



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:
100-1199

Date of Issuance:
12/7/2005

NOTICE OF PESTICIDE:
 Registration
 Reregistration

Term of Issuance:
Conditional

Name of Pesticide Product:
Axial Herbicide

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419

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 section 3(c)(7)(C) provided you agree in writing to:

- 1) Submit additional storage stability data (860.1380) to support MRID 44399210 for CGA-153433 in wheat grain, including,
 - a) raw data including residues (ppm) found and representative chromatograms (for standards, controls, freshly fortified samples, and stored samples);
 - b) description of storage containers
 - c) submission or identification by number of the method used to analyze the storage stability samples.
- 2) Submit one of the following options:
 OPTION 1: submit the following additional crop field trials (860.1500) in wheat for adequate geographic representation: 1 trial in Region 2, 1 trial in Region 4, 1 trial in Region 5, 1 trial in Region 6, and 4 trials in Region 8.
 OR
 OPTION 2: submit a ruminant feeding study OR livestock method for meat, fat, and milk including radiovalidation data and an independent laboratory validation.

Signature of Approving Official:

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

Date:

12/7/05

- 3) Change EPA Reg. No. on label from 100- to 100-1199.
- 4) Add an appropriate EPA establishment number on the label.
- 5) Remove the statement "Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco" from under the PRECAUTIONARY STATEMENTS.
- 6) In the section CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY, add "To the extent allowed by law," before the **bolded** statement "**THE EXCLUSIVE REMEDY OF THE USER OR BUYER,**"
- 7) On page 5, in the second paragraph, change "his" to "this."
- 8) Remove Barnyardgrass from the lists of weeds controlled by Axial (page 7 and 9), as the efficacy data submitted to the Agency does not support this use.
- 9) On Page 10: Delete the Heading "Recommendations to Avoid Spray Drift" and change "Aerial Drift Management" to "Drift Management"

Make the following modification to the current label language: "Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment and weather related factors determines the potential for spray drift. The applicator and grower must consider the interaction of equipment and related factors to ensure that the potential for drift to sensitive non-target plants is minimal.

This pesticide may only be applied when the potential for drift to adjacent sensitive areas (e.g.) residential areas, bodies of water, non-target plants is minimal (i.e. when the wind is blowing away from the sensitive area).

When states have more stringent regulations, they must be observed.

On page 12: under "Swath Adjustment" change "downward" to "downwind".

10) Add the following restrictions to the label on page 14 under the heading CROP USE DIRECTIONS:

Make one application per crop season

Do not graze livestock or harvest forage for hay from treated areas for a minimum of 50 days following application.

Do not harvest grain for 60 days following application

Do not use on barley which will be fed or grazed by livestock or made into silage.

Do not apply both Discovery and Axial products to the same crop in the same season."

11) On page 15 and 16, for the tank mixes "Affinity Tankmix + MCPA Ester" and "Widematch + MCPA Ester" add "(assume 4 lb/gal)" after MCPA Ester.

12) On page 18, in the section Tank Mix Application With Warrior Insecticide, a restriction must be added that states "Do not use this tank mix for use on barley." Add this restriction after the first sentence. Change the first sentence to "Axial Herbicide may be tank mixed with Warrior Insecticide for annual grass and insect control on wheat." Also, on page 7, change the statement "It can also be tank mixed with Tilt Fungicide, Quilt Fungicide, and Warrior Insecticide with Zeon Technology." to "It can also be tank mixed with Tilt Fungicide, Quilt Fungicide, and Warrior Insecticide with Zeon Technology (Restriction: not for use on barley)."

13) This registration expires on January 1, 2010.

You will submit one (1) copy of your final printed labeling before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). A stamped copy of labeling is enclosed for your records.

If you have any questions, please contact Hope Johnson at 703-305-5410.

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

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Booklet

Group 1 Herbicide

Axial™

Herbicide

Postemergence herbicide for control of grass weeds in wheat and barley

Active Ingredient:

Pinoxaden*	9.71%
Other ingredients:	90.29%
Total:	100.00%

*CAS No. 243973-20-8

Contains petroleum distillates.

Axial Herbicide contains 0.83 lb. of pinoxaden active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-

EPA Est. _____

_____ gallons
Net Contents

ACCEPTED
with COMMENTS
in EPA Letter Dated

DEC 7 2005

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

100-1199

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

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Harmful if swallowed or absorbed through skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

Personal Protective Equipment (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistant category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves, Category A, such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils

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.

Engineering Control Statements

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

User Safety Recommendations

Users should:

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

Environmental Hazards

For terrestrial uses: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and Buyer and User assume the risk of any such use. SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

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

Axial Herbicide should be used only in accordance with recommendations on this label or in separately published Syngenta supplemental labelling recommendations for his product.

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labelling 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 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves, Category A, such as barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils, or viton ≥14 mils

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

STORAGE AND DISPOSAL

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

Pesticide Storage

Store in a cool, dry place. Do not store near seeds, fertilizers, or foodstuffs.

Pesticide Disposal

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

Container Disposal

[Packaged Product 1-10 gallon]:

Do not reuse empty container. 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.

[Bulk/Mini-Bulk]:

When this container is empty replace cap and seal all openings that have been opened during use, and return the container to the point of purchase or to a designated location named at time of purchase of this product. The container must only be refilled with this pesticide product. **DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.** Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact Syngenta Crop Protection, Inc. at 1-800-888-8372. If not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

GENERAL INFORMATION

Axial Herbicide is a systemic, postemergence herbicide for the control of several grass weed species in all varieties of spring wheat (excluding durum), winter wheat, and barley.

Axial Herbicide is rapidly absorbed by weed foliage and translocated to the growing points of leaves and stems where it inhibits the acetyl CoA carboxylase (ACCase) enzyme. Susceptible weed species generally stop growing within 48 hours of treatment, turn yellow within one to three weeks, and are completely controlled within three to five weeks. Level and rate of control depend on weed species, growing conditions, crop competition, and coverage. Thorough spray coverage of the plants is essential for consistent control.

Although Axial Herbicide does not control broadleaf weeds, it can be tank mixed with a wide range of broadleaf herbicides to provide broad-spectrum one-pass weed control. It can also be tank mixed with Tilt® Fungicide, Quilt™ Fungicide, and Warrior® Insecticide with Zeon™ Technology. See the section entitled **Tank Mixes of Axial Herbicide with Broadleaf Weed Herbicides, Fungicides, Insecticides and Liquid Nitrogen Fertilizers**. Herbicides not approved on this label for tank mixing with Axial Herbicide may be applied sequentially. Always apply Axial Herbicide first and allow at least 4 days after application of Axial Herbicide before applying these herbicides sequentially.

Weeds Controlled

Axial Herbicide controls green foxtail, yellow foxtail, giant foxtail, wild oat, volunteer oat, barnyardgrass, Persian darnel, Italian (annual) ryegrass, canarygrass, wild proso millet, and windgrass.

Use Rates

Apply the recommended rate of Axial Herbicide and the recommended rate of Adigor™ Adjuvant using ground or aerial equipment, in a minimum of 5 gals. of water per acre (see **Ground and Aerial Application Procedures** section for additional information).

WEEDS CONTROLLED ^A	USE RATES	
Wild oat, <i>Avena fatua</i> Volunteer oat, <i>Avena sativa</i> Green foxtail, <i>Setaria viridis</i> Yellow foxtail, <i>Setaria glauca</i> Giant foxtail, <i>Setaria faberii</i> Italian (annual) ryegrass, <i>Lolium mutiflorum</i> Persian darnel, <i>Lolium persicum</i> Barnyardgrass, <i>Echinochloa crus-galli</i> Canarygrass, <i>Phalaris</i> spp. Wild proso millet, <i>Panicum milaceum</i> Windgrass, <i>Apera</i> spp.	Axial Herbicide +	8.2 oz./A +
	Adigor Adjuvant	9.6 oz./A

^AWhen tank mixing broadleaf herbicides, refer to **Tank Mixes of Axial Herbicide with Broadleaf Weed Herbicides, Fungicides, Insecticides and Liquid Nitrogen Fertilizers** section for exceptions and additional information on weeds controlled.

Management of Resistant Weeds

Axial Herbicide is a Group 1 herbicide (ACCase mode of action). Some naturally occurring populations of wild oats, green foxtail and Italian (annual) ryegrass have been identified as resistant to herbicides with the ACCase mode of action (herbicides with the same mode of action as Axial Herbicide, such as: Achieve®, Assure® II, Discover®, Fusilade®, Fusion®, Hoelon®, Poast®, Prism®, Puma®, Select®). Selection of resistant biotypes, through repeated use of these herbicides in the same

field, may result in control failures. A resistant biotype may be present if poor performance cannot be attributed to adverse weather conditions or improper application methods. If resistance is suspected, contact your local Syngenta representative for assistance.

The following practices will delay selection for resistant populations of weeds:

- Apply postemergence herbicides to small, actively growing weeds.
- Ensure that good spray coverage is achieved with proper spray volumes and calibrated equipment.
- Use the full label rate of product with the recommended tank mix spray adjuvant.
- Avoid tank mixes that may cause antagonism and reduced weed control.
- Where possible, avoid the repeated use of herbicides with the same mode of action (i.e., same group number) in successive seasons either in cereal crops or rotational crops.
- Use a diverse crop/fallow rotation to extend the range of available herbicides and agronomic practices.
- Use cultivation, fertilizer regimens, seeding rates and row widths that enhance crop competitiveness.
- Prevent weed escapes from producing seed either in the crop or during fallow periods.

Rotational Crop Restrictions

The following crops may be planted at the specified interval following application of Axial Herbicide.

Crop	Rotational Interval
Wheat (including Durum) and Barley	0 days
Leafy and Root Crops	30 days
Other Cereal Grains and All Other Crops	120 days

APPLICATION PROCEDURES

Timing of Application

Apply Axial Herbicide to all varieties of spring wheat (excluding durum), winter wheat, and barley from the 2-leaf stage to pre-boot stage. Refer to the **Crop Use Directions** section for grazing and harvest restrictions.

Precaution: Do not apply to a crop that is stressed by conditions such as frost, low fertility, drought, flooding, disease damage, or insect damage, as crop injury may result.

When tank mixing with a broadleaf herbicide, insecticide or fungicide, always refer to the label of the tank mix partner prior to use.

For optimum results, apply Axial Herbicide to actively growing weeds. An early application will maximize crop yields by reducing weed competition. Weed control following application of Axial Herbicide alone or in combination with broadleaf herbicides can be reduced or delayed under conditions of stress, such as drought, heat, insufficient fertility, flooding, and prolonged cool temperatures. Grass escapes or re-tillering may occur if application is made during prolonged conditions of stress. Optimum weed control will be obtained if application of Axial Herbicide is delayed until the conditions of stress have ended and weeds are once again actively growing. Weeds emerging after Axial Herbicide application will not be controlled.

TIMING OF APPLICATION TO WEEDS		
Weed	Leaves on Main Stem	Tillers
Persian Darnel Volunteer Oat Wild Oat	1 to 6-leaf stage on main stem	Prior to emergence of the 4 th tiller
Barnyardgrass Giant Foxtail Green Foxtail Yellow Foxtail Italian (Annual) Ryegrass Canarygrass Wild Proso Millet Windgrass	1 to 5-leaf stage on main stem	For optimum control, apply prior to emergence of the 3 rd tiller and while weeds are actively growing.

Rainfastness

Axial Herbicide applied alone is not affected by rain falling 30 minutes or more after application.

Ground and Aerial Application Procedures

For best accuracy, calibrate the sprayer before use.

Ground Applications

Water Volume – Use an application rate of 5–10 gals. of water per acre. Use 10 gals. of water per acre under dry conditions or dense weed populations. Application rates of greater than 10 gallons of water per acre should be avoided as reduced grass control may occur.

Spray Nozzles – 80° or 110° flat fan nozzles are recommended for optimum spray coverage. Nozzles must be uniformly spaced along the boom to provide accurate and uniform coverage. Point the nozzles forward in the direction of travel at an angle of 45° for optimum coverage of grass weeds. Follow the nozzle manufacturer’s

recommendations for pressure and screens. Do not use flood or hollow cone type nozzles.

Screens – Use a screen or strainer with 16-mesh or coarser on the suction side of the pump. Do not place a screen in the recirculation line unless using a roller or piston pump. Use 50-mesh or coarser screens between the pump and boom, and at the nozzles.

Pressure – 35-40 psi at the nozzles. Lower pressure may be used with extended range or low pressure nozzles.

Pump – Must have capacity to maintain pressure (35-40 psi) and to maintain the product suspension through tank agitation. A centrifugal pump is recommended with an agitation rate of 20 gals./minute/100 gals. tank size. Agitation must be maintained during mixing and spraying.

Good weed coverage with the spray mixture is essential for optimum weed control results. Observe sprayer nozzles frequently during the spraying operation to ensure that the spray pattern is uniform. Avoid large spray overlaps which result in excessive rates in the overlap areas. Also, avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur. To reduce spray drift, do not apply under windy conditions. Allow adequate distance between target area and desirable vegetation to prevent drift to nontarget areas. Boom height for broadcast over-the-top application should be based upon the free-standing height of the crop, not height above the soil surface, and should be at least 12 inches above the crop.

Aerial Applications

Apply Axial Herbicide in water using a minimum spray volume of 5 gals./A. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Make applications at a maximum height of 10 ft. above the crop with low-drift nozzles at a maximum pressure of 40 psi and wind speed not exceeding 10 mph to help assure accurate application within the target area.

Recommendations to Avoid Spray Drift

Aerial Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the **Aerial Drift Reduction Advisory Information**.

Aerial Drift Reduction Advisory Information

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity, and Temperature Inversions**).

Controlling Droplet Size

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length

For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications should not be made at a height greater than 10 ft. above the top of the largest plants, unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

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

Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

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

Temperature Inversions

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

Sensitive Areas

Do not apply this product in a manner that allows sprays to drift from the application target site and causes or is likely to cause harm to humans, animals or other non-target sites.

Avoid all direct or indirect contact (such as spray drift) of Axial Herbicide with crops other than those recommended for treatment on this label, since injury may occur.

Chemigation

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

MIXING PROCEDURES

Mixing Instructions

1. Clean spray tank and half fill with clean water. Start agitation or bypass system.
2. If a broadleaf herbicide is to be used, add the product **FIRST**, prior to adding Axial Herbicide and agitate for 2-3 minutes.
3. Add correct amount of Axial Herbicide.
4. Agitate for 2-3 minutes.
5. Add correct amount of Adigor Adjuvant
6. Agitate for 1-2 minutes before adding remainder of water and then maintain constant agitation.
7. After any break in spraying operations, agitate thoroughly before spraying again.
8. **Use the spray solution as soon as it is prepared.**

Sprayer Cleanup

Prior to using Axial Herbicide, ensure that the spray tank, lines and screens and filters are thoroughly clean.

Thoroughly clean application equipment immediately after spraying Axial Herbicide. Ensure that all traces of the product are removed. The following recommendations are provided:

1. Drain and flush tank walls, boom, and all hoses for 10 minutes with clean water. **Do not** clean the sprayer near desirable vegetation, wells, or other water sources.
2. Remove the nozzles and screens and wash separately.
3. Dispose of all rinsates in accordance with state and local regulations.
4. If a broadleaf herbicide, insecticide, or fungicide tank mix partner is used, always check tank mix partner label for any additional cleanup procedures.

CROP USE DIRECTIONS

Wheat and Barley

Axial Herbicide can be used on all varieties of spring wheat (excluding durum), winter wheat, and barley. Do not allow spray to drift to adjacent fields seeded to crops other than wheat or barley. Do not treat wheat or barley underseeded to forages.

To avoid possible illegal residues:

- Make only one application per crop season.
- Do not graze livestock or feed forage of hay from treated areas for a minimum of 30 days following application.
- Do not harvest for 60 days following application.

Tank Mixes of Axial Herbicide with Broadleaf Weed Herbicides, Fungicides, Insecticides and Liquid Nitrogen Fertilizers

For broad-spectrum control of annual grass and broadleaf weeds, tank mix Axial Herbicide with one of the broadleaf herbicides or broadleaf herbicide combinations listed in the following table. Consult the label of the tank mix partner for a list of broadleaf weeds controlled, rates, timing, recropping restrictions, grazing interval restrictions, recommendations for specific weeds, directions for use, and precautions. Use in accordance with the most restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any other product whose label prohibits such a mixture.

Table 1: For control of wild oat, volunteer oat, green foxtail, yellow foxtail, Italian (annual) ryegrass, and broadleaf weeds (refer to the broadleaf tank mix partner label for weeds controlled), use Axial Herbicide at 8.2 oz./A plus one of the following single or two-way broadleaf herbicide combinations. Broadleaf herbicide combinations other than those listed in the table below are not recommended.

SELECT ONLY ONE BROADLEAF HERBICIDE TANK MIX COMBINATION LISTED IN THE TABLE BELOW

Broadleaf Herbicide	Rate	Weeds Controlled by Axial Herbicide at 8.2 oz./A*				
		Wild Oat	Volunteer Oat	Green Foxtail	Yellow Foxtail	Italian Ryegrass
2,4-D Amine (assume 4 lb./gal.)	0.5-0.75 pt./A	C	C	C	C	C
2,4-D Ester (assume 4 lb./gal.)	0.5-0.75 pt./A	C	C	S	C	C
Affinity™ Tankmix ^A + Bronate Advanced ^B	0.6 oz./A + 0.6-0.8 pt./A	C	C	-	-	-
Affinity Tankmix ^A + MCPA Ester	0.6 oz./A + 0.5-0.75 pt./A	C	C	-	-	-
Ally ^{A,F}	0.1 oz./A	-	-	-	-	C
Amber ^A	0.28-0.47 oz./A	C	-	-	-	C
Banvel + MCPA Ester (assume 4 lb./gal.)	2 oz./A + 0.5-0.75 pt./A	S	S	-	C	-
Bronate Advanced ^{B,D}	0.6-1.2 pt./A	C	C	C	C	C
Buctril ^{C,E}	0.75-1.5 pt./A	C	C	C	C	C
Buctril ^{C,E} + MCPA Ester (assume 4 lb./gal.)	0.75-1.5 pt./A + 0.5-0.75 pt./A	C	C	C	C	C
Clarity + MCPA Ester (assume 4 lb./gal.)	2 oz./A + 0.5-0.75 pt./A	S	S	-	C	-
Curtail M	1.75 pt./A	C	C	C	-	-
Express ^{A,I}	0.17-0.25 oz./A	C	-	-	-	C
Finesse ^A	0.2-0.4 oz./A	-	-	-	-	C
Harmony Extra ^{AG}	0.3-0.6 oz./A	C	C	C	C	C
Harmony Extra ^{AG} + MCPA Ester (assume 4 lb./gal.)	0.3-0.5 oz./A + 0.5-0.75 pt./A	C	C	C	C	C
Harmony GT ^{AH}	0.3-0.6 oz./A	C	C	C	C	C
Harmony GT ^{AH} + Bronate Advanced ^B	0.3-0.5 oz./A + 0.6-1 pt./A	C	C	-	-	-
Harmony GT ^{AH} + Buctril ^C	0.3-0.5 oz./A + 0.75-1.5 pt./A	C	C	-	-	-
Harmony GT ^{AH} + MCPA Ester (assume 4 lb./gal.)	0.3-0.5 oz./A + 0.5-0.75 pt./A	C	C	C	C	C
MCPA Ester (assume 4 lb./gal.)	0.5-0.75 pt./A	C	C	C	C	C
Peak ^A	0.25-0.5 oz./A	C	-	-	-	C
Starane	0.67 pt./A	C	C	C	C	C
Starane + Bronate Advanced ^{B,D}	0.67 pt./A + 0.6-1 pt./A	C	C	C	C	C
Starane + Harmony Extra ^{AG}	0.67 pt./A + 0.3-0.4 oz./A	C	C	C	-	C
Starane + Harmony GT ^{AH}	0.67 pt./A + 0.3-0.5 oz./A	C	C	C	-	C

Broadleaf Herbicide	Rate	Weeds Controlled by Axial Herbicide at 8.2 oz./A*				
		Wild Oat	Volunteer Oat	Green Foxtail	Yellow Foxtail	Italian Ryegrass
Starane + Sword	1.125 pt./A	C	C	C	C	C
WideMatch™	1 pt./A	C	C	C	C	C
WideMatch + Harmony GT	1 pt./A + 0.3-0.4 oz./A	C	C	C	C	C
WideMatch + MCPA Ester	1 pt./A + 0.5-.0.75 pt./A	C	C	C	C	C

*C = Control; S = Suppression (indicates "Partial Control" which means significant activity but not always at a level generally considered acceptable for commercial weed control).

^AAddition of surfactants other than Adigor Adjuvant is not required.

^BOther equivalent products containing the active ingredients bromoxynil/MCPA esters may be used. Consult the specific product label for recommended rates.

^COther equivalent products containing the active ingredient bromoxynil may be used. Consult the specific product label for recommended rates.

Do not exceed 0.8 pt./A of Bronate Advanced in a tank mix for control of Italian (annual) ryegrass, green foxtail, or yellow foxtail.

^EDo not exceed 1.25 pt./A of Buctril in a tank mix for control of Italian (annual) ryegrass, green foxtail, or yellow foxtail.

^FAlly XP may be used.

^GHarmony Extra XP may be used.

^HHarmony GT XP may be used.

^IExpress XP may be used.

When tank mixing, add the broadleaf herbicide(s) to the spray tank first followed by Axial Herbicide, then add Adigor Adjuvant last.

Precaution: Temporary crop injury may occur with tank mixes under extreme weather conditions or when the crop is suffering from stress due to inadequate or abnormally high moisture levels or extreme temperatures.

Note: Tank mixing is not recommended with any chemical additives, pesticides, or fertilizers that are not recommended on this label or other Syngenta labelling as reduced annual grass control (antagonism) and/or crop injury may occur. Herbicides not approved on this label for tank mixing with Axial Herbicide may be applied sequentially. Always apply Axial Herbicide first and allow at least 4 days after application of Axial Herbicide before applying these herbicides sequentially.

Tank Mix Application with Tilt Fungicide

Axial Herbicide may be tank mixed with Tilt Fungicide for annual grass and disease control. Apply Axial Herbicide at 8.2 oz./A in a tank mix with Tilt at recommended use rates. Add Tilt to the tank first, followed by Axial Herbicide, then Adigor Adjuvant last.

Refer to the Tilt label for specific use directions, application rates, restrictions, and a list of diseases controlled.

Tank Mix Application with Quilt Fungicide

Axial Herbicide may be tank mixed with Quilt Fungicide for annual grass control and early season disease suppression. Apply Axial Herbicide at 8.2 oz./A in a tank mix with Quilt Fungicide at 7 oz./A. Add Quilt to the tank first, followed by Axial Herbicide, then Adigor Adjuvant last. Refer to the Quilt label for specific use directions, application rates, restrictions, and a list of diseases suppressed and/or controlled.

Note: under certain environmental conditions, tank mixes of Quilt Fungicide plus herbicides may cause crop injury.

Tank Mix Application with Warrior Insecticide

Axial Herbicide may be tank mixed with Warrior Insecticide for annual grass and insect control. Apply Axial Herbicide at 8.2 oz./A in a tank mix with Warrior Insecticide at recommended use rates. Add Warrior to the tank first, followed by Axial Herbicide, then Adigor Adjuvant last. Refer to the Warrior label for specific use directions, application rates, restrictions, and a list of insects controlled.

Mixtures with Liquid Nitrogen Fertilizers

Axial Herbicide may be mixed in a spray solution containing up to 50% liquid nitrogen fertilizer. Add Axial Herbicide to the water first followed by Adigor Adjuvant. Mix thoroughly, then add the liquid nitrogen fertilizer in an amount no greater than 50% of the final volume. **Note:** under certain environmental conditions, mixtures of liquid nitrogen fertilizers as a partial carrier may cause crop burn.

When using Axial Herbicide with approved herbicide tank mix partners, consult the label of the partner product and follow any additional instructions or restrictions on that label which relate to mixture with liquid nitrogen fertilizers.

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