



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg.  
Number:

3125-488

Date of Issuance:

APR 8 1993

Expiration Date:

APR 30 2003

NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration

(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

Axiom DF Herbicide

Name and Address of Registrant (include ZIP Code):

Bayer Corporation  
8400 Hawthorn Road  
P.O. Box 4913  
Kansas City, MO 64120-0013

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

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

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

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(C) provided that you:

1. Comply with all the terms and conditions as stated in attached correspondence dated March 26, 1998 from Bayer Corporation concerning additional data requirements for N-(4-fluorophenyl)-N-(1-methylethyl)-2-[[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yl]oxy]acetamide [proposed common name flucenacet].

2. Make the following label changes listed below before you release the product for shipment:

a. Add the phrase, "EPA Reg. No. 3125-488".

b. Assure that the Surface Water section reads as specified in the March 26, 1998 correspondence.

Signature of Approving Official:

*[Handwritten Signature]*

Date:

4-8-98

page 2  
EPA Reg. No. 3125-488

3. Submit production information (pounds or gallons produced) for this product for the fiscal year in which the use on corn and soybeans is conditionally registered, in accordance with FIFRA section 29. The fiscal year begins October 1, and ends September 30. The product information will be submitted to the Agency no later than November 15, following the end of the preceding fiscal year.

This information is to be submitted to:

Registration Support Branch  
Registration Division (7505C)  
Environmental Protection Agency  
Washington, DC 20460

If production will exceed 16% of the total corn and 26% of the total soybeans acres planted in the U.S. at the average application rates for products containing flufenacet, Agency permission must be obtained.

4. Submit one (1) copy of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

5. Submit by October 31, 2002 the following Studies conducted on accordance with the Good Laboratory Practice Standards, 40 CFR Part 160 and appropriate test guidelines as referenced in EPA's Data Requirements for Registration Regulations, 40 CFR Part 158:

- a. Acute Toxicity of the thiadone degradate to Aquatic Species [Guideline #'s 72-1, 72-2, and 72-3]
- b. Environmental Fate Data on the thiadone degradate [Guideline #'s 161-1, 161-2, 162-1, 162-2 or 162-3, 162-4, and 163-2]
- c. Freshwater Fish Life-Cycle Test conducted with FOE 5043 Technical [Guideline # 72-5]
- d. Two Prospective Groundwater Monitoring Studies at vulnerable sites
- e. Tier II Terrestrial Plant Test conducted with Axiom DF [Guideline # 123-1]
- f. Data regarding the stability of the glucoside conjugate and the malonylalanine conjugate of thiadone and subsequent bioavailability of any release free thiadone
- g. A revised analytical method
- h. Validation of the product chemistry enforcement analytical method [OPPTS 830.1800]
- i. Additional Crop Rotation data [Guideline # 165-2]

3913

page 3  
EPA Reg. No. 3125-488

- j. Surface Water Monitoring
- k. A Developmental Neurotoxicity Study

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.



James A. Tompkins  
Product Manager (25)  
Herbicide Branch  
Registration Division (7505C)

Enclosure

# Axiom DF

U11-9112.YLD

Base Pre-Reg (9112)

Reason to Issue: To modify the rotational crop statement and add additional surface water labeling.

U.S. LABEL

**ACCEPTED**

Date of Pre-Reg Draft: 03/10/98 (D)

Supersedes Pre-Reg Draft Dated: 01/06/98

with comments  
APR 8 1998

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 3125-488

## Axiom<sup>TM</sup> DF Herbicide

For control of certain grass and broadleaf weeds in corn and soybeans.

### ACTIVE INGREDIENT:

*N*-(4-Fluorophenyl)-*N*-(1-methylethyl)-2-[[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yl]oxy]acetamide ... 54.4%

Metribuzin: 4-Amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4*H*)-one ..... 13.6%

INERT INGREDIENTS ..... 32.0%

100.0%

EPA File Symbol No. 3125-U11

EPA Est. 3125-MO-1

U.S. Patent No. 4,645,525 and 4,585,471 and 4,968,342

Net Weight: \_\_\_\_\_ Pounds

**STOP - Read the Label Before Use  
KEEP OUT OF REACH OF CHILDREN**

## CAUTION

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed, inhaled or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals. Avoid contact with skin, eyes, or clothing. Avoid breathing dust.

#### Personal Protective Equipment:

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### User Safety Recommendations:

User 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.

### STATEMENTS OF PRACTICAL TREATMENT

**If swallowed:** Vomiting should be induced. Administer water freely and induce vomiting by giving one dose (1/2 oz or 15 mL) of syrup of ipecac. If vomiting does not occur within 10 to 20 minutes, administer second dose. If syrup of ipecac is not available, induce vomiting by sticking finger down throat. Repeat until vomit fluid is clear.

Never give anything by mouth to an unconscious person. Professional medical assistance should be secured immediately. If inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention. If on skin: Wash thoroughly with soap and warm water.

**To Physician:** No specific antidote is available. Treat the patient symptomatically.

Text being added is highlighted by redlining.

Text being deleted is highlighted by ~~strikeout~~.

## ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment washwaters.

Do not allow sprays to drift onto adjacent desirable plants.

Metribuzin has properties that may result in ground water contamination. Application in areas where soils are permeable or coarse and groundwater is near the surface could result in groundwater contamination.

**Ground Water:** *N*-(4-Fluorophenyl)-*N*-(1-methylethyl)-2-[[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yl]oxy]acetamide is known to leach through soil into ground water under certain

conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

**Surface Water:** *N*-(4-Fluorophenyl)-*N*-(1-methylethyl)-2-[[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yl]oxy]acetamide and metribuzin have properties that may result in surface water contamination via dissolved runoff and/or runoff erosion. Vulnerable conditions include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-lying extremely shallow ground water, areas with infield canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface water.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. 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 12 hours following application.

**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

### AGRICULTURAL USE REQUIREMENTS continued

contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

**IMPORTANT:** Read these entire Directions and Conditions of Sale before using AXIOM Dry Flowable Herbicide.

**CONDITIONS OF SALE OR OF DELIVERY FOR USE:** THE DIRECTIONS ON THIS LABEL WERE DETERMINED THROUGH RESEARCH TO BE THE DIRECTIONS FOR CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED FOR A RANGE OF WEATHER CONDITIONS SIMILAR TO THOSE WEATHER CONDITIONS THAT ARE ORDINARY AND CUSTOMARY IN THE GEOGRAPHIC AREA WHERE THE PRODUCT IS USED. INSUFFICIENT CONTROL OF PESTS AND/OR INJURY TO THE CROP TO WHICH THE PRODUCT IS APPLIED MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL WEATHER, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO OTHER CROPS, ANIMALS, MAN, OR THE ENVIRONMENT. BAYER OFFERS, AND THE BUYER ACCEPTS AND USES, THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL WEATHER, OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF BAYER AND ARE, THEREFORE, THE RESPONSIBILITY OF THE BUYER.

## GENERAL INFORMATION

AXIOM is a selective herbicide for control of many annual grasses and certain broadleaf weeds in field corn, corn grown

for silage and soybeans. AXIOM may be applied preplant surface, preplant incorporated (mix into the top 1 to 2 inch

layer of soil) and preemergence. AXIOM will provide its most effective weed control when applied and subsequently moved into the soil by rainfall, sprinkler irrigation or mechanical tillage prior to weed emergence. AXIOM controls weeds by interfering with seed germination and seedling development.

AXIOM may be applied using either water or sprayable fluid fertilizer as a liquid carrier or be impregnated and applied on dry bulk fertilizer.

AXIOM may be applied either alone or in tank mix combination with additional herbicides. When tank mixing, always observe all precautionary statements and limitations on labeling of all products.

Dry weather following preemergence application of AXIOM or recommended tank mixtures may reduce effectiveness. Cultivate if weeds develop.

## GENERAL USE RESTRICTIONS

AXIOM is for use on soybeans, field corn or corn grown for silage. Do not use on popcorn, sweetcorn, whitecorn or corn grown for seed.

Do not apply this product through any type of irrigation system. Do not apply aerially.

Do not use flood irrigation to apply, activate or incorporate AXIOM.

Do not apply more than 23 ounces AXIOM per acre per use season in corn and 13 ounces per acre per use season in soybeans.

Do not apply AXIOM or AXIOM tank mixtures when environmental conditions may favor drift to non-target sites.

Corn and soybean seed should be planted a minimum of 1 to 1-1/2 inches deep.

If any crop treated with AXIOM is lost, corn or soybeans may be replanted immediately. Do not make a second application of AXIOM.

This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing / loading areas.

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

This product must be used in a manner which will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

## RATE SELECTION/SOIL TEXTURE

The recommended rates of AXIOM are defined by texture and organic matter content of the soil being treated. Unless a specific soil texture is mentioned, rate tables throughout this label refer to the following three soil texture groups: coarse, medium and fine. If you are not sure how to classify

your soil, contact your Bayer Corporation representative, the Cooperative Extension Service or other knowledgeable person. The following chart includes a complete listing of soil textures included in each of the soil texture groupings:

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

## MIXING INSTRUCTIONS

### LIQUID CARRIERS:

AXIOM is a dry flowable herbicide that must be mixed in

water or sprayable fluid fertilizer. Compatibility of AXIOM or its labeled tank mix products with these liquid carriers should

7913

always be predetermined prior to spraying. Refer to the SPRAYABLE FLUID FERTILIZER COMPATIBILITY TEST (Appendix I) of this label to determine product compatibility in fluid fertilizer carriers.

Before mixing AXIOM and its labeled tank mixtures, examine the spray equipment making sure it is completely clean and free of rust or corrosion. Be sure the equipment is free of any residues from previously used pesticides. Flush lines with clean water or recommended detergents after the last application. Use an approved method for disposing of rinsate.

The proper mixing sequence for AXIOM and recommended tank mixtures with the appropriate liquid carrier is as follows:

1. Fill the spray tank or nurse tank 1/4 full with the appropriate liquid carrier.
2. Start recirculation and agitation system and continue throughout mixing and application.
3. If the compatibility test indicates the need of a compatibility agent, add the recommended amount of compatibility agent to the spray tank.
4. If ammonium sulfate is to be used, add it now. Next add the recommended quantity of AXIOM [add directly if water or sprayable grade nitrogen fertilizers (28-0-0, 34-0-0) are the carriers; for other sprayable grade fertilizers first check compatibility and then either mix directly or

preslurry first in water depending on the results of the compatibility test].

5. If tank mixing with wettable powders or other dry flowable products, make a slurry of the products with water and add the slurry slowly to the spray tank.
6. If tank mixing with emulsifiable concentrates or soluble products, add the products to the spray tank.
7. If tank mixing with Gramoxone Extra®, a glyphosate-containing product or Touchdown®, add the products to the spray tank.
8. If mixing spray adjuvants in the mixture, add them after all other products have been mixed.
9. Fill the spray tank to the desired level with the appropriate liquid carrier.
10. Continue agitation during transport and application until the spray tank is empty.

AXIOM and all registered mixtures should be kept agitated once mixed and then sprayed immediately. Do not allow mixtures to stand for prolonged periods of time. Water quality, pH, temperature and/or other components of the mixture may affect how long the mixture may stand before application.

#### DRY FERTILIZER CARRIERS:

AXIOM may be impregnated or coated on dry bulk fertilizers for application. Refer to Appendix II of this label for details.

### APPLICATION INFORMATION

#### SPRAYER APPLICATION

**Ground Broadcast Treatment:** Accurately calibrate the sprayer prior to mixing the herbicide treatments. Apply AXIOM and the labeled tank mixtures in a minimum of 10 gallons of total spray volume per acre using broadcast boom equipment. Use a pump with capacity to maintain 30 to 40 psi at the nozzles, maintain adequate in-tank agitation to keep the spray mixture in suspension and provide a minimum of 20% bypass at all times. Application must be made at a sufficient spray pressure and volume to provide accurate and uniform application of spray particles to a given area without causing spray drift to non-target areas. If mixed with other labeled herbicides, the spray volume may be no less than the minimum volume recommended by the tank mix product or 10 gallons, whichever is greater. The use of screens to protect the pump and nozzles is recommended. Screens placed on the suction side of the pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use

50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Refer to the nozzle manufacturer for additional recommendations. Agitate thoroughly before and during application with either bypass or mechanical agitation. Rinse the sprayer thoroughly with clean water immediately after each use.

**Band Treatment:** AXIOM and the labeled tank mixtures may be applied as a band treatment. Use the following formula to calculate the amount of herbicide needed for band treatments:

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

#### DRY FERTILIZER APPLICATION

Apply using a minimum of 200 lb of dry fertilizer per acre. See Appendix II for additional details.

### APPLICATION METHODS AND TIMING

AXIOM may be applied either alone or in tank mixtures with or sequentially with certain other registered and recommended herbicides. Applications may be made preplant surface, preplant incorporated or preemergence. AXIOM may be used in either a single or split application program. Do not apply when environmental conditions favor drift.

**Preplant Surface:** For use in conservation, minimum or no-tillage crop production systems, AXIOM alone or as a recommended tank mixture may be applied as a broadcast spray up to 45 days before planting in corn and 14 days before planting in soybeans. A sequential application is recommended for applications made 30 to 45 days prior to planting, where 2/3 of the highest recommended broadcast

rate for the crop and soil texture is applied initially and the remaining 1/3 is applied at planting. Treatments made less than 30 days before planting may use either a single or sequential application. If weeds are present at the time of application, apply the AXIOM treatment in tank mixture with a recommended nonselective herbicide such as Gramoxone Extra, a glyphosate-containing product or Touchdown. If possible, do not move treated soil out of the row or move untreated soil to the soil surface during planting, as weed control may be reduced.

**Preplant Incorporation:** Apply AXIOM alone or in combination with recommended tank mixes as a broadcast spray and incorporate into the upper 1 to 2 inches of the soil surface up to 14 days before planting. Avoid deep incorporation since reduced weed control and/or crop injury may result. Incorporate with implements which provide uniform, shallow incorporation (example -finishing disk,

harrow, rolling cultivator, etc.)

**Preemergence:** AXIOM alone and its recommended tank mixes may be applied to the soil surface as a broadcast spray or band application after planting of the crop but prior to weed or crop emergence. If weeds are present at the time of application, apply AXIOM with a nonselective herbicide such as Gramoxone Extra, a glyphosate-containing product or Touchdown. Rainfall and/or overhead sprinkler irrigation is necessary to move AXIOM into the upper soil surface where weed seeds germinate. Dry weather conditions following application may reduce weed control. If adequate moisture is not received within 7 to 10 days after applications and weeds begin to emerge from the soil, a light rotary hoeing or shallow incorporation (no deeper than 1/2 inch deep) will improve performance and minimize crop damage. Excessive rainfall or irrigation after application may reduce weed control.

## CORN

AXIOM dry flowable herbicide is a selective herbicide for control of most annual grasses and selected annual broadleaf weeds in field corn or corn grown for silage. A single or split application program may be used and the product may be applied alone or in tank-mix combination with certain registered herbicides. The following types of applications are

allowed: preplant surface, preplant incorporate and preemergence. Most effective weed control will occur when the applied product is moved into the soil by rainfall, sprinkler irrigation or mechanical tillage prior to weed emergence from the soil.

### WEED SPECIES CONTROLLED BY AXIOM

AXIOM herbicide applied at recommended dosages and application timings will control many important annual grasses and broadleaf weeds.

WEEDS CONTROLLED <sup>1</sup>			
ANNUAL GRASS WEEDS		ANNUAL BROADLEAF WEEDS	
Barnyardgrass ( <i>Echinochloa crusgalli</i> )	Johnsongrass (seedling) ( <i>Sorghum halepense</i> )	Beggarweed, Florida ( <i>Desmodium tortuosum</i> )	Pusley, Florida ( <i>Richardia scabra</i> )
Crabgrass, large ( <i>Digitaria sanguinalis</i> )	Lovegrass, India ( <i>Eragrostis</i> sp)	Carpetweed ( <i>Mullugo verticillata</i> )	Spurge, spotted ( <i>Euphorbia maculata</i> )
Crabgrass, smooth ( <i>Digitaria ischaemum</i> )	Panicum, browntop ( <i>Panicum fasciculatum</i> )	Galinsoga spp. ( <i>Galinsoga</i> spp.)	Waterhemp, common <sup>1,2</sup> ( <i>Amaranthus rudis</i> )
Foxtail, giant ( <i>Setaria faberi</i> )	Panicum, fall ( <i>Panicum dichotomiflorum</i> )	Lambsquarters, common <sup>1</sup> ( <i>Chenopodium album</i> )	Waterhemp, tall <sup>1,2</sup> ( <i>Amaranthus tuberculatus</i> )
Foxtail, green ( <i>Setaria viridis</i> )	Signalgrass, broadleaf ( <i>Brachiaria platyphylla</i> )	Pigweed spp. <sup>1</sup> ( <i>Amaranthus</i> spp.)	
Foxtail, yellow ( <i>Setaria glauca</i> )	Witchgrass ( <i>Panicum capillare</i> )	Purslane, common ( <i>Portulaca oleracea</i> )	
Goosegrass ( <i>Eleusine indica</i> )			

<sup>1</sup> These treatments may not provide acceptable control of triazine-resistant biotypes.  
<sup>2</sup> Due to extended germination intervals, full season control may not always be achieved, especially following preplant surface applications. To complement control, AXIOM should be used in tank-mixtures or sequentially with other herbicides that provide additional control of these weed species.

### WEED SPECIES PARTIALLY CONTROLLED

AXIOM herbicide will provide partial control or reduced competition for many additional grass and broadleaf weeds. be reduced populations as compared to non-treated areas but control will generally not be commercially acceptable. Reduced competition weeds will be stunted in growth and/or



WEED SPECIES PARTIALLY CONTROLLED		
ANNUAL GRASS/SEDGE WEEDS	ANNUAL BROADLEAF WEEDS	
Cupgrass, woolly ( <i>Eriochloa villosa</i> )	Jimsonweed ( <i>Datura stramonium</i> )	Sida, prickly ( <i>Sida spinosa</i> )
Millet, wild-proso ( <i>Panicum milliaceum</i> )	Mustard spp. ( <i>Brassica spp.</i> )	Smartweed, Pennsylvania ( <i>Polygonum pennsylvanicum</i> )
Nutsedge, yellow ( <i>Cyperus esculentus</i> )	Nightshade, eastern black ( <i>Solanum ptycanthum</i> )	Sunflower, common ( <i>Helianthus annuus</i> )
Panicum, Texas ( <i>Panicum texanum</i> )	Ragweed, common ( <i>Ambrosia artemisiifolia</i> )	Velvetleaf ( <i>Abutilon theophrasti</i> )
Sandbur, field ( <i>Cenchrus incertus</i> )		
Shattercane ( <i>Sorghum bicolor</i> )		

### AXIOM USE RATES IN PREPLANT SURFACE, PREPLANT INCORPORATED AND PREEMERGENCE APPLICATIONS

For CONVENTIONAL Tillage Systems With Applications Made TWO WEEKS OR LESS Preplant Surface, Preplant Incorporate or Preemergence:

Recommended AXIOM use rates are located in Table 1. Rates are based on soil texture and organic matter and are for applications made within two weeks of planting and until corn emergence.

TABLE 1

AXIOM USE RATES IN CONVENTIONAL TILLAGE APPLICATIONS MADE TWO WEEKS OR LESS PREPLANT SURFACE, PREPLANT INCORPORATED OR PREEMERGENCE. AXIOM DF RATE (OUNCES PER ACRE). <sup>1,2</sup>		
SOIL TEXTURAL GROUP <sup>3</sup>	SOIL ORGANIC MATTER CONTENT	
	Less than 3%	3% or More
COARSE	13 oz	15 oz
MEDIUM	15 to 18 oz	17 to 20 oz
FINE	20 to 22 oz	20 to 23 oz

<sup>1</sup> Use the higher rate of AXIOM within the applicable rate range under any of the following conditions: heavy surface plant residues, heavy weed pressure and/or when soil organic matter is at the upper end of the range.  
<sup>2</sup> Not recommended for use on peat or muck soils (soils with 20% or more organic matter).  
<sup>3</sup> For more information, refer to the "Rate Selection/Soil Texture" section of this label.

For CONSERVATION, MINIMUM, and NO-TILLAGE Systems; or CONVENTIONAL Tillage Systems With Applications GREATER THAN TWO WEEKS Preplant Surface:

Recommended AXIOM use rates are located in Table 2. Rates are higher for these types of tillage systems and application timings than in Table 1 due to the extended period of weed control needed and the increased crop

residue present. Refer to the "Application Methods and Timing" section of the label for details. Weed control will generally be greater the closer the applications are made to planting but prior to weed emergence. If weeds are present at application, a nonselective herbicide such as Gramoxone Extra, a glyphosate-containing product or Touchdown used at recommended rates may be mixed with AXIOM treatments.

TABLE 2

AXIOM USE RATES IN CONSERVATION, MINIMUM, AND NO-TILLAGE SYSTEMS; OR CONVENTIONAL TILLAGE SYSTEMS WITH APPLICATIONS GREATER THAN TWO WEEKS PREPLANT SURFACE. AXIOM DF RATES (OUNCES PER ACRE). <sup>1,2</sup>		
SOIL TEXTURAL GROUP <sup>3</sup>	SOIL ORGANIC MATTER CONTENT	
	Less than 3%	3% or More
COARSE	14 oz	16 oz
MEDIUM	18 to 20 oz	19 to 22 oz
FINE	22 to 23 oz	22 to 23 oz

<sup>1</sup> Use the higher rate of AXIOM within the applicable rate range under any of the following conditions: heavy surface plant residues, heavy weed pressure and/or when soil organic matter is at the upper end of the range.  
<sup>2</sup> Not recommended for use on peat or muck soils (soils with 20% or more organic matter).  
<sup>3</sup> For more information, refer to the "Rate Selection/Soil Texture" section of this label.

## AXIOM TANK MIXTURES

AXIOM may be applied in tank mixture with certain herbicides to improve control of broadleaf weeds such as velvetleaf, common cocklebur and morningglory species. Mixtures may be used in either conventional, conservation, minimum and no-tillage systems. They may be applied with similar timings

and methods as AXIOM alone unless specifically prohibited in the mix partner's product label. Three-way or multiple tank mixtures are permitted unless restricted by the product label. Refer to the individual product labels for recommended use rates, precautions and/or restrictions.

Herbicides recommended for tank mixtures with AXIOM include:

Atrazine	Extrazine II®	Prowl®	Gramoxone Extra	SENCOR®
Bladex®	Glyphosate	Marksman®	Roundup®	Touchdown
Banvel®	Homet®	Eradicane®	Roundup Ultra®	2,4-D LVE
Clarity®	Pentagon®			

## AXIOM SEQUENTIAL APPLICATIONS

Sequential herbicide applications either before or following AXIOM treatments may be used to control additional weeds.

Herbicides recommended for sequential applications include:

Atrazine	Beacon®	Buctril Gel®	Gramoxone Extra	Poast®	Roundup Ultra
Accent®	Bladex®	Clarity®	Homet	Prowl®	Scorpion III®
Banvel®	Bromoxynil	Contour®	Laddok S-12®	Pursuit®	SENCOR
Basagran®	Bromoxynil + Atrazine	Exceed®	Liberty®	Resolve®	Tough
Basis®	Buctril®	Extrazine II®	Marksman®	Resource®	2,4-D
Battalion®	Buctril + Atrazine®	Glyphosate	Permit®	Roundup	

Refer to the above information and the individual product labels for detailed explanations on use rates and directions and special precautions/restrictions.

## SOYBEAN

AXIOM is a selective herbicide for the control/suppression of annual grasses and selected broadleaf weeds in soybeans. AXIOM may be applied once per use season either alone or in tank mix combination with or sequentially with certain registered herbicides. The following types of application are allowed: preplant surface, preplant incorporated and preemergence. The preplant surface and preplant

incorporate treatments may be applied up to 14 days before planting. The most effective weed control will occur when the applied product is moved into the soil by rainfall, sprinkler irrigation or mechanical tillage prior to weed emergence from the soil.

Do not graze or feed forage, hay or straw to livestock.

## WEED SPECIES CONTROLLED BY AXIOM

AXIOM herbicide applied alone at the recommended dosages and application timings will provide control of certain annual grasses and broadleaf weeds.

WEEDS CONTROLLED <sup>1</sup>		
ANNUAL GRASS WEEDS		ANNUAL BROADLEAF WEEDS
Barnyardgrass ( <i>Echinochloa crusgalli</i> )	Foxtail, yellow ( <i>Setaria glauca</i> )	Carpetweed ( <i>Muhlenbergia verticillata</i> )
Crabgrass, large ( <i>Digitaria sanguinalis</i> )	Goosegrass ( <i>Eleusine indica</i> )	Galinsoga spp. ( <i>Galinsoga</i> spp.)
Crabgrass, smooth ( <i>Digitaria ischaemum</i> )	Lovegrass, India ( <i>Eragrostis</i> sp)	Purslane, common ( <i>Portulaca oleracea</i> )
Foxtail, giant ( <i>Setaria faberi</i> )	Panicum, fall ( <i>Panicum dichotomiflorum</i> )	Spurge, spotted ( <i>Euphorbia maculata</i> )
Foxtail, green ( <i>Setaria viridis</i> )		

<sup>1</sup> Full season weed control will be achieved only on coarse textured soils using the maximum 13 ounce use rate. Use rates of 7 to 13 ounces will provide only early season weed control on all other soil textures. To complement early season weed control, AXIOM is recommended for use in tank-mixture with or sequentially with other herbicides that provide additional control of these weed species.

11-7-13

## WEED SPECIES PARTIALLY CONTROLLED BY AXIOM

AXIOM herbicide will provide partial control or reduced competition for additional grass and broadleaf weeds. Reduced competition weeds will be stunted in growth and/or be of reduced populations as compared to non-treated areas but control will generally not be commercially acceptable.

WEED SPECIES PARTIALLY CONTROLLED		
ANNUAL GRASS WEEDS	ANNUAL BROADLEAF WEEDS	
Johnsongrass, seedling ( <i>Sorghum halepense</i> )	Beggarweed, Florida ( <i>Desmodium tortuosum</i> )	Ragweed, common ( <i>Ambrosia artemisiifolia</i> )
Panicum, browntop ( <i>Panicum fasciculatum</i> )	Jimsonweed ( <i>Datura stramonium</i> )	Sida, prickly ( <i>Sida spinosa</i> )
Sandbur, field ( <i>Cenchrus incertus</i> )	Lambsquarters, common ( <i>Chenopodium album</i> )	Smartweed, Pennsylvania ( <i>Polygonum pennsylvanicum</i> )
Signalgrass, broadleaf ( <i>Bracharia platyphylla</i> )	Mustard spp. ( <i>Brassica</i> spp.)	Waterhemp, common ( <i>Amaranthus rudis</i> )
Shattercane ( <i>Sorghum bicolor</i> )	Pigweed spp. ( <i>Amaranthus</i> spp.)	Waterhemp, tall ( <i>Amaranthus tuberculatus</i> )
Witchgrass ( <i>Panicum capillare</i> )		

## AXIOM USE RATES

The recommended use rate for AXIOM applied alone, in tank-mix combination with and/or sequentially with other herbicides for all application methods and timings is 7 to 13 ounces per acre. The 13 ounce rate of AXIOM alone will provide full season control of annual grasses and certain broadleaf weeds in coarse textured soils but will provide only

early season weed control on medium and fine textured soils. Rates lower than 13 ounces will provide only early season weed control on all soil textures. To complement this early season weed control, AXIOM should be used in tank-mixture or sequentially with other herbicides that provide additional control of these weed species.

## AXIOM TANK MIXTURES

AXIOM may be applied in tank mixture with certain herbicides to improve control of annual grasses and/or broadleaf weeds such as velvetleaf, common cocklebur and morningglory species. Mixtures may be used in either conventional, conservation, minimum and no-tillage systems. They may be applied with similar timings and methods as AXIOM alone

unless specifically prohibited in the mix partner product label. Three-way or multiple tank mixtures are permitted unless restricted by the mix partner product labels. Refer to the individual product labels for recommended use rates, precautions and/or restrictions. Herbicides recommended for tank mixtures with AXIOM include:

Authority Broadleaf®	FirstRate®	Pentagon	Roundup Ultra	Touchdown
Canopy®	Glyphosate	Prowl	SENCOR (Metribuzin)	Turbo®
Canopy XL®	Gramoxone Extra	Pursuit®	Scepter®	Trifluralin
Command®	Linuron (Lorox® and others)	Roundup	Sonalan HFP®	2, 4D LVE

## AXIOM SEQUENTIAL APPLICATIONS

Sequential herbicide applications may be used in an AXIOM weed control program to control additional weeds. Herbicides recommended for use either before or following AXIOM treatments include:

Assure II®	FirstRate	Linuron	Raptor®	SENCOR
Basagran®	Flexstar®	Option II®	Reflex®	Sonalan HFP
Blazer®	Fusilade®	Pentagon	Reliance STS®	Storm®
Canopy®	Ftision®	Pinnacle®	Resource®	Synchrony STS®
Classic®	Galaxy®	Poast®	Roundup	Tornado®
Cobra®	Glyphosate	Poast Plus®	Roundup Ultra	Touchdown
Command®	Gramoxone Extra®	Prowl	Scepter	Trifluralin
Concert®	Liberty	Pursuit	Select®	2, 4-D

Refer to the above information and the individual product labels to for use directions, use rates and special precautions/restrictions.

12 9 13

## CORN AND SOYBEAN CROP ROTATION RECOMMENDATIONS

In the event of a crop failure, any crop on this label can be replanted immediately. Do not make a second application of AXIOM. Do not graze or feed to livestock the forage or

fodder of cotton planted 4 months after an AXIOM application. After application of AXIOM, only the following crops can be planted after the waiting period as listed below.

Waiting period after AXIOM herbicide application before the following crops can be planted.

1 month	4 months			12 months				
Potato	Cabbage	Lettuce	Radish	Alfalfa	Bromegrass	Millet, pearl	Rice	Tritic
	Garrots	Peppers	Sugar beets	Barley	Buckwheat	Millet, proso	Rye	Wheat
	Cotton			Bermudagrass	Glover	Oats	Sorghum	Wild Rice
				Bluegrass	Fescue	Popcorn	Teosinte	
	all other leafy vegetables			all other crops				

Immediately	1 month	4 month
corn	soybean	potato
		carrot

## STORAGE AND DISPOSAL

**Pesticide Disposal:** Do not contaminate water, food or feed by storage or disposal.

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed above. In spill or leak incidents, keep unauthorized people away. You may contact the Bayer Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer Kansas City Emergency Response Telephone No. is 800-414-0244 or contact Chemtrec at 800-424-9300.

B 7 13

## APPENDIX I SPRAYABLE FLUID FERTILIZER COMPATIBILITY TEST

A compatibility test is highly recommended for all applications with liquid fertilizers. Prior to mixing products in the spray tank, small quantities of each product can be mixed in proportionate quantities to evaluate compatibilities. The following test assumes a spray volume of 25 gallons per acre. If other spray volumes are to be used, adjust the appropriate amounts of ingredients. To check for compatibility, use the following procedure:

1. Add two inches of water to a one-quart jar filled with a tight lid.
2. Add the appropriate amount of herbicide. If more than one product is used, the recommended mix sequence is the dry herbicide first, flowables next and emulsified concentrates last. For dry herbicides, add 1-1/2 level teaspoons/pound/acre use rate and for liquids add 1/2 teaspoon/pint/acre use rate.
3. Add one pint of the liquid fertilizer to the jar. Place the lid on the jar and gently shake the jar for one minute. Place the jar on a level surface and let it stand for 30 minutes.
4. Observe the mixture for signs of separation, flakes, gels, precipitates, etc. If none of these conditions occur, the mix is compatible.
5. If incompatible, use of a compatibility agent is recommended. Rerun the above test but first add a compatibility agent (1/4 teaspoon is equal to a use rate of 2 pints/100 gallons spray mix) and gently shake the jar prior to adding herbicides.
6. If the mixture is now compatible, a compatibility agent should be used in the spray mixture at its recommended rate.
7. If the mixture is still incompatible, the liquid fertilizer and herbicides should not be mixed together for use in the same spray tank.

## APPENDIX II IMPREGNATION AND APPLICATION ON DRY FERTILIZER

Dry bulk fertilizer may be impregnated or coated with AXIOM for applications to corn and soybeans. Follow all AXIOM label recommendations, special instructions and precautions. All state regulations relating to dry bulk fertilizer blending, impregnating and labeling must also be followed.

**Rates:** Select the recommended AXIOM use rate per acre from the crop section of this label and determine the quantity of dry bulk fertilizer to be applied per acre (use a minimum of 200 pounds and a maximum of 450 pounds per acre). Use the equation below to determine the amount of AXIOM needed per ton of fertilizer applied.

$$\frac{\text{Pounds AXIOM}}{\text{per Acre}} \times \frac{2000 \text{ Pounds Fertilizer}}{\text{per Acre}} = \frac{\text{Pounds AXIOM}}{\text{per ton fertilizer}}$$

(1 lb = 16 ounces AXIOM)

**Impregnation:** AXIOM may be impregnated on many commonly used dry fertilizers but should not be impregnated on ammonium nitrate, fertilizers containing ammonium nitrate, potassium nitrate, sodium nitrate or powder limestone.

To impregnate AXIOM on bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Mix AXIOM with sufficient water to form a sprayable slurry mixture. Spray nozzles must be directed to provide uniform fertilizer coverage while avoiding spray contact with mixing equipment. Nonuniform impregnation can cause crop injury or unsatisfactory performance.

Spray the herbicide mixture onto the fertilizer after blending has started. If necessary, include a suitable drying agent to ensure a spreadable herbicide impregnated fertilizer. If the fertilizer materials are excessively dusty, use diesel fuel or other suitable additive to reduce dust prior to impregnation. Apply the treated fertilizer immediately after impregnation to avoid lump formation and spreading difficulties.

**Application:** Accurate calibration of fertilizer application equipment and uniform fertilizer distribution is essential for satisfactory weed control. Air flow or auger metered application equipment is preferred (one pass application). If other equipment is used, the recommended application method is to apply one-half the recommended rate and overlap 50 percent or to double apply by splitting the middles to obtain the best distribution pattern.

AXIOM®, SENCOR® and Turb® are trademarks of Bayer Corporation.

Option II®, and Liberty® are trademarks of AgrEvo.

Contour®, Passport®, Paha®, Prowl®, Pursuit®, Raptor®, Resolve® and Scepter® are trademarks of American Cyanamid Company.

Basagran®, Blazer®, Galaxy®, Laddok S-12®, Poast®, Poast Plus® and Storm® are trademarks of BASF Corporation.

Beacon® and Exceed® are trademarks of Novartis.

FirstRate®, Homeet®, Scorpion II® and Sonalan HFP® are trademarks of Dow Elanco.

Accent®, Assure II®, Basis®, Bladex®, Canopy®, Canopy XL®, Classic®, Concert®, Extrazine II®, Lorox®, Pinnacle®,

Reliance STS® and Synchrony STS® are trademarks of DuPont.

Authority Broeleaf® and Command® are trademarks of FMC Corporation.

Battalion®, Permit®, Roundup® and Roundup Ultra®, are trademarks of Monsanto.

Buctril®, Buctril Gel® and Buctril + Atrazine® are trademarks of Rhone-Poulenc AG Company.

Barivel®, Clarity®, Marksman® and Tough® are trademarks of Sandoz.

Cobra®, Resource® and Select® are trademarks of Valent.

Eradicane®, Flexstar®, Fusilade®, Fusion®, Gramoxone Extra®, Tornado® and Touchdown® are trademarks of Zeneca.