remainder at planting. Applications made less than 30 days before planting may be as either a split or single treatment. Apply 1.33 pints (1.27 lb ai) per acre of AX S-MET on coarse soils not more than 2 weeks prior to planting.

**Restrictions:** (1) On soybeans, AX S-MET may be used up to 2.6 pints (2.48 lb ai) per acre as a preplant surface treatment on soils having organic matter content between 6% and 20%. (2) **DO NOT** apply more than 2.6 pints (2.48 lb ai) per acre per year. (3) **DO NOT** graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment.

**Preplant Incorporated or Preemergence:** On coarse soils, apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET if organic matter content is less than 3%, or 1.33 pints (1.27 lb ai) per acre if organic matter content is 3% or greater. On medium soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET. On fine soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET if organic matter content is less than 3%, or 1.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre if organic matter content is 3% or greater.

**Restrictions:** (1) On soybeans, AX S-MET may be used up to 2.6 pints (2.48 lb ai) per acre as a preplant incorporated or preemergence treatment on soils having an organic matter content between 6% and 20%. (2) **DO NOT** apply more than 2.6 pints (2.48 lb ai) per acre per year. (3) **DO NOT** graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment.

**Postemergence:** Apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET as a postemergence treatment to soybeans from emergence up through the third trifoliate leaf stage. AX S-MET will not control emerged weeds so it must be applied to a weed-free soil surface or in a tank mixture with products that provide postemergence control of weeds present at the time of application.

AX S-MET can also be applied as part of a sequential soybean weed control program. If AX S-MET was applied as a preplant surface, preplant incorporated, or a preemergence treatment, a second treatment of AX S-MET can be applied postemergence provided that the total AX S-MET rate during any year does not exceed 2.6 pints (2.48 lb ai) per acre.

**Restrictions:** (1) **DO NOT** apply more than 1.33 pints (1.27 lb ai) per acre of AX S-MET postemergence to soybeans. (2) The total AX S-MET rate applied preplant, preemergence or postemergence to soybeans per year must not exceed 2.6 pints (2.5 lb ai) per acre. (3) Make postemergence applications at least 90 days before harvest. (4) **DO NOT** graze or feed treated forage or hay from soybeans to livestock following a postemergence application of AX S-MET.

#### **SOYBEANS - AX S-MET COMBINATIONS**

Water or fluid fertilizer may be used as carrier for AX S-MET in combination with Sencor, Lorox, Canopy, Pursuit, Scepter, Sonalan, or Command.

**Restrictions:** The total AX S-MET rate applied to soybeans per year must not exceed 2.6 pints (2.5 lb ai) per acre. For all of the following combinations, AX S-MET may be used up to 2.33 pints (2.22 lb ai) per acre on soils having an organic matter content between 6% and 20%.

#### **TANK MIXTURE WITH SENCOR**

In addition to those weeds controlled by AX S-MET alone, AX S-MET + Sencor, when applied as directed, also controls the following broadleaf weeds: cocklebur\*, hairy nightshade, hemp sesbania, jimsonweed\*, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, Venice mallow, and wild mustard.

\*Partially controlled.

Apply AX S-MET and Sencor preplant incorporated or preemergence, using the appropriate rates from Table 11. **Preplant Incorporated or Preemergence:** Follow instructions for use of AX S-MET alone under **Application Procedures**.

**Sequential:** Apply AX S-MET alone Preplant Incorporated, as specified in Table 11 for this tank mixture. Follow with a preemergence application of Sencor during planting (behind the planter) or after planting, but before weeds or soybeans emerge.

Refer to the Sencor labels for planting details and soybean variety restrictions.

**Table 11: AX S-MET + Sencor - Soybeans**  
**Broadcast Rates Per Acre**

	0.5% to Less Than 3% Organic Matter		3% Organic Matter or Greater	
Soil Texture**	AX S-MET	+ Sencor DF*	AX S-MET	+ Sencor DF*
<b>COARSE</b> Loamy sand (over 2% organic matter), sandy loam	0.8-1.0 pt.	+ 0.33 lb.	1.0 pt.	+ 0.5 lb.
<b>MEDIUM</b>	1.0-1.33 pts.	+ 0.5 lb.	1.33 pts.	+ 0.67 lb.***
<b>FINE</b>	1.33 pts.	+ 0.67 lb.	1.33-1.67 pts.	+ 0.67 lb.
<b>Mississippi Delta Only</b> Silty clay, clay	1.33 pts.	+ 1.0 lb.	1.33-1.67 pts.	+ 1.0 lb.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE		DO NOT USE	

\*When using Sencor 4 multiply pounds of DF by 1.5 to get pints per acre.

\*\*On all sand and on loamy sand with less than 2% organic matter, **DO NOT** use this tank mixture preemergence, or the sequential treatment. **DO NOT** use the tank mixture preplant incorporated on any sand, loamy sand, or sandy loam, or crop injury may occur.

\*\*\*Use 0.5 pound per acre if applied preplant incorporated.

**Precautions:** TO AVOID CROP INJURY (1) **DO NOT** use the tank mix or sequential application on soil with less than 0.5% organic matter or on alkaline soil with a pH over 7.4, or crop injury may occur. (2) If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days.

Follow most restrictive limitations and precautions on the **AX S-MET – Soybeans Alone** section of the AX S-MET label and the Soybean directions on the Sencor label.

**TANK MIXTURE WITH LOROX**

In addition to those weeds controlled by AX S-MET alone, AX S-MET + Lorox, applied preemergence, also controls the following broadleaf weeds: cocklebur\*, jimsonweed\*, lambsquarters, morningglory\*, prickly sida, ragweed, smartweed, velvetleaf\*, Venice mallow, and wild mustard.

\*Partially controlled.

**Preemergence:** Apply during planting (behind planter) or after planting, but before weeds or soybeans emerge. Refer to the Lorox label for planting details. Apply the appropriate rates from Table 12.

**Precaution:** TO AVOID CROP INJURY, **DO NOT** use on soil with less than 0.5% organic matter.

**Table 12: AX S-MET + Lorox - Soybeans**  
**Broadcast Rates Per Acre**

	0.5% to Less Than 3% Organic Matter			3% Organic Matter or Greater		
Soil Texture*	AX S-MET	+	Lorox DF***	AX S-MET	+	Lorox DF***
<b>COARSE**</b>	0.8 pt.	+	1.0 lb.	1.0 pt.	+	1.0-1.5 lbs.
<b>MEDIUM</b>	1.0 pt.	+	1.0-1.5 lbs.	1.33 pts.	+	1.5-2.0 lbs.
<b>FINE</b>	1.33 pts.	+	2.0 lbs.	1.33-1.67 pts.	+	2.5-3.0 lbs.
Muck or Peat (Soils with more than 20% organic matter)	DO NOT USE			DO NOT USE		

\***DO NOT** use on sand, gravelly soils, or exposed subsoils.

\*\***DO NOT** use on loamy sand, except in the northeastern U.S. on loamy sand with over 1% organic matter.

\*\*\*When using Lorox L or Lorox DF, use equivalent rates. One pint of Lorox L equals 1.0 pound of Lorox DF.

Follow the most restrictive limitations and precautions on the **AX S-MET - Soybeans Alone** section of the AX S-MET label and the Soybean directions on the Lorox labels.

**TANK MIXTURE WITH TREFLAN**

AX S-MET + Treflan tank mix applied preplant incorporated controls those weeds listed under the **AX S-MET Applied Alone** section and those weeds listed for Treflan Alone on the Treflan label. AX S-MET + Treflan may be applied by ground or by aerial equipment and incorporated up to 14 days before planting. Follow the use directions on the Treflan and AX S-MET labels, using equipment that provides uniform 2-inch incorporation.

Apply AX S-MET + Treflan tank mix using the appropriate rate from the **Soybeans - AX S-MET Alone** section of this label and the Treflan Alone section of the Treflan label for the specific soil texture/organic matter classification and weed species expected.

To control DNA-resistant goosegrass\* and other species on the respective labels where the soil organic matter is 3% or less, apply the rate in Table 13.

**Table 13: AX S-MET + Treflan - Organic Matter Content Less than 3%  
Broadcast Rates Per Acre**

	<b>AX S-MET</b>	<b>Treflan E.C.**</b>	<b>Treflan E.C.**</b>
<b>Soil Texture</b>	<b>Organic Matter Less Than 3%</b>	<b>Organic Matter Less than 2%</b>	<b>Organic Matter 2-3%</b>
<b>COARSE*</b>	0.8-1.0 pt.	1.0 pt.	1.5 pts.
<b>MEDIUM</b>	1.0 pt.	1.5 pts.	1.5 pts.
<b>FINE</b>	1.33 pts.	2.0 pts.	2.0 pts.

\*Where a range of rates is given for AX S-MET, use the minimum rate where DNA-resistant goosegrass is the predominant species.

\*\*When Treflan MTF or Treflan 5 is used, use comparable rates. Multiply pints of Treflan E.C. by 1 for Treflan MTF and by 0.8 for Treflan 5.

Follow the most restrictive limitations and precautions on the **AX S-MET - Soybeans Alone** section of the AX S-MET label and the Soybean directions on the Treflan labels.

**TANK MIXTURE WITH SCEPTER**

This tank mixture controls all weeds controlled by AX S-MET alone and by Scepter alone. Refer to the **AX S-MET Applied Alone** section for weeds controlled by AX S-MET and to the Scepter label for weeds controlled by Scepter. Refer to the Scepter label for geographical locations where this tank mixture may be applied.

Apply AX S-MET + Scepter preplant incorporated or preemergence, using rates in Table 14. Follow use directions under **Application Instructions** on the Scepter label. For preplant incorporated applications, apply and incorporate within 30 days before planting. Observe all other precautions and limitations on the Scepter labels.

**Table 14: AX S-MET + Scepter - Soybeans  
Broadcast Rates Per Acre**

	<b>Less Than 3% Organic Matter</b>	<b>Less Than 3% Organic Matter</b>	<b>3% or More Organic Matter</b>	<b>3% or More Organic Matter</b>
<b>Soil Texture</b>	<b>AX S-MET</b>	<b>Scepter</b>	<b>AX S-MET</b>	<b>Scepter</b>
<b>COARSE</b>	0.8 pt.	0.67 pt.	1.0 pt.	0.67 pt.
<b>MEDIUM</b>	1.0 pt.	0.67 pt.	1.33 pts.	0.67 pt.
<b>FINE</b>	1.33 pts.	0.67 pt.	1.33-1.67* pts.	0.67 pt.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE	DO NOT USE	DO NOT USE	DO NOT USE

\*Use the higher rate of AX S-MET if heavy weed infestations are expected.

Follow the most restrictive limitations and precautions on the **AX S-MET - Soybeans Alone** section of the AX S-MET label and the Soybean directions on the Scepter labels.

**TANK MIXTURE WITH CANOPY**

This tank mixture controls all weeds controlled by AX S-MET alone and by Canopy alone. Refer to the **AX S-MET Applied Alone** section for weeds controlled by AX S-MET and to the Canopy label for weeds controlled by Canopy.

Apply preplant incorporated or preemergence, using the appropriate rates from Table 15. **Preplant Incorporated:** Apply within 2 weeks of planting. Uniformly incorporate into the top 1 to 2 inches of soil before planting soybeans. **Preemergence:** Apply after planting, but before soybeans emerge.

Follow the most restrictive limitations and precautions on the **AX S-MET - Soybeans Alone** section of the AX S-MET label and the Soybean directions on the Canopy labels including varietal restrictions.

**Table 15: AX S-MET + Canopy - Soybeans  
Broadcast Rates Per Acre**

	<b>Less Than 3% Organic Matter</b>	<b>3% or More Organic Matter</b>	<b>3% or More Organic Matter</b>
<b>Soil Texture</b>	<b>AX S-MET</b>	<b>AX S-MET</b>	<b>Canopy</b>
<b>COARSE</b>	0.8 pt.	1.0 pt.	*
<b>MEDIUM</b>	1.0 pt.	1.33 pts.	*
<b>FINE</b>	1.33 pts.	1.33-1.67 pts.	*

\*Refer to the Canopy label for appropriate rate, according to geographical location, soil and organic matter classification, and pH limitations.

**Restriction: DO NOT** apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 7.0, except as noted on the Canopy label.

**TANK MIXTURE WITH COMMAND**

This tank mixture controls all weeds controlled by AX S-MET alone and by Command alone. Refer to the **AX S-MET Applied Alone** section for weeds controlled by Dual Magnum and to the Command label for weeds controlled by Command.

Apply AX S-MET + Command preplant incorporated, using rates in Table 16, Follow all Command application instructions as to incorporation interval, geographical location, equipment operation, soil moisture conditions, etc.

Follow the most restrictive limitations and precautions on the Dual Magnum - Soybeans Alone section of the AX S-MET label and the Soybean directions on the Command labels including rotational restrictions.

**Table 16: AX S-MET + Command - Soybeans**

**Broadcast Rates Per Acre**

	<b>AX S-MET</b>	<b>AX S-MET</b>	<b>Command 4E</b>	<b>Command 4E</b>
<b>Soil Texture</b>	<b>0.5-3% Organic Matter</b>	<b>Greater Than 3% Organic Matter</b>	<b>Northern Area</b>	<b>Southern Area</b>
<b>COARSE</b>	0.8 pt.	1.0 pt.	1.5-2.0 pts.	2.0-2.5 pts.
<b>MEDIUM</b>	1.0 pt.	1.33 pts.	1.5-2.0 pts.	2.0-2.5 pts.
<b>FINE</b>	1.33 pts.	1.33-1.67 pts.	1.5-2.0 pts.	2.0-2.5 pts.

**TANK MIXTURE WITH SONALAN**

This tank mixture controls all weeds controlled by AX S-MET alone and by Sonalan alone. Refer to the **AX S-MET Applied Alone** section for weeds controlled by AX S-MET and to the Sonalan label for weeds controlled by Sonalan.

Apply AX S-MET and Sonalan preplant incorporated, using the appropriate rates from Table 17.

**Preplant Incorporated:** Follow use directions for soil preparation procedures for Sonalan as described on the Sonalan label.

**Sequential:** Apply Sonalan alone preplant incorporated as specified on the Sonalan label. Follow with a preemergence application of AX S-MET during planting (behind the planter) or after planting, but before weeds or soybeans emerge.

**Table 17: AX S-MET + Sonalan - Soybeans**

**Broadcast Rates Per Acre**

	<b>Less Than 3% Organic Matter</b>	<b>Less Than 3% Organic Matter</b>	<b>3% or More Organic Matter</b>	<b>3% or More Organic Matter</b>
<b>Soil Texture</b>	<b>AX S-MET</b>	<b>Sonalan</b>	<b>AX S-MET</b>	<b>Sonalan</b>
<b>COARSE</b>	1.0-1.33 pts.	1.25-2.0 pts.	1.33 pts.	1.25-2.0 pts.
<b>MEDIUM</b>	1.33-1.67 pts.	1.75-2.5 pts.	1.33-1.67 pts.	1.75-2.5 pts.
<b>FINE</b>	1.33-1.67 pts.	2.25-3.0 pts.	1.67-2.0 pts.	2.25-3.0 pts.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE	DO NOT USE	DO NOT USE	DO NOT USE

\*For eastern black nightshade on these soils, apply Sonalan at 3.0 pints per acre on medium- and 3.5 pints per acre on fine-textured soils, and follow with 2 incorporation passes.



Follow the most restrictive limitations and precautions on the **AX S-MET - Soybeans Alone** section of the AX S-MET label and the Soybean directions on the Sonalan labels.

**TANK MIXTURE WITH PURSUIT**

This tank mixture controls all weeds controlled by AX S-MET alone and- by Pursuit alone. Refer to the **AX S-MET Applied Alone** section for weeds controlled by AX S-MET and to the Pursuit label for weeds controlled by Pursuit. Refer to the Pursuit label for geographical locations where this tank mixture may be applied.

Apply AX S-MET + Pursuit early preplant, preplant incorporated, or preemergence after planting, using rates in Table 18. Application can be made in water or liquid fertilizer. Follow all use directions under Soil Applications on the Pursuit label. For early preplant and preplant incorporated applications, apply within 30 days before planting.

Follow the most restrictive limitations and precautions on the **AX S-MET -Soybeans Alone** section of the AX S-MET label and the Soybean directions on the Pursuit labels including rotational restrictions.

**Table 18: AX S-MET + Pursuit - Soybeans**

**Broadcast Rates Per Acre**

	<b>Less Than 3% Organic Matter</b>	<b>3% or More Organic Matter</b>	<b>Less Than 3% - 3% or More Organic Matter</b>
<b>Soil Texture</b>	<b>AX S-MET</b>	<b>AX S-MET</b>	<b>Pursuit</b>
<b>COARSE</b>	0.8 pt.	1.0 pt.	0.25 pt.
<b>MEDIUM</b>	1.0 pt.	1.33 pts.	0.25 pt.
<b>FINE</b>	1.33 pts.	1.33-1.67 pts.	0.25 pt.

**Sequential:** Apply AX S-MET early preplant, preplant incorporated or preemergence after planting at 0.8 pint (0.76 lb ai) per acre on coarse soils and 1.0 pint (0.95 lb ai) per acre on medium- and fine-textured soils. Follow with a sequential postemergence application of Pursuit to control emerged weeds according to the Pursuit label. AX S-MET will improve the consistency and level of control from Pursuit on most grass species. Refer to the Pursuit postemergence label for a listing of weeds controlled, application rate, and growth stage limitations.

**TANK MIXTURE WITH SENCOR, SCEPTER, LOROX, CANOPY, OR PURSUIT, PLUS GRAMOXONE INTEON, TOUCHDOWN BRANDS OR ROUNDUP BRANDS FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS**

In minimum-tillage or no-tillage systems where soybeans are planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Inteon, Touchdown brands or Roundup brands may be added to a tank mix of either AX S-MET + Sencor, AX S-MET + Scepter, AX S-MET + Lorox, AX S-MET + Canopy, or AX S-MET + Pursuit. When used as directed, the Gramoxone Inteon portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Touchdown or Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Touchdown or

Roundup label. The AX S-MET + Sencor, Scepter, Lorex, Canopy, or Pursuit portion of the tank mixture provides preemergence control of the weeds listed on this label in the tank mixture section for AX S-MET + Sencor/Lexone, AX S-MET + Scepter, AX S-MET + Lorox, AX S-MET + Canopy, and AX S-MET + Pursuit, respectively.

Refer to the label of each product used in combination and observe the planting details, soybean variety restrictions, information regarding application to soybeans, geographical restrictions, and all other precautions and limitations.

**Application:** Apply before, during, or after planting, but before the soybeans emerge. Add Gramoxone Inteon, Touchdown brands or Roundup brands and apply as directed on the product labels.

**Gramoxone Inteon:** Apply as directed on the product label. This treatment will not control weeds taller than 6 inches.

**Restriction: DO NOT** apply combinations containing Gramoxone Inteon in suspension-type liquid fertilizers, as the activity of paraquat will be reduced.

**Touchdown or Roundup:** See the Touchdown brand or Roundup brand label for weeds controlled, labeled rates, and other use directions.

Apply in 20 to 60 gallons of water or fluid fertilizer per acre with ground equipment.

**AX S-MET + Sencor + Gramoxone Inteon, Touchdown Brands or Roundup Brands**

On loamy sand with over 2% organic matter, apply 1.0 pint (0.95 lb ai) per acre of AX S-MET + 0.33-0.5 pound per acre of Sencor DF. On medium soils, apply 1.33 pints (1.27 lb ai) per acre of AX S-MET + 0.5-0.67 pound per acre of Sencor DF. On fine soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET + 0.67 pound per acre of Sencor DF.

\*When using Sencor 4L, multiply pounds of DF by 1.5 to get pints per acre.

**Precautions:** TO AVOID CROP INJURY, (1) **DO NOT** use this tank mixture on soil with less than 0.5% organic matter, on alkaline soil with a pH over 7.4, or on all sand and on loamy sand with less than 2% organic matter. (2) If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days, or where the seeding slit has not been properly closed.

**AX S-MET + Scepter + Gramoxone Inteon, Touchdown Brands or Roundup Brands**

On coarse soils, apply 1.0 pint (0.95 lb ai) per acre of AX S-MET + 0.67 pint per acre of Scepter. On medium soils, apply 1.33 pints (1.27 lb ai) per acre of AX S-MET + 0.67 pint per acre of Scepter. On fine soils, apply 1.67 pints (1.59 lb ai) per acre of AX S-MET + 0.67 pint per acre of Scepter.

**Restriction:** (1) **DO NOT** apply within 90 days of harvest, and (2) **DO NOT** graze or feed treated soybean forage, hay, or straw to livestock.

**AX S-MET + Lorox + Gramoxone Inteon, Touchdown Brands or Roundup Brands**

On coarse soils\*, apply 1.0 pint (0.95 lb ai) per acre of AX S-MET + 1.0 to .5 pounds per acre of Lorox DF\*\*. On medium soils, apply 1.33 pints (1.27 lb ai) per acre of AX S-MET + 1.0 to 2.0

pound per acre of Lorox DF. On fine soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET + 2.0 to 3.0 pounds per acre of Lorox DF.

**\*DO NOT** use on loamy sand, except in the northeastern U.S. on loamy sand with over 1% organic matter. **DO NOT** use on sand, gravelly soils, or exposed subsoils.

**\*\***When using Lorox DF, use equivalent rates. One pint of Lorox L equals 1.0 pound of Lorox DF.

**Precaution:** TO AVOID CROP INJURY, **DO NOT** use on soil with less than 0.5% organic matter.

#### **AX S-MET + Canopy + Gramoxone Inteon, Touchdown Brands or Roundup Brands**

Use only where soils have 0.5 to 5% organic matter. On coarse soils (except sand), apply 1.0 pint (0.95 lb ai) per acre of AX S-MET, on medium soils, apply 1.33 pints (1.27 lb ai) per acre of AX S-MET, and on fine soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of Dual Magnum. Refer to the Canopy label for appropriate rate, according to geographical location, soil and organic matter classification, pH limitations, and all other use directions.

**Restriction:** **DO NOT** apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 7.0, except as noted on the Canopy label.

#### **AX S-MET + Pursuit + Gramoxone Inteon, Touchdown Brands or Roundup Brands**

On coarse soils, apply 1.0 pint (0.95 lb ai) per acre of AX S-MET + 0.25 pint per acre of Pursuit. On medium soils, apply 1.33 pints (1.27 lb ai) per acre of AX S-MET + 0.25 pint per acre of Pursuit. On fine soils, apply 1.67 pints (1.59 lb ai) per acre of AX S-MET + 0.25 pint per acre of Pursuit.

#### **POSTEMERGENCE USE ON SOYBEANS - AX S-MET TANK MIXTURES**

##### **Tank Mixture with Glyphosate Products (e.g., Touchdown Brands or Roundup Brands)**

AX S-MET at 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre may be tank mixed with glyphosate products at labeled rates and applied from emergence up through the third trifoliate leaf stage of Roundup Ready or glyphosate-tolerant soybeans. AX S-MET alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glyphosate (e.g., Roundup Ready or glyphosate-tolerant soybeans). The glyphosate product must be registered for postemergence use in Roundup Ready or glyphosate-tolerant soybeans.

##### **Tank Mixture with Pursuit**

AX S-MET at 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre may be tank mixed with Pursuit at labeled rates and applied from emergence up through the third trifoliate leaf stage of soybeans. AX S-MET alone will not control emerged weeds.

##### **Tank Mixture with Liberty Herbicide or Ignite 280 SL Herbicide**

AX S-MET at 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre may be tank mixed with Liberty Herbicide or Ignite 280SL Herbicide at labeled rates and applied from emergence up through the third trifoliate leaf stage of soybeans. AX S-MET alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glufosinate (e.g., Liberty Link).

**Restriction:** Follow the tank mix product label for adjuvant use directions. The use of COC or UAN with AX S-MET may result in temporary crop injury. To avoid possible illegal residues when AX S-MET is applied postemergence to soybeans: (1) **DO NOT** apply more than 1.33 pints (1.27 lb ai) per acre postemergence. (2) Make postemergence applications at least 90 days before harvest. (3) **DO NOT** graze or feed treated forage or hay from soybeans to livestock following a postemergence application of AX S-MET.

## SUGAR BEETS - AX S-MET ALONE

### Postemergence Applications

AX S-MET may be applied postemergence to sugar beets after the sugar beets have reached the first true leaf stage. However, because AX S-MET is primarily a soil-active herbicide, it must be applied prior to weed emergence in order to provide consistent control of listed weeds. As such, weeds that are emerged with or before the crop, or that are present at the time AX S-MET is applied, must be controlled with another appropriately labeled herbicide. Apply AX S-MET at 1 pint (0.95 lb ai) per acre on coarse soils, 1.33 pints (1.27 lb ai) per acre on medium soils, and 1.67 pints (1.59 lb ai) per acre on fine soils. More than one postemergence application may be applied, but the total should not exceed 2.6 pints (2.48 lb ai) per acre. Weeds present at the time of application will not be controlled.

**Restriction:** (1) **DO NOT** apply more than 2.67 pints (2.54 lb ai) per acre postemergence. (2) **DO NOT** harvest within 60 days after the last application.

**Precaution:** TO AVOID CROP INJURY, In coarse soils, AX S-MET applied before emergence of sugar beets (i.e., other than postemergence) may cause injury.

## SUGAR BEETS - AX S-MET TANK MIX COMBINATIONS

AX S-MET may tank mixed with Assure® II, Betarnix®, Betanex®, Poast®, Progress®, Select®, Stinger™, or Upbeet® and applied to sugar beets. Tank mixtures of these products with AX S-MET will increase the risk of crop injury over that of either product applied alone, as the AX S-MET formulation has some adjuvant properties. The addition of a spray adjuvant such as crop oil concentrates (COC's) or methylated seed oils (MSO's) can further increase the risk of crop injury. Injury risk can be reduced by using the lowest effective rate of the tank mix partner(s) and/or adjuvant and by avoiding applications under adverse growing conditions or high soil or air humidity. Refer to the individual product labels and follow all use restrictions and limitations.

## SUNFLOWERS - AX S-MET ALONE

### Preplant Incorporated or Preemergence

Within the rate ranges given below, use the higher rate of AX S-MET if heavy weed infestations are expected. On coarse soils with organic matter of less than 3%, apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET; 1.33 pints (1.27 lb ai) per acre if organic matter is 3% or greater. On medium soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET. On fine soils with organic matter of less than 3%, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET; 1.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre if organic matter content is 3% or greater.

**Restrictions:** (1) **DO NOT** allow livestock to graze or feed in treated area. (2) **DO NOT** exceed the maximum label rates given above for sunflowers for the soil type.

## TOMATOES - AX S-MET ALONE

### Transplanted

AX S-MET may be applied preplant incorporated or preplant before transplanting. If the latter method is used, keep soil disturbance to a minimum during the transplanting operation.

Application may also be made post-directed to transplants after the first settling rain or irrigation. When an application is made post-directed, apply in a minimum of 20 gallons of water per acre and minimize contact with tomato plants. AX S-MET will not control emerged weeds. In bedded transplanted tomatoes, apply AX S-MET preplant non-incorporated to the top of the pressed bed, as the last step, prior to laying plastic. AX S-MET may also be used to treat row-middles in bedded tomatoes, as long as the total amount of AX S-MET does not exceed the maximum allowed per crop.

### **Seeded**

AX S-MET may be applied post-directed to direct seeded tomatoes. Tomato plants must be at least 4 inches tall at the time of application and the product must be applied in a minimum of 20 gallons of water per acre. Minimize spray contact with tomato plants. AX S-MET will not control emerged weeds.

**Tomato Use Rates:** On coarse soils, apply 1.0 to 1.33 pints (0.95 – 1.27 lb ai) per acre of AX S-MET if organic matter content is less than 3% or 1.33 pints (1.27 lb ai) per acre if organic matter is 3% or greater. On medium soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET. On fine soils, apply 1.33 to 1.67 pints (1.27 – 1.59 lb ai) per acre of AX S-MET if organic matter content is less than 3% or 11.67 to 2.0 pints (1.59 – 1.91 lb ai) per acre if organic matter content is 3% or greater.

**Precautions:** TO AVOID CROP INJURY (1) **DO NOT** apply to varieties or cultivars with unknown tolerance to AX S-MET. (2) AX S-MET may damage transplants that have been weakened by any cause. To prevent damage only plant healthy transplants. **DO NOT** plant when wet, cool, or unfavorable growing conditions exist. (3) In transplanted tomatoes, if AX S-MET is applied preplant incorporated, incorporate to a depth less than the depth of transplanting, and use the lower end of the rate range for the given soil type, or damage may occur. (4) For row middle applications where tomatoes are grown on sandy soils and where high soil moisture conditions can exist (i.e. low binding and high evaporation conditions), as may be found in the States of Florida, Georgia, Maryland, and Virginia, there is potential for crop injury in the form of leaf epinasty. The risk of this type of injury can be reduced by: a) incorporating the AX S-MET immediately following application, b) applying the AX S-MET seven or more days before transplanting (but only after the beds have been formed), c) minimizing the application of AX S-MET onto the plastic of the bed, or d) any combination of the above.

**Restriction:** (1) **DO NOT** apply AX S-MET within 30 days of tomato harvest. (2) **DO NOT** exceed the maximum label rate for the soil texture per year. (3) Apply only by ground application.

### **STORAGE AND DISPOSAL**

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

#### **Pesticide Storage**

This product may be stored at temperatures down to 30 degrees below 0°F.

#### **Pesticide Disposal**

Open dumping is prohibited. Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

#### **Container handling [less than 5 gallons]**

Non-refillable container. **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 and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Container Handling [greater than 5 gallons]**

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 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned stay out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

**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.

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