John S. Thornton Bayer Corporation P.O. Box 4913 Kansas City, MO 64120

Dear Mr. Thornton:

Subject: Revised Labeling

Axiom DF Herbicide

EPA Registration No. 3125-488

Your Submission Dated February 2, 1999

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you:

- 1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
 - For clarity reinstate in the directions for use a statement similar to the following:

Do not apply to popcorn, sweetcorn or whitecorn.

2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

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

Sincerely yours,

-hx

James A. Tompkins Product Manager (25) Herbicide Branch

Registration Division (7505C)

Enclosure

Axiom

DF Herbicide

For weed control 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% INERT INGREDIENTS

EPA Reg. No. 3125-488 EPA Est. 3125-MO-1

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

Pounds Net Weight: ACCEPTED with COMMENTS

STOP - Read the label before use. Keep out of reach of children. In EPA Letter Dated:

FEB 1 9 1999

CAUTION

Under the Federal Insecticide, Fungicide, and Rodenticide Act,

amended, for the pesticide histered under EPA Reg. No. PRECAUTIONARY STATEMEN 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
- 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 freeerably ** mouth-to-mouth. Get medical airention. If on: " skin: Wash thoroughly with soap and warm

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

Text being added is highlighted by red double underline

Text being deleted is highlighted by blue strikeout.

MOIX

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-(triffuoromethyl)-1,3,4-thiadiazol-2-yl]oxy]acetamide and metribuzin residues can contaminate surface water through spray drift. Under some conditions, they also have high potential for runoff into surface water (primarily via dissolution in runoff water or erosion), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlying tile drainage systems that drain to surface waters.

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

AGRICULTURAL USE REQUIREMENTS continued

involves 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. ADDITION, FAILURE TO FOLLOW LABEL DIFFECTIONS 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, on grown for silage, Bo not use on popcorn, sweetcorn, whitecorn or and field corn grown for seed and specialty corn (white, high oil, high lysine, etc).

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 4 to 1-1/2 inches deep and coybean seed should be planted a genument of 1 inch deep.

If any crop treated with AXIOM is lost, corn or soybeans may be replanted immediately. <u>Do not</u> 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.

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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 textures groupings:

••••

COA	RSE		MEDIUM		FINE	
Sand Loamy sand	Sandy loam	Loam Silt loam	_ Silt Sandy clay loam	Sandy clay	Silty clay loam Silty clay	Clay loam 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 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.

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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.
- Start recirculation and agitation system and continue throughout mixing and application.
- 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 https://doctor.system.or.to the spray tank [add-slowly add AXIOM directly if water or sprayable grade nitrogen

- fertilizers (28-0-0, 34-0-0 <u>32-0-0</u>) 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].
- 6. If tank mixing with wettable powders or other dry flowable products in water as the carrier, make a slurry of the products with water and add the slurry slowly to the spray tank. they may be added now. If tank mixing these is roducts in a sprayable grade fertilizer carrier, first pressurry these products with water and then slowly add them to any sprayable grade fertilizer carrier.
- If tank mixing with emulsifiable concentrates or soluble products, add the products to the spray tank.
- 8. If tank mixing with Gramoxone Extra®, a glyphosate-containing product or Touchdown®, add the products to the spray tank.
- If mixing spray adjuvants in the mixture, add them after all other products have been mixed.
- Fill the spray tank to the desired level with the appropriate liquid carrier.
- 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:

Band width in inches
Row width in inches
Row width in inches

DRY FERTILIZER APPLICATION

Apply using a minimum of 200 lb of dry fettilizer 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 notillage 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 sovbeans. 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 ½ inch deep) will improve performance and minimize crop damage. Excessive rainfall or irrigation after application may reduce weed control.

Special Applications: Fall Application (for use only in IA MN, ND, SD, WI, north of Route 20 in NE, north of Brute 136 in IL, and north of Interstate 70 in OFI):

Eclipholish harvest of crops in the fall AXIOM may be as to crop court a latter October 15 when the soldier court temperature at the four-inch soldier his less than 600 to before the ground is to zero. The poplication is animals and are tested areas of with an ergon of although a creation and waich was be planted to detail following combo. The soil may be tilled before a cover application with incorporation depth no more than two three inches following herbicide application. If a supplication of AXIOM tolows the fall application of AXIOM tolows the fall application of AXIOM tolows the fall application.

CORN

(FIELD, AND SEED, POPCORN, SWEETCORN, SPECIALTY AND SILAGE)

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.

Special Precautions (Sweetcorn / Field Seedcorn Inbreds): Sweetcorn varieties and Field seedcorn inbred lines may vary in their response to AXIOM. Do not apply AXIOM to these crops inbreds without first verifying with your local seedcorn company (supplier) and / or cannery the AXIOM selectivity on your inbred line, or variety of sweetcorn

Recommended application timing for AXIOM on sweetcom seedcorn field seedcorn inbreds are only preplant surface and preemergence. Do not apply preplant incorporated.

Do not apply AXIOM on sweetcom field seedcorn inbress grown on coarse textured soils with less than 1.0% organic matter.

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 ¹						
ANNUAL GE	RASS WEEDS	ANNUAL BROA	ADLEAF WEEDS			
Barnyardgrass (Echinocloa crusgalli) Crabgrass, large (Digitaria sanguinalis) Crabgrass, smooth (Digitaria ischaemum) Foxtail, giant (Setaria faberi) Foxtail, green (Setaria viridis) Foxtail, yellow (Setaria glauca) Goosegrass (Eleusine indica)	Johnsongrass (seedling) (Sorghum halepense) Lovegrass, India (Eragrostis sp) Panicum, browntop (Panicum fasciculatum) Panicum, fall (Panicum dichotomifforum) Signalgrass, broadleaf (Brachiaria platyphylla) Witchgrass (Panicum capillare)	Beggarweed, Florida (Desmodium tortuosum) Carpetweed (Mullugo verticillata) Galinsoga spp. (Galinsoga spp.) Lambsquarters, common¹ (Chenopodium album) Pigweed spp.¹ (Amaranthus spp.) Purslane, common (Portulaca oleracea)	Pusley, Florida (<i>Richardia scabra</i> Spurge, spotted (<i>Euphorbia maculata</i>) Waterhemp, common ^{1,2} (<i>Amaranthus rudis</i>) Waterhemp, tall ^{1,2} (<i>Amaranthus tuberculatus</i>)			

¹ These treatments may not provide acceptable control of triazine-resistant biotypes.

WEED SPECIES PARTIALLY CONTROLLED BY AXIOM

AXIOM herbicide will provide partial control or reduced competition for many additional grass and broadleaf weeds. Reduced competition weeds will be stunted in growth and/or

be reduced populations as compared to non-treated areas but control will generally not be commercially acceptable.

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

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

For FALL Application (For use only in IA, MN, ND, SD, WI, north of Route 20 in NE, north of Route 136 in IL, and north of Interstate 70 in OH):

After October 15, when the sustained soil temperature at the four inch soil depth is less than 50 °F, AXIOM may be applied to remaining crop stubble following harvest. In conservation, minimum and no-tillage systems on soils having 2.5% organic matter or greater, apply AXIOM at 19 to 23 oz/A on medium textured soils and 23 oz/a on fine textured soils. Apply before the ground is frozen. The soil may be tilled before or after application with an incorporation depth no more than two to three inches following the fall

application. Minimize furrow and ridge formation in the tillage operations after application of AXIOM. If a spring application is made, the total rate of both fall and spring must not exceed the maximum total rate for corn, or illegal residues may occur.

For CONVENTIONAL Tillage Systems With Applications
Made TWO WEEKS OR LESS Preplant Surface, Preplant
Incorporated and Preemergence Applications

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 cornemergence.

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.

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). 1.2.3

COIL TEXTURAL CROUD!	SOIL ORGANIC MATTER CONTENT							
SOIL TEXTURAL GROUP	<u><0.5%</u>	0.5 to 1%	1 to 1.5%	1.5 to 3%	≥3 %			
COARSE	<u>8 oz</u>	8 to 10 oz	10 to 12 oz	<u>13 oz</u>	<u>15 oz</u>			
MEDIUM	10 to 15 oz		15 to 18 oz		17 to 20 oz			
FINE	1	20 to	22 07		20 to 23 oz			

- 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.
- If soil pH is >7.4, use the lower rate of the rate range shown
- Not recommended for use on peat or muck soils (soils with 20% or more organic matter).
- 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).^{1,2,3}

SOIL TEXTURAL GROUP⁴	SOIL ORGANIC MATTER CONTENT						
SOIL TEXTURAL GROUP	<u><0.5%</u>	0.5 to 1%	1 to 1 5%	<u>1.5 to 3</u>	<u>≥3'-</u>		
COARSE	9 oz	9 to 11 oz	11 to 13 oz	14.00	<u> 16 02</u>		
MEDIUM	11 to 18 oz		18 to 20 oz		<u>1936-22 (7</u>		
FINE	22 to 23 oz						

- 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.
- If soil pH is > 7.4, use the lower rate of the rate range shown.
- Not recommended for use on peat or muck soils (soils with 20% or more organic matter).
- 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. If a broader spectrum of weed control is required, AXIOM may be tank mixed with certain recommended herbicides. Mixtures may be used in either conventional, conservation, minimum and/or 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. In conservation, minimum or no-till systems where emerged weeds are present at the time of application, AXIOM alone and/or tank mixtures may also be tank mixed with Gramoxone

Extra glyphosate-containing products, and/of Touchdown to provide burndown of emerged weeds. For additional broadleaf control, an appropriate formulation of 2,4-D may be added to the mixtures. Refer to the individual product labels for recommended use rates, precautions and/or restrictions.

Refer to individual product labels for use rates, precautions and / or restrictions. Apply in accordance with the messestrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

AXIOM Dry Flowable Herbicide

Herbicides recommended for tank mixtures with AXIOM include:

2.4-D LVE

Cyanazine (Bladex® and others)

Glyphosate - Gramoxone Extra Pentagon® Prowl®

Roundup Ultra®

Atrazine Balance® Clarity® Eradicane®

Hornet®

Python®

Sencor® Touchdown

Banvel®

Extrazine II®

Marksman®

Roundup®

Specific or general information for each tank mix product are provided in the following text. Refer to the individual product labels for additional information concerning use rates, precautions and/or restrictions.

AXIOM Plus ATRAZINE:

Use the recommended use rate of AXIOM as shown below with the labeled use rate of atrazine.

	USE RATES FOR AXIOM (ounces per acre)								
~~~	<u>so</u>	IL TEXTUR	AL GRO	UPING AN	D ORGANIC	MATT	R CON	NTENT	
TANK MIX PARTNER		COARSE			MEDIUM			FINE	COMMENTS
	<u>&lt; 1%</u>	1 to 3%	<u>&gt; 3%</u>	<u>&lt;1%</u>	1 to 3%	<u>&gt;3%</u>	<u>&lt;3 %</u>	>3%	
Atrazine  (0.5 to 2.0 Ib aich are labeled use rates)	<u>4 to 6 oz</u>	<u>8 to 11 oz</u>	<u>11 oz</u>	<u>8 to 11 oz</u>	<u>11 to 15 oz</u>	<u>15 oz</u>	<u>15 oz</u>	<u>15 to 19 oz</u>	For improved control of broadleaf weeds such as groundcherry nightshade, common ragweed, giant ragweed* mustards, imsonweed, kochia (non-triazine resistant), sicklepod*, velvetleaf* common cocklebur*, and annual morningdory.  Applications may be made preplant surface proplant incorporated and confirmmentative.  Do not apply these than two weeks just to planting in proplant surface proplant.

#### **AXIOM plus BALANCE:**

In addition to the weeds controlled by AXIOM alone, AXIOM at rates suggested in Tables 1 or 2 when mixed with the suggested rates of Balance as shown below will improve control of many weeds.

	USE RATES FOR B	ALANCE (Ounces 75 WD	G per Acre)
APPLICATION TIMING	COARSE TEXTURED SOILS :-	MEDIUM / FINE TEXTURED SOILS	ADDITIONAL WEEDS CONTROLLED AND
<u> 1 2/04/1/04/14/14/0</u>	<u>Conventional tillage /</u> Conservation tillage / <b>No-til</b> l	Conventional tillage Conservation tillage / No-till	<u>COMMENTS</u>
Preplant Surface or Incorporated (0 to 7 days before planting)	<u>0.75 to 1 oz</u>	<u>1.5 to 2.0 oz</u>	For improved control of palmer amaranth, buffalobur, common chickweed, seedling dandelion, imsonweed, kochia. Venice mallow, marestail, wild mustard, nightshades (eastern, black), field pennycress, broadleaf plantain, triazine resistant weeds (pigweeds, common lambsquarters).
Preplant Surface or Incorporated (8 to 14 days before planting)	1.0 to 1.5 oz	2.0 to 2.5 oz	common ragweed, shepherdspurce, Penssylvania smartweed, velvetleat, waterhemp (common, tall), wild radish, woolly cupgrass*, wild proso millet*

Weeds may require an appropriate postemergence herbicide application for control of late season escapes.

On coarse textured soils with < 1.5% organic matter and/or soil pH > 7.4, use Balance at 0.5 to 0.67 oz acre and AXIOM at 4 to 8 oz. Use the high rates as organic matter content increases.

In the following tank mixes, use AXIOM at use rates recommended in Tables 1 or 2 plus the recommended labeled use rate of the tank mix partner.

AXIOM Plus:

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Labeled Use Rates)	ADDITIONAL WEEDS CONTROLLED	COMMENTS
Cyanazine (1 lb ai/A)	annual groundcherry, ladysthumb, Pennsylvania smartweed, nightshade,	Preplant surface, preplant incorporate and preemergence applications
Extrazine II	common ragweed, kochia (non-triazine resistant), mustards, jimsonweed*, prickly	Do not use on coarse textured soils.
(1,5 lb ai/A)	sida, velvetleaf*, common cocklebur*, annual morningglory* and sunflower*	Do not use after December 31, 2002
Banvel/Clarity (1 pinLA)	kochia, ladysthumb, Pennsylvania smartweed, marestail, Venice mallow.	Preplant and preemergence app!:cations only.
Marksman	nightshade, common raqweed, jimsonweed*, velvetleaf*, common cocklebur*, morningglory	Use only on field which are flat planted (no furrows)
(3.5 pints/A)	sp.*, sicklepod, waterhemp and triazine- resistant weeds	Avoid direct contact with the corn seed or injury may result.
		Apply only to medium and fine textured soils with > 2% organic matter
Prowt/Pentagon ( 0.75 to 1.5 lb ai/A)	velvetleaf, triazine-resistant weeds	Preemergence application only.
		Do not apply preplant incorporate as serious com damage may result
<u>Hornet</u> [3.2 to 4.8 oz/A)	common cocklebur, marestail, jimsonweed, kochia, ladysthumb, Peiinsylvania	Apply proplant surface, preplant incorporate and or preemergence.
***************************************	cmartweed Venice mallow morningglory*, common ragweed, grant ragweed*, Russian	Do not apply 1. areas where the soil pH is >7.8
	thistle, sicklepod, prickly sida, common sunflower, velvetleat, tall waterhemp, wild mustard black nightshade triazine-resistant	Do not upper to areas with a scuipH < 5.9 and escanic matter > 5' (Both must see by)
	weeds and Czeada thistle	Use of energy too sine the Lauriage + 1.5% urganic matter may restring coundenage.
Python (0.89 to 1.33 oz/A)	marestail, ladysthumb, Pennsylvania smartweed, Venice mallow common	Apply preplant curface, preplant incorporate and or preemetgence
	cocklebur*, jimsonwced*, nightshade (black, cutleat, eastern black, harry), vetvetleat, wild mustard. Bussian thistle, prickly sida,	Use of Python on soils that average < 1.5% organic matter may result in corn conseque
	waterhemp sp., sickleped* common ragweed*, giant ragweed*, morningglory sp*, wild sunflower, friazine-resistant weeds	
<u>Sencor</u> 0.05 to <del>0.17</del> 0 114 lb	ladysthumb. Pennsylvania smartweed, prickly sida, velvetleaf, common ragweed,	Apply problem incorporate and or preemergence
<u>ai/A)</u>	waterhemp sp.*	Do not use on coarse textured soils with < 1.5% organic matter.
		This product contains metribuzin. The maximum application rate of 23 oz is equivalent to applying 0.136 lbs metribuzin (ai) per acre.
		Do not exceed a total Metribuzin (Sencor) rate of 0.187 lb ai A on soil with < 2% organic matter and 0.25 lb ai a on all other soils per us season.
2,4-D	common cocklebur, mustards, common	Apply preplant surface and/or preemergence.
(low volatile ester) (1/4 to 1 lb ae/A)	ragweed, giant ragweed, jimsonweed, morningglory sp., sunflower, velvetleaf, dandelion*,	Apply 7 to 14 days prior to planting or 3 to 5 days after planting bubefore corn emergence
		Do not use on light, sandy soils, or where soil moisture is inadequat for normal weed growth.
Glyphosate / Touchdown	Annual and perennial weeds	Apply before or after planting but prior to corn emergence
(0.375 to 4 lb ai/A)		For use in conservation, minimum and no-till systems.
Gramoxone Extra (1.5 to 3 pints/A)	Annual weeds and suppression of some perennials	Apply before or after planting but prior to corn emergence
		For use in conservation, minimum and no-till systems,

#### **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	Battalion®	Buctril Gel®	Hornet	Poast®	Roundup
Accent®	Beacon®	Clarity®	Laddok S-12®	Prowl®	Roundup Ultra
<u>Aim®</u>	Bladex®	Contour®	Liberty®	Pursuit®	Scorpion III®
Aim® Balance Banvel®	Bromoxynil	Exceed®	<u>Lightning®</u>	Python®	Sencor
Banvel®	Bromoxynil + Atrazine	Extrazine II®	Marksman®	Resolve®	Tough
Basagran®	Buctrik®	Glyphosate	Permit®	Resource®	2,4-D
Basis®	Buctril + Atrazine®	Gramoxone Extra			

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.

ANNUAL GF	ASS WEEDS	ANNUAL BROADLEAF WEEDS
Barnyardgrass (Echinocloa crusgalli) Crabgrass, large (Digitaria sanguinalis) Crabgrass, smooth (Digitaria ischaemum) Foxtail, giant (Setaria faberi) Foxtail, green (Setaria viridis)	Foxtail, yellow (Setaria glauca) Goosegrass (Eleusine indica) Lovegrass, India (Eragrostis sp) Panicum, fall (Panicum dichotomiflorum)	Carpetweed (Mullugo verticillata) Galinsoga spp. (Galinsoga spp.) Purslane, common (Portulaca oleracea) Spurge, spotted (Euphorbia maculata)

#### 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 (Sorghum halepense) Panicum, browntop (Panicum fasciculatum) Sandbur, field (Cenchrus incertus) Signalgrass, broadleaf (Brachiaria platyphylla) Shattercane (Sorghum bicolor) Witchgrass (Panicum capillare)	Beggarweed, Florida (Desmodium tortuosum) Jimsonweed (Datura stramonium) Lambsquarters, common (Chenopodium album) Mustard spp. (Brassica spp.) Pigweed spp. (Amaranthus spp.)	Ragweed, common (Ambrosia artemisiifolia) Sida, prickly (Sida spinosa) Smartweed, Pennsylvania (Polygonum pennsylvanicum) Waterhemp, common (Amaranthus rudis) Waterhemp, tali (Amaranthus luberculatus)				

#### **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**

If a broader spectrum of weed control or improved residual activity is required, AXIOM may be tank mixed with certain recommended herbicides. 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	Section of Control of the	Turbo®
Canopy®	Glyphosate	Prowl	Roundup Ultra	Sonalan HFP®	Trifluralin
Canopy XL®	Gramoxone Extra	Pursuit®	Scepter®	Touchdown	2, 4D LVE
Command®	Linuron (Lorox® and others)	Python			

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

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

#### 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. After application of AXIOM, only the following crops can be planted, after the waiting period as listed below.

Immediately	1 month	4 months	12 months				
Corn <del>Popcorn</del> Soybean	Potato	Саггоі	Alfalfa Barley Bermudagrass Bluegrass	Bromegrass Buckwheat Clover Fescue	Millet, pearl Millet, prose Oats Popcorn	Rice Rye Sorghum Teosinte	Tritical Wheat Wild Rice

#### STORAGE AND DISPOSAL

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

<u>Pesticide Storage</u>: 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.

**Pesticide 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.

Bayer 💨

Bayer Corporation Crop Protection Box 4913, Kansas City, MO 64120-0013 (800) 842-8020

## 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:

- Add two inches of water to a one-quart jar fitted with a tight lid.
- 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.
- If the mixture is now compatible, a compatibility agent should be used in the spray mixture at its recommended rate.
- 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.

Pounds AXIOM X 2000 Pounds Fertilizer Pounds AXIOM per Acre per Acre per ton fertilizer

AMIOM 2000 Pounds Fertilizer 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.

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