

# OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

February 29, 2024

Annette Marine
Agent for Axill Solutions, LLC
c/o Wagner Regulatory Associates, Inc.
P.O. Box 640
7217 Lancaster Pike, Suite A
Hockessin, DE 19707

Subject: Notification per PRN 98-10 – Add ABN; correct group number in resistance

management section; add missing footnote reference on pg. 27 and update

company address

Product Name: Axill Solutions Imazethapyr

EPA Registration Number: 93809-3 Application Date: 10/24/2022

Case Number: 475470

# Dear Annette Marine:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "NOTIFICATION" and placed in our records.

The alternate brand name, "Imazethapyr 2SL" has been added to the product record.

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

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EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you have any questions, please contact Marc Sheahin at 202-566-2896 or at <a href="mailto:sheahin.marc@epa.gov">sheahin.marc@epa.gov</a>.

Sincerely,

Marc Sheahin, Biologist Fungicide & Herbicide Branch, Registration Division,

Office of Pesticide Programs, OCSPP, EPA

[Note to reviewer: [Text] in brackets denotes optional text].

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IMAZETHAPYR GROUP 2 HERBICIDE

[Master Label]

[COMPANY LOGO]

# **Axill Solutions Imazethapyr**

[ABN: Axill Solutions Imazethapyr 2SL]
[ABN: Imazethapyr 2SL]

HERBICIDE FOR USE IN ALFALFA, CLOVER, PEAS AND BEANS, PEANUTS, AND SOYBEANS (Not for use on CLEARFIELD\* rice or any other rice varieties or hybrids.)

ACTIVE INGREDIENT:	By Wt.
Ammonium salt of imazethapyr (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]	
-5-ethyl-3-pyridinecarboxylic acid*	22.87%
OTHER INGREDIENTS	<u>77.13%</u>
TOTAL	100.00%
*Equivalent to 21.6% (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarbo	oxylic acid
(1 gal. contains 2.0 lbs. of active ingredient as the free acid).	

# KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

See inside label booklet for [First Aid] [and] [additional] Precautionary Statements.

EPA Reg. No.: 93809-3

EPA Est. No.:

#### Manufactured for:

Axill Solutions, LLC

422 Jasmine Way P.O. Box 398

Roseburg, OR 97471 Clinton, NC 28329

**Net Contents:** 

# NOTIFICATION

93809-3

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

02/29/2024

	FIRST AID			
IF ON SKIN OR	Take off contaminated clothing.			
CLOTHING:	Rinse skin immediately with plenty of water for 15-20 minutes.			
	Call a poison control center or doctor for treatment advice.			
IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice.			
	Have person sip a glass of water if able to swallow.			
	Do not induce vomiting unless told to by a poison control center or doctor.			
	Do not give anything by mouth to an unconscious person.			
IF INHALED:	Move person to fresh air.			
	• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably			
	mouth-to-mouth if possible.			
	Call a poison control center or doctor for treatment advice.			
IF IN EYES:	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.			
	Call a poison control center or doctor for further treatment advice.			
	HOT LINE NUMBER			

Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency involving this product, call CHEMTREC at 1-800-424-9300.

# PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS AND DOMESTIC ANIMALS **CAUTION**

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

# Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as butyl rubber ≥14 mils, or natural rubber ≥14 mils, or neoprene rubber ≥14 mils, or nitrile rubber ≥14 mils
- Shoes plus socks

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

# **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

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

#### **ENVIRONMENTAL HAZARDS**

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 contaminate water when disposing of equipment washwaters or rinsate.

#### **Groundwater Advisory and Proper Handling Instructions**

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Axill Solutions Imazethapyr 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 or 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.

**DO NOT** apply **Axill Solutions Imazethapyr** through any type of irrigation system.

**Axill Solutions Imazethapyr** must be used in a manner which will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixture.

#### PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reactions may occur.

# **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. This labeling must be in the possession of the user at the time of pesticide application.

Observe all cautions and limitations on this label and on the labels of products used in combination with **Axill Solutions Imazethapyr**. Do not use **Axill Solutions Imazethapyr** other than in accordance with the instructions set forth on this label. The use of **Axill Solutions Imazethapyr** not consistent with this label may result in injury to crops. Keep containers closed to avoid spills and contamination.

# 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 4 hours.

**Exception:** If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Chemical-resistant gloves, such as butyl rubber ≥14 mils, or natural rubber ≥14 mils, or neoprene rubber ≥14 mils, or nitrile rubber ≥14 mils
- Shoes plus socks

#### PRODUCT INFORMATION

Not for use on CLEARFIELD® rice or any other rice varieties or hybrids.

**Axill Solutions Imazethapyr** kills weeds by root and/or foliage uptake and rapid translocation to the growing points. Adequate soil moisture is important for optimum **Axill Solutions Imazethapyr** activity. When adequate soil moisture is present, **Axill Solutions Imazethapyr** will provide residual control of susceptible germinating weeds; activity on established weeds will depend on the weed

species and the location of its root system in the soil.

Occasionally, internode shortening and/or temporary yellowing of crop plants occurs following **Axill Solutions Imazethapyr** applications. These effects occur infrequently and are temporary. Normal growth and appearance should resume within 1 to 2 weeks.

When organophosphate (such as chlorpyrifos) or carbamate insecticides are tank-mixed with **Axill Solutions Imazethapyr**, temporary injury may result to the treated crops.

Use of **Axill Solutions Imazethapyr** herbicide in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. Under some conditions (such as heavy texture soil, high organic matter, low pH or low rainfall) **Axill Solutions Imazethapyr** may cause injury to subsequent planted crops. Vegetable crops and particularly sugar beets are sensitive to **Axill Solutions Imazethapyr** residues in the soil.

Naturally occurring biotypes\* of some of the weeds listed on this label may not be effectively controlled by this and/or other products with either the ALS/AHAS enzyme inhibiting mode of action. Other herbicides with the ALS/AHAS enzyme inhibiting mode of action include the sulfonylureas, the sulfonamides and the pyrimidyl benzoates. If naturally occurring ALS/AHAS resistant biotypes are present in a field, **Axill Solutions Imazethapyr** and/or any other ALS/AHAS enzyme inhibiting mode of action herbicide must be tank-mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

\*A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct, genetic makeup from other plants.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Replanting:** If replanting is necessary in a field previously treated with **Axill Solutions Imazethapyr**, the field may be replanted to soybeans, or peanuts (imidazolinone resistant corn), lima beans or Southern peas. Rework the soil no deeper than the treated zone. **DO NOT** apply a second treatment of **Axill Solutions Imazethapyr**.

#### **EDIBLE LEGUME VEGETABLES**

Reduced crop growth, quality, yield and/or delayed maturity may result from **Axill Solutions Imazethapyr** application to edible legume vegetables. Since crop maturity may be delayed, timing of harvest may need to be adjusted accordingly.

Use **Axill Solutions Imazethapyr** ONLY if proper agronomic practices have been utilized, including good soil fertility, proper crop rotation, disease and insect management and tillage practices that eliminate compaction and hardpans. Plant peas, lentils or lima beans at least 1/2 inch deep to reduce risk of crop injury.

#### **USE AREA RESTRICTIONS**

In New York State – Not for Sale or Use on Long Island.

# **RESTRICTIONS**

- DO NOT apply Axill Solutions Imazethapyr if planting is delayed and chance of frost prior to maturity is likely.
- DO NOT apply **Axill Solutions Imazethapyr** if cold and/or wet conditions are present or predicted to occur within one week of application.
- DO NOT apply **Axill Solutions Imazethapyr** post-emergence after crop has begun to flower or crop injury may result. (Refer to specific legume vegetable crop for specific application timings listed).

#### MIXING INSTRUCTIONS

POST-EMERGENCE APPLICATIONS OF AXILL SOLUTIONS IMAZETHAPYR REQUIRE THE ADDITION OF AN ADJUVANT AND A FERTILIZER SOLUTION.

NOTE: DO NOT use fertilizer solutions in the state of California.

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#### **ADJUVANTS**

**CROP OIL CONCENTRATE:** A petroleum or vegetable seed based oil concentrate may be used. Use methylated seed oils are when weeds are under moisture or temperature stress. Use methylated seed oils at the rate of 1.0% v/v (1 gal. per 100 gals. of spray solution), or use a crop oil concentrate at 1.25% v/v (1.25 gals. per 100 gals. of spray solution). **DO NOT** include a CROP OIL CONCENTRATE when applying **Axill Solutions Imazethapyr** to edible legume vegetable crops.

OR

**SURFACTANTS:** Use a non-ionic surfactant containing at least 80% active ingredient. Apply the surfactant at the rate of 0.25% v/v (1 quart per 100 gals. of spray solution). An organosilicone surfactant or dry surfactant may be used in place of a non-ionic surfactant.

# AND (All States Except California)

#### **FERTILIZER SOLUTION**

Acceptable nitrogen-based fertilizers include liquid fertilizers (such as 28%N, 32%N, or 10-34-0) may be applied at the rate of 1.25 to 2.5 gals. per 100 gals. of spray solution. Use the higher rate within the specified rate range when weeds are under moisture or temperature stress. Instead of a liquid fertilizer, use spray grade ammonium sulfate at the rate of 12 - 15 lbs. per 100 gals. of spray solution.

**NOTE:** Fertilizer solution is not required in **Axill Solutions Imazethapyr** applications in use areas south of interstate highway 40, except in the states of Texas, New Mexico and Oklahoma.

Fill the spray tank one-half full with clean water. Use a calibrated measuring device to measure the required amount of **Axill Solutions Imazethapyr** to the spray tank while agitating. Add adjuvants and fill the remainder of the tank with water.

#### TANK-MIX COMBINATIONS WITH OTHER HERBICIDES

If other herbicides are tank-mixed with **Axill Solutions Imazethapyr**, while agitating, add components in the following order:

- 1. Fill spray tank 1/2 full with clean water.
- 2. Add soluble packet products and thoroughly mix.
- 3. Add WP (wettable powder), DG (dispersible granule), DF (dry flowable) or liquid flowable formulations not in soluble packets.
- 4. Add **Axill Solutions Imazethapyr** and thoroughly mix.
- 5. Add other aqueous solution products.
- 6. Add EC (emulsifiable concentrate) products.
- 7. Add surfactant or crop oil to the spray tank.
- 8. Add liquid fertilizer.
- 9. While agitating, fill the remainder of the tank with water.

To avoid injury to sensitive crops, spray equipment used for **Axill Solutions Imazethapyr** applications must be drained and thoroughly cleaned with water before being used to apply other products.

When **Axill Solutions Imazethapyr** is used in combination with another herbicide, refer to the respective label for rates, methods of application, proper timing, weeds controlled, restrictions and precautions. Always use in accordance with the more restrictive label restrictions and precautions. **DO NOT** exceed label dosages. **Axill Solutions Imazethapyr** cannot be mixed with any product containing a label prohibiting such mixtures.

#### **SPRAYING INSTRUCTIONS**

**DO NOT** apply when wind velocity is greater than 10 mph, or when spray may be carried to sensitive crops. Sensitive crops include, but are not limited to, leafy vegetables and sugar beets.

#### **GROUND APPLICATIONS**

Uniformly apply with properly calibrated ground equipment in 10 or more gals. of water per acre. Apply with a spray pressure of 20 to 40 psi.

To ensure thorough coverage, use a minimum of 20 gals. of water per acre when applying Axill Solutions Imazethapyr to minimum or no-till crops. Use higher gallonage for fields with dense vegetation or heavy crop residues. Adjust the boom height to ensure proper coverage of weed foliage (according to the manufacturer's recommendation). Use only flat-fan nozzle tips for postemergence applications.

Avoid overlaps when spraying.

#### AXILL SOLUTIONS IMAZETHAPYR APPLICATIONS WITH A LOW-VOLUME SPRAYER

Axill Solutions Imazethapyr may be applied to soybeans with a low-volume (Spra-Coupe type) sprayer. When applying Axill Solutions Imazethapyr with a low-volume sprayer, spray the weeds before they reach the maximum size listed in this label. Adequate control of weeds is dependent upon good spray coverage of the weeds. The sprayer must be calibrated to deliver the specified spray volume and pressure to ensure adequate spray coverage of the weeds.

When applying Axill Solutions Imazethapyr with a low-volume sprayer, apply a minimum of 10 gals. per acre of spray solution with a nozzle pressure between 40 – 60 psi for optimum coverage.

**AERIAL APPLICATIONS** 

Axill Solutions Imazethapyr herbicide may be applied by air to crops listed in this label unless otherwise noted.

Uniformly apply with properly calibrated aerial equipment in 5 or more gals. of water per acre. When applied POST- EMERGENCE, the addition of a non-ionic surfactant AND fertilizer solution are required for optimum weed control. Apply a non-ionic surfactant at the rate of 1 quart per 100 gals. of spray solution OR a crop oil concentrate at the rate of 1.25 gals. per 100 gals. of spray solution AND a liquid fertilizer at the rate of 1.25 gals. per 100 gals. of spray solution. (See instructions under APPLICATION INFORMATION – POSTEMERGENCE).

# **Mandatory Spray Drift**

#### Aerial Applications

- Do not release spray at a height greater than 10 ft. above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium to ultra coarse spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

#### **Ground Applications**

- Apply with a nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop
- For all applications, applicators are required to use a medium to ultra coarse spray droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

# **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### IMPORTANCE OF DROPLET SIZE

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

#### Controlling Droplet Size - Ground Boom

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

# Controlling Droplet Size - Aircraft

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

#### **BOOM HEIGHT - Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

#### SHIELDED SPRAYERS

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

#### TEMPERATURE AND HUMIDITY

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

#### TEMPERATURE INVERSIONS

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

#### WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

# RESISTANCE MANAGEMENT

For resistance management, **Axill Solutions Imazethapyr** is a Group 4Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to **Axill Solutions Imazethapyr** and other Group 4Group 2 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same use site. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Avoid the consecutive use of **Axill Solutions Imazethapyr** or other target site of action Group 4Group 2 herbicides that might have a similar target site of action, on the same weed species.
- Use tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Base herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Scout fields prior to application to identify the weed species present and their growth state to determine if the intended application will be effective.
- Scout fields after application to verify that the treatment was effective and to monitor weed populations for early signs of resistance development.
- Contact your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- o A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your Axill Solutions, LLC retailer or representative. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemicals means to remove escapes, as practical, with the goal of preventing further seed production.

#### APPLICATION INFORMATION

#### **POST-EMERGENCE**

**Axill Solutions Imazethapyr** is effective in controlling weeds in conservation tillage as well as in conventional production systems. Apply **Axill Solutions Imazethapyr** herbicide as an early post-emergence treatment when weeds are actively growing and before they exceed a height of 3 inches, unless otherwise indicated. Delay application until the majority of the weeds are at the specified growth stage. Base application timing on weed size and not crop growth stage. Apply **Axill Solutions Imazethapyr** to crops and weeds that are actively growing.

An adjuvant (either a crop oil concentrate or a surfactant) and a nitrogen-based fertilizer must be added to the spray solution for optimum weed control activity. See the **ADJUVANTS** section under **MIXING INSTRUCTIONS** for specific instructions.

When **Axill Solutions Imazethapyr** is applied post-emergence, absorption will occur through both the roots and foliage. Susceptible weeds stop growing and either die or are not competitive with the crop. **Axill Solutions Imazethapyr** not only controls many existing broadleaf and grass weeds when applied post-emergence, it also provides control of susceptible weeds that may emerge after application.

For maximum weed control, cultivate 7 - 10 days following a post-emergence **Axill Solutions Imazethapyr** application. This timely cultivation will enhance residual weed control, especially under dry conditions.

Apply Axill Solutions Imazethapyr a minimum of one hour before rainfall or overhead irrigation.

Unusually cool temperatures (50°F or less) reduce photosynthesis and transpiration and thus reduce uptake, translocation, and efficacy of **Axill Solutions Imazethapyr** herbicide in weeds. Delaying a **Axill Solutions Imazethapyr** application for 48 hours from the time the temperature increases above 50°F, if air temperature has been below 50°F for 10 hours or more hours, will improve weed control and reduce crop response.

# NO-TILL/MINIMUM TILLAGE AND DOUBLE CROP SOYBEANS

**Axill Solutions Imazethapyr** controls existing weeds and provides residual control of most weeds when applied early post-emergence to soybeans in no-till or minimum tillage and double crop soybean production systems. The application may be applied either before or after emergence of the crop. (Refer to the **WEEDS CONTROLLED POST-EMERGENCE** chart for weeds controlled and specified weed size).

If **Axill Solutions Imazethapyr** is applied prior to emergence of the crop, and weeds exceed the specified size, add a contact herbicide to **Axill Solutions Imazethapyr** to enhance control. (See instructions for **NO-TILL OR REDUCED TILLAGE** under the **PRE-EMERGENCE** section of this label).

#### **SOIL APPLICATIONS**

**Axill Solutions Imazethapyr** provides effective weed control in conservation tillage systems designed to meet conservation compliance requirements. **Axill Solutions Imazethapyr** can be applied as an early pre-plant, pre-plant incorporated, or pre-emergence treatment in soybeans. It can also be applied in conventional, minimum tillage and no-till production systems. The application method of choice will depend on the anticipated weed spectrum and the preference of the applicator.

Adequate soil moisture is required for optimum activity. Rainfall or overhead irrigation is necessary to move **Axill Solutions Imazethapyr** into the weed germination zone. The amount of rainfall or irrigation required following application depends on existing soil moisture, soil texture and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is normally adequate. If adequate moisture is not received within 7 days after treatment, cultivate to control escaped weeds. When adequate

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moisture is received after dry conditions, **Axill Solutions Imazethapyr** will provide residual control of susceptible germinating weeds; activity on established weeds will depend on the weed species and the location of its root system in the soil.

**Axill Solutions Imazethapyr** controls weeds by uptake by weed roots and translocation to the growing points where it stops weed growth. Susceptible weeds may emerge, growth will stop and the weeds will either die or are not competitive with the crop.

# **SOIL APPLICATIONS WITH LIQUID FERTILIZERS**

**Axill Solutions Imazethapyr can** be applied to the soil in liquid fertilizers, alone or in combination with pendimethalin, or dimethenamide-P to soybeans. Mixtures including trifluralin may be applied to soybeans only. Follow all **Axill Solutions Imazethapyr** label instructions regarding incorporation, timing of application, special instructions, restrictions and precautions. Apply treatments in 20 or more gals. of liquid fertilizer per acre with ground equipment. Always test the compatibility of **Axill Solutions Imazethapyr** with the liquid fertilizer before mixing in the spray tank.

# PRE-EMERGENCE (SURFACE APPLICATIONS)

**Axill Solutions Imazethapyr** offers flexibility in that it can be utilized in all production tillage systems. It can be applied prior to planting (up to 45 days prior to planting); at planting in conventional, reduced tillage or no-till production systems; or after planting and before crop emergence.

#### **NO-TILL OR REDUCED TILLAGE**

Apply **Axill Solutions Imazethapyr** treatments before, during or after planting. To ensure thorough coverage, use a minimum of 20 gals. of water per acre. Use higher gallonage for fields with dense vegetation or heavy crop residues.

For maximum grass control, tank-mix **Axill Solutions Imazethapyr** with pendimethalin, or dimethenamide-P. To kill existing vegetation, paraquat dichloride, glyphosate or 2,4-D (early pre-plant – see 2,4-D label for limitations) may be tank-mixed with **Axill Solutions Imazethapyr** alone or in combination with pendimethalin, or dimethenamide-P. Delete paraquat dichloride, glyphosate or 2,4-D from the tank-mixture if vegetation is absent at the time of application.

**NOTE:** Adjust planters to ensure adequate soil coverage of seed.

#### PRE-PLANT INCORPORATED APPLICATIONS

**Axill Solutions Imazethapyr** may be applied following land preparation and must be thoroughly incorporated to a depth of 1 to 2 inches. If crops are planted on beds, apply and incorporate after bed formation using PTO-driven equipment or a rolling cultivator. Maintain **Axill Solutions Imazethapyr** in the surface 1 to 2 inches of the finished beds. Make application up to 45 days prior to planting soybeans.

When **Axill Solutions Imazethapyr** is soil applied for control of nutsedge in peanuts, incorporate with two passes of the incorporation implement. Make the second pass at an offset angle to the first pass to minimize the potential for streaking.

# FEDERAL CONSERVATION RESERVE PROGRAM AND AGRICULTURAL RESERVE PROGRAM LAND SEEDED TO FORAGE LEGUME SPECIES AND PERENNIAL FORAGE GRASSES DIRECTIONS FOR USE

**Axill Solutions Imazethapyr** is effective in controlling many annual broadleaf and grass weeds in CONSERVATION RESERVE PROGRAMS and AGRICULTURAL RESERVE PROGRAMS (SET-ASIDE) land seeded to forage legume or grass crops. An **Axill Solutions Imazethapyr** application may result in temporary reduction in growth of legumes and grasses. Plants overcome temporary effects and become well established due to reduced weed competition.

#### RESTRICTIONS

- DO NOT apply more than 4 fl. oz. Axill Solutions Imazethapyr (0.0625 lb. ai) per application.
- DO NOT apply more than 4 fl. oz. Axill Solutions Imazethapyr (0.0625 lb. ai) per acre per year.
- DO NOT make more than one application of **Axill Solutions Imazethapyr** per year.
- DO NOT feed or graze legumes or grasses following an Axill Solutions Imazethapyr application.
- DO NOT cut treated legumes or grasses for hay or forage.
- DO NOT harvest legume seed for livestock feed.

- DO NOT use seed from treated legumes for sprouting.
- DO NOT apply to seeded grasses until they have 4 leaves.

#### **COVER CROPS\***

#### **LEGUMES:**

Apply to forage legumes including alfalfa, Birdsfoot trefoil, clover, crown vetch, kudzu, lespedeza, lupin, milk vetch, sainfoin, trefoil, velvet bean, and vetch.

#### **GRASSES:**

**Axill Solutions Imazethapyr** can be applied to the following grasses: big bluestem, little bluestem, switchgrass, Russian wild rye, intermediate wheatgrass, crested wheatgrass, western wheatgrass, tall wheatgrass, smooth brome, canarygrass, or orchardgrass.

\*NOTE: Cover crops may be planted into fields previously treated with **Axill Solutions Imazethapyr** for weed control in soybeans. In this case, **do not** make an **Axill Solutions Imazethapyr** application to the cover crop until the following spring.

#### POST-EMERGENCE APPLICATIONS OF AXILL SOLUTIONS IMAZETHAPYR TO CRP COVER CROPS

APPLICATION RATE: Apply Axill Solutions Imazethapyr at 4 fl. oz./Acre (0.0625 lb. ai/Acre).

**APPLICATION TIMING: Axill Solutions Imazethapyr** may be applied post-emergence to seedling legumes (with at least 3 fully expanded trifoliate leaves) or to established legumes. On established legumes, **Axill Solutions Imazethapyr** may be applied in the fall or in the spring before weeds exceed the maximum specified size for control.

Refer to the WEEDS CONTROLLED under the SOYBEAN section of this label.

#### **ALFALFA AND CLOVER**

#### **DIRECTIONS FOR USE**

USE RATE: 3 to 6 fl. oz./Acre (0.047 to 0.094 lb. ai/Acre)

Apply **Axill Solutions Imazethapyr** at a broadcast rate of 3 to 6 fl. oz./Acre (0.047 to 0.094 lb. ai/Acre) post-emergence only to seedling or established alfalfa or clover grown for forage, hay, or seed.

#### **RESTRICTIONS**

- DO NOT apply more than 6 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.094 lb. ai/Acre) per year to alfalfa or clover.
- DO NOT make more than one application of **Axill Solutions Imazethapyr** per year.
- DO NOT apply **Axill Solutions Imazethapyr** at more than 4 fl. oz./Acre (0.063 lb. ai/Acre) in North Dakota or Minnesota north of Highway #210.
- DO NOT apply more than 4 fl. oz./Acre (0.063 lb. ai/Acre) to alfalfa or clover during the last year of the stand.
- DO NOT graze or harvest alfalfa or clover for 30 days following an application of **Axill Solutions Imazethapyr** to alfalfa or clover.

#### **SEEDLING ALFALFA/CLOVER**

**Axill Solutions Imazethapyr** must be applied post-emergence to seedling alfalfa or clover. Apply **Axill Solutions Imazethapyr** when the seedling alfalfa or clover is in the second (2nd) trifoliate stage or larger and when the majority of the weeds are 1 to 3 inches. For low growing weeds (such as mustards) apply **Axill Solutions Imazethapyr** before the rosette exceeds 3 inches. When **Axill Solutions Imazethapyr** is applied to seedling alfalfa or clover, there may be a temporary reduction in growth.

#### **ESTABLISHED ALFALFA/CLOVER**

**Axill Solutions Imazethapyr** can be applied to established alfalfa or clover in the fall, in the spring to dormant, or semi-dormant alfalfa or clover (less than 3 inches of re-growth), or between cuttings. Any application must be made before significant alfalfa or clover growth or re-growth (3 inches) to allow **Axill Solutions Imazethapyr** to reach the target weeds.

**Replanting:** If replanting is necessary in a field previously treated with **Axill Solutions Imazethapyr**, **do not** plant alfalfa or clover for 4 months following a **Axill Solutions Imazethapyr** application. Refer to the **ROTATIONAL CROP GUIDELINE** section on this label for plant-back interval of various crops.

When applied as directed, **Axill Solutions Imazethapyr** will control or reduce competition from the weeds listed below. Refer to the **MIXING INSTRUCTIONS** section for specifications when weeds are at the maximum specified growth stage, or are under stress.

# **NOTE:** R = Reduced Competition

Weeds noted with an "R" will be suppressed by **Axill Solutions Imazethapyr**. For best results, apply before the weeds exceed the size indicated in the below table.

#### BROADLEAF WEEDS CONTROLLED

3 Fl. Oz./A (0.047 lb. ai/A)	ONS IMAZETHAPYR APPLIC	CATION RATE 6 Fl. Oz./A
(0.047 lb. ai/A)	-	6 Fl. Oz./A
	/	-
	(0.063 lb. ai/A)	(0.094 lb. ai/A)
Maximum Weed Size (Inches)		
R	6	8
4	5	6
_	3	4
_	3	4
R	3	4
R	3	3
R	8	8
-	R	R
_	R	R(5)
_	_	R(6)
_	_	R(6)
_	_	R*
_	_	R(4)
_	R	3
_		3
_		3
R		4
		4
_	_	R(3)
_		3
		4
		3
		3
		R(2)
		4
<u>-</u>	<u> </u>	4
	2	2
_		3
		6
<u>-</u>	4	0
	D	2
		3
_		3
_ _ p		
, n		4 3
<u>-</u>	n n	3
2	2	4
		4
		4
		4
	4 — — — — — — — R R R R R R R R R R R R	4 5 - 3 - 3 R 8 3 R 8 8 - R 8 - R 7 - R 7 - R 7 - R 7 - R 7 - R 8

Nightshade,			
Black	3	3	4
Eastern black	3	3	4
Hairy	3	3	4
Oxtongue, bristly	_	_	R(3)
Pennycress, field	3	3	4
Pepperweed,			
field	3	3	4
Virginia	R	3	3
Pigweed,			<u> </u>
Redroot	4	6	8
Smooth	4	6	8
Spiny	_	6	8
Radish, wild	_	R	4
Ragweed,			*
Common	_	2	3
Giant	_	3	3
Redmaids	_	3	4
Redmaids	_	3	4
Rocket,			·
London	3	4	6
Yellow	R	3	4
Rock purslane, desert	_	_	3
Shepherd's purse	3	3	4
Smartweed,	<u> </u>		-
Ladysthumb	R	3	4
Pennsylvania	R	3	4
Swamp (seedling)	_	3	4
Spurge		-	<u> </u>
prostrate	_	R	3
spotted	_	R	3
petty	_	3	4
Spurry, corn	_	3	3
Sunflower, common	R	4	6
Swinecress	_	3	3
Tansymustard,			
green	3	3	4
pinnate	3	3	4
Thistle, Russian	R	3	3
Velvetleaf	R	3	4
Wartcress, creeping	_	2	3
Watercress	_	3	3
Willowweed, panicle	_	3	3

<sup>\*</sup>For best results in suppressing dodder (*Cuscuta* spp.), apply **Axill Solutions Imazethapyr** with crop oil concentrate or methylated seed oil after dodder has emerged but prior to or soon after attachment.

# **GRASSES AND SEDGES CONTROLLED**

	GRASSES AND SEDGES CONTROLLED		
	AXILL SOLUTIONS IMAZET	HAPYR APPLICATION RATE	
	4 Fl. Oz./A 6 Fl. Oz./A		
Weeds Controlled*	(0.063 lb. ai/A)	(0.094 lb. ai/A)	
	Maximum Weed Size (Inches)		
Barnyardgrass	R	3	
Bluegrass, annual	-	R(3)	
Canarygrass, littleseed	R	R(3)	

Cereals, volunteer		
barley	R	R(4)
oats	R	R(4)
wheat	R	R(4)
Crabgrass,		
large	R	3
smooth	R	3
Cupgrass, woolly**	3	3
Foxtail,		
Giant	6	6
Green	3	4
Yellow	3	3
Johnsongrass,		
seedling	8	8
rhizome	R	R(6-12)
Millet, wild proso	R	3
Nutsedge,		
yellow	R	R(6)
purple	R	R(6)
Oats, wild	R	R(4)
Rice, red	3	4
Shattercane	8	10
Signalgrass, broadleaf	R	8
Quackgrass***	_	R(7)

<sup>\*</sup>Axill Solutions Imazethapyr is active against many grass species. However, when heavy grass pressure is anticipated, use Axill Solutions Imazethapyr in a sequential application with a registered post-emergence grass herbicide such as sethoxydim for optimum control.

# TANK-MIX COMBINATIONS WITH OTHER HERBICIDES

To control weeds not listed on the **Axill Solutions Imazethapyr** label, herbicides such as bromoxynil, 2,4-DB, sethoxydim, rimsulfuron or clethodim may be tank-mixed with **Axill Solutions Imazethapyr**. When **Axill Solutions Imazethapyr** is used in combination with another herbicide, refer to the respective label for rates, methods of application, proper timing, weeds controlled, restrictions and precautions. Always use in accordance with the more restrictive label restrictions and precautions. **DO NOT** exceed label dosages.

#### APPLICATION INFORMATION

**Axill Solutions Imazethapyr** is effective in controlling a broad spectrum of broadleaf and grass weeds. Alfalfa and clover are resistant to postemergence applications of **Axill Solutions Imazethapyr** after the second trifoliate leaf has expanded. Minor height reduction or slight leaf yellowing may occur soon after application.

Apply **Axill Solutions Imazethapyr** as an early post-emergence treatment when the weeds are actively growing. Weeds are generally easier to control before they exceed 3 inches in height. Weeds under stress are less susceptible to control in cold or drought stress conditions.

If applied to alfalfa or clover under cool conditions (40°F or less), temporary stunting and yellowing of the crop may occur.

# **Stand Establishment**

Apply **Axill Solutions Imazethapyr** after the alfalfa or clover has 2 fully expanded trifoliate leaves. Weeds must not exceed the size listed in the **WEEDS CONTROLLED** tables. **Axill Solutions Imazethapyr** may be applied to summer, fall or spring seeded alfalfa or clover.

#### Inter-seeded Oats

Oats inter-seeded with alfalfa will reduce soil erosion and allow the alfalfa or clover to establish. Oats, however can compete with the alfalfa or clover. An application of **Axill Solutions Imazethapyr** will kill or significantly reduce the growth of the oats and allow the alfalfa or clover to establish with minimal erosion or competition from the oats. Apply **Axill Solutions Imazethapyr** to the oats when they have 3 to 4 leaves.

<sup>\*\*</sup>Axill Solutions Imazethapyr controls emerged woolly cupgrass only.

<sup>\*\*\*</sup>Quackgrass will be suppressed only when actively growing and before it exceeds 7 inches in height.

#### **ESTABLISHED ALFALFA / CLOVER - DORMANT**

Apply **Axill Solutions Imazethapyr** to dormant alfalfa or clover in the fall following the last cutting. Apply **Axill Solutions Imazethapyr** in the spring to dormant alfalfa or clover, or as alfalfa or clover breaks dormancy. Apply spring treatments prior to excessive alfalfa or clover growth (less than 3 inches), to reduce spray interference.

#### **ESTABLISHED ALFALFA / CLOVER - GROWING**

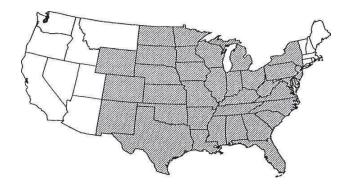
For weed control during the season, apply **Axill Solutions Imazethapyr** following alfalfa or clover cutting. Remove the hay from the field and apply **Axill Solutions Imazethapyr** prior to excessive alfalfa or clover regrowth.

# **Perennial Grass Suppression**

If perennial grasses (such as orchardgrass, fescues, bromes or timothy) are present in an alfalfa or clover stand, **Axill Solutions**Imazethapyr will reduce the growth and competitive effect of the grass.

NAVY, GREAT NORTHERN, RED KIDNEY, BLACK TURTLE, CRANBERRY, PINTO, LIMA, AND SMALL WHITE TYPE DRY BEANS, ADZUKI, LENTILS, WHITE LUPINS, CHICKPEAS (GARBANZO BEANS), DRY EDIBLE PEAS, ENGLISH AND SOUTHERN PEAS

**DIRECTIONS FOR USE** in the states east of and including: North Dakota, South Dakota, Wyoming, Colorado, and New Mexico (except the states east of and including: Vermont, Massachusetts, and Connecticut). Refer to map for geographical use area.



Use only non-ionic surfactants as a spray additive for post-emergence applications. **DO NOT** use crop oils, methylated seed oils, or petroleum oils.

#### **RESTRICTIONS**

- DO NOT make more than one application of **Axill Solutions Imazethapyr** per year.
- DO NOT apply more than 4 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.047 lb. ai/Acre) per application.
- DO NOT apply more than 4 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.063 lb. ai/Acre) per year to peas and beans in this region
- Allow at least 30 days between application and harvest of succulent lima beans, English peas, and Southern peas. Allow at least 60 days between application and harvest of dry edible peas, lentils, chickpeas, and other dry bean or pea types listed on this label.
- DO NOT APPLY AXILL SOLUTIONS IMAZETHAPYR POST-EMERGENCE BEFORE CROP HAS AT LEAST ONE TRIFOLIATE LEAF OR
  PEAS ARE AT LEAST THREE INCHES IN HEIGHT OR CROP INJURY (REDUCED CROP GROWTH AND/OR DELAYED MATURITY) MAY
  RESULT
- DO NOT APPLY AXILL SOLUTIONS IMAZETHAPYR POST-EMERGENCE TO LIMA BEANS, LENTILS, WHITE LUPINS, OR CHICKPEAS.
- DO NOT apply to Domino variety black turtle beans.
- DO NOT apply this product through any type of irrigation system.

Pinto varieties UI-1 1 1 and Olathe are more sensitive to **Axill Solutions Imazethapyr** than other varieties.

# **APPLICATION INSTRUCTIONS**

NAVY, GREAT NORTHERN, RED KIDNEY, BLACK TURTLE, CRANBERRY, PINTO, AND SMALL WHITE DRY BEANS, ADZUKI, DRY EDIBLE PEAS, ENGLISH AND SOUTHERN PEAS

In Michigan or the Delaware, Maryland, and Virginia (Delmarva) peninsula: **DO NOT** apply more than 2 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.031 lb. ai/Acre) to sands or loamy sand soils.

In North Dakota or north of Highway 210 in Minnesota: **DO NOT** apply more than 2 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.031 lb. ai/Acre).

#### **Pre-Plant Incorporated Applications:**

Apply **Axill Solutions Imazethapyr** at the broadcast rate of up to 3 fl. oz./Acre (0.047 lb. ai) to dry beans (navy, great northern, red kidney, black turtle, cranberry, pinto and small white type dry beans, and adzuki), dry edible peas, and English peas, or up to 4 fl. oz./Acre (0.063 lb. ai/Acre) for southern peas only, within 1 week before planting. Applied pre-plant incorporated, **Axill Solutions Imazethapyr** may be tank-mixed with a registered grass herbicide.

#### **Pre-Emergence Applications:**

Apply **Axill Solutions Imazethapyr** at the broadcast rate of up to 3 fl. oz./Acre (0.047 lb. ai/Acre) to dry beans, dry edible peas and English peas, or up to 4 fl. oz./Acre (0.063 lb. ai/Acre) for southern peas only, immediately after, or up to 3 days after planting. **Axill Solutions Imazethapyr** may be applied in a tank-mix with a registered grass herbicide or applied pre- emergence following a preplant incorporated application of a registered grass herbicide.

#### **Early Post-Emergence Applications:**

Apply **Axill Solutions Imazethapyr** at the broadcast rate of up to 3 fl. oz./Acre (0.047 lb. ai/Acre) to dry beans, dry edible peas, and English peas, or up to 4 fl. oz./Acre (0.063 lb. ai/Acre) for southern peas only. Apply to dry beans with at least one fully expanded trifoliate leaf. Apply to dry edible peas, English peas, and southern peas at least 3 inches in height but prior to 5 nodes and before flowering. The use of trifluralin prior to **Axill Solutions Imazethapyr** application may increase the likelihood and severity of crop injury. A non-ionic surfactant must be added to the spray solution. The non-ionic surfactant must contain at least 80% active ingredient and shall be used at a rate of 2 pts. per 100 gals. of spray mixture.

Sodium bentazon may be tank-mixed with **Axill Solutions Imazethapyr** to control weeds not listed on the **Axill Solutions Imazethapyr** label. Addition of sodium bentazon may also cause antagonism, thereby reducing control of grass weeds. Nitrogenbased fertilizer may be included as a spray additive ONLY when **Axill Solutions Imazethapyr** is tank-mixed with sodium bentazon. Refer to the sodium bentazon label for proper application rates and restrictions. Always use in accordance with the more restrictive label restrictions and precautions.

#### LIMA BEANS, CHICKPEAS (GARBANZOS), LENTILS, AND WHITE LUPINS

**DO NOT** apply **Axill Solutions Imazethapyr** to white lupins grown on sand or loamy sand soils.

In Michigan or the Delaware, Maryland, and Virginia (Delmarva) peninsula: **DO NOT** apply more than 2 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.031 lb. ai/Acre) to sands or loamy sand soils.

In North Dakota or north of Highway 210 in Minnesota: **DO NO**T apply more than 2 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.031 lb. ai/Acre).

#### **Pre-Plant Incorporated Applications:**

Apply **Axill Solutions Imazethapyr** at the broadcast rate of up to 3 fl. oz./Acre (0.047 lb. ai/Acre) within 1 week before planting. Applied pre-plant incorporated, **Axill Solutions Imazethapyr** may be tank-mixed with a registered grass herbicide.

# **Pre-Emergence Applications:**

Apply **Axill Solutions Imazethapyr** at the broadcast rate of up to 3 fl. oz./Acre (0.047 lb. ai/Acre) immediately after or up to 3 days after planting. **Axill Solutions Imazethapyr** may be applied in a tank-mix with a registered grass herbicide or applied pre-emergence following a pre-plant incorporated application of a registered grass herbicide.

# **WEEDS CONTROLLED**

**Axill Solutions Imazethapyr** applied at the broadcast rate of 2 fl. oz./Acre (0.031 lb. ai/Acre) pre-plant incorporated, pre- emergence, or early post-emergence will control:

Mustard, wild
Nightshade, black\*
Nightshade, Eastern black\*
\*suppression only

**Axill Solutions Imazethapyr** applied at the broadcast rate of 3 fl. oz./Acre (0.047 lb. ai/Acre) pre-plant incorporated, pre-emergence, or early post-emergence will control:

Mustard, wild Nightshade, black Nightshade, Eastern black Nightshade, hairy Pigweed, redroot

Post-emergence applications of 3 fl. oz./Acre (0.047 lb. ai/Acre) must be made to weeds less than 2 inches tall for best results.

When applied as directed at the broadcast rate of 4 fl. oz./Acre (0.063 lb. ai/Acre) for southern peas only, **Axill Solutions Imazethapyr** will control or reduce competition from the weeds listed below:

**NOTE:** C = Control, R = Reduced Competition

The number under **Maximum Leaf Stage** indicates the MAXIMUM number of leaves at which weeds must be sprayed post-emergence.

# **BROADLEAF WEEDS CONTROLLED**

Broadleaf Weeds	COUL ADDILLED	POST-EMERGENCE		
Broadlear weeds	SOIL APPLIED	Maximum Leaf Stage	Size (Inches)	
Anoda, spurred	С	2	1 – 2	
Artichoke, Jerusalem	_	8	6 – 10	
Bristly starbur	_	2	1 – 2	
Buffalobur	C*	-	-	
Carpetweed	С	-	_	
Cocklebur, common	C*	8	1-8	
Galinsoga	С			
imsonweed	C**	4	1-3	
(ochia (non-ALS resistant)	С	4	1-3	
ambsquarters, common	C**	R	1-2	
Mallow, Venice	R	2	1-2	
Morningglory,				
Entireleaf	R	2	1 – 2	
lvyleaf	R	2	1 – 2	
, Pitted	R	2	1 – 2	
Smallflower	С	4	1-3	
Tall	R	2	1 – 2	
Mustard sp.	С	4	1-3	
Nightshade,				
Black	С	4	1-3	
Eastern black	С	4	1-3	
Hairy	С	4	1-3	
Pigweed,				
Redroot	С	4	1 – 4	
Smooth	С	4	1 – 4	
Spiny	С	4	1 – 4	
Poinsettia, wild	С	-	-	
Puncturevine	С	-	-	
Purslane, common	С	-	_	
Pusley, Florida	С	_	_	
Ragweed,				
Common	R	4	1-3	
Giant	R	4	1-3	
Sage, barnyard	-	R	1-3	
Sida, prickly	C**	_	_	
Smartweed,				
Ladysthumb	С	4	1-3	
Pennsylvania	С	4	1-3	
Spurge				
prostrate	С	4	1-3	
spotted	С	4	1-3	

Sunflower, common	C**	4	1-3
Thistle, Canada	_	R	1-3
Velvetleaf	C**	3	1-3

<sup>\*</sup>Use soil applications for light to moderate infestations only. Must be pre-plant incorporated for best results.

#### **GRASS WEEDS CONTROLLED\***

Cura Manda	COU ADDITED	POST-EMERGENCE	
Grass Weeds	SOIL APPLIED	Maximum Leaf Stage	Size (Inches)
Barnyardgrass	R	3	1-3
Crabgrass,			
large	R	3	1-3
smooth	R	3	1-3
Cupgrass, woolly	-	3**	1-3
Foxtail,			
giant	С	6	1-6
green	C	3	1-3
robust purple	С	3	1-3
robust white	С	3	1-3
yellow	С	3	1-3
Goosegrass	R	_	-
Johnsongrass,			
seedling	C	6	1-8
rhizome	_	R	1-8
Panicum,			
fall	R	_	-
Texas	R	_	-
Red rice	_	3	-
Shattercane	R	6	_
Signalgrass, broadleaf	R	4	1-8

<sup>\*</sup>When soil applied to grasses, more consistent control can be obtained from pre-plant incorporated treatments.

#### **SEDGES CONTROLLED**

Cuara Manda	COULADDILED PC		EMERGENCE	
Grass Weeds	SOIL APPLIED	Maximum Leaf Stage	Size (Inches)	
Nutsedge,				
purple	R	R	1-3	
yellow	R	R	-	

**DO NOT** count cotyledon leaves when determining weed stage of growth.

Refer to the ADDITIONAL USE INFORMATION section for additional instructions.

#### **RED KIDNEY BEANS**

**DIRECTIONS FOR USE** in the state of California.

# **APPLICATION RATE AND TIMING**

# **Post-Emergence Applications:**

Apply **Axill Solutions Imazethapyr** at the rate of 3 fl. oz./Acre (0.047 lb. ai/Acre). A non-ionic surfactant must be added to the spray solution. The non-ionic surfactant must contain at least 80% active ingredient and used at a rate of 2 pts. per 100 gals. of spray mixture.

Apply **Axill Solutions Imazethapyr** herbicide when weeds are actively growing and red kidney beans have at least 1 fully expanded trifoliate leaf.

For maximum weed control, cultivate 7 - 10 days following a post-emergence Axill Solutions Imazethapyr application. This timely

<sup>\*\*</sup>When soil applied, common lambsquarters, jimsonweed, prickly sida, velvetleaf, and common sunflower are more consistently controlled by preplant incorporated treatments.

<sup>\*\*</sup>Axill Solutions Imazethapyr controls emerged woolly cupgrass only.

cultivation will enhance residual weed control, especially under dry conditions.

#### **RESTRICTIONS**

- DO NOT MAKE MORE THAN ONE APPLICATION OF AXILL SOLUTIONS IMAZETHAPYR PER YEAR.
- DO NOT apply more than 3 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.047 lb. ai/Acre) per application.
- DO NOT apply more than 3 fl. oz./Acre of Axill Solutions Imazethapyr (0.047 lb. ai/Acre) per year to Red Kidney Beans.
- DO NOT APPLY AXILL SOLUTIONS IMAZETHAPYR POST-EMERGENCE BEFORE CROP HAS AT LEAST ONE TRUE LEAF OR CROP INJURY (REDUCED CROP GROWTH AND/OR DELAYED MATURITY) MAY RESULT.
- DO NOT apply Axill Solutions Imazethapyr post-emergence when the crop and weeds have been subjected to stress
  conditions such as temperature or moisture extremes.
- DO NOT apply by aerial application.
- Allow at least 60 days between application and harvest.

#### WEEDS CONTROLLED

When applied as directed, **Axill Solutions Imazethapyr** will control or reduce competition from the weeds listed below. Refer to the **MIXING INSTRUCTIONS** section for instructions when weeds are at the maximum specified growth stage, or are under stress. (The number under **Maximum Leaf Stage** indicates the MAXIMUM number of leaves at which weeds need to be sprayed post-emergence.)

Weeds Controlled	POST-EMERGENCE	
weeds Controlled	Maximum Leaf Stage	Size (Inches)
Kochia (non-ALS resistant)	4	1-3
Mustard sp.	4	1-3
Nightshade,		
black	4	1-3
Eastern black	4	1-3
hairy	4	1 – 2
Pigweed, redroot	4	1-3

Refer to the **ADDITIONAL USE INFORMATION** section for additional instructions.

#### **SNAP BEANS**

**DIRECTIONS FOR USE** in the states of Alabama, Florida, Georgia, Illinois, Minnesota, Michigan, New Jersey, North Carolina, and Wisconsin.

#### RESTRICTIONS

- DO NOT apply by aerial application.
- DO NOT apply **Axill Solutions Imazethapyr** after July 31st (June 20th in New Jersey).
- DO NOT MAKE MORE THAN ONE APPLICATION OF AXILL SOLUTIONS IMAZETHAPYR PER YEAR.
- DO NOT apply more than 1.5 fl. oz./Acre of Axill Solutions Imazethapyr (0.023 lb. ai/Acre) per application.
- DO NOT apply more than 1.5 fl. oz./Acre of Axill Solutions Imazethapyr (0.023 lb. ai/Acre) per year to Snap Beans.
- Allow at least 30 days between application and harvest.

# **APPLICATION INSTRUCTIONS**

# **Pre-Plant Incorporated Applications:**

Apply **Axill Solutions Imazethapyr** at 1.5 fl. oz./Acre (0.023 lb. ai/Acre) within 1 week of planting. Applied pre-plant incorporated, **Axill Solutions Imazethapyr** may be tank-mixed with a registered grass herbicide.

# **Pre-Emergence Applications:**

Apply **Axill Solutions Imazethapyr** at the broadcast rate of 1.5 fl. oz./Acre (0.023 lb. ai/Acre) immediately after, or up to 1 day after planting. **Axill Solutions Imazethapyr** may be applied in a tank-mix with a registered grass herbicide or applied pre- emergence following a pre-plant incorporated application of a registered grass herbicide.

#### **WEEDS SUPPRESSED**

**Axill Solutions Imazethapyr** applied at the broadcast rate of 1.5 fl. oz./Acre (0.023 lb. ai/Acre) pre-plant incorporated or pre-emergence will suppress or reduce competition of the following weeds:

Common Purslane

[Note to reviewer: [Text] in brackets denotes optional text].

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Eastern Black Nightshade Redroot Pigweed Wild Mustard

Refer to the ADDITIONAL USE INFORMATION section for additional instructions.

#### **SNAP BEANS**

**DIRECTIONS FOR USE** in the states of Arkansas, Missouri, North Carolina, Oklahoma, Texas (counties of Bailey, Castro, Lamb and Parmer only), and New Mexico (counties of Curry and Roosevelt only).

#### **RESTRICTIONS**

- DO NOT apply by aerial application.
- DO NOT apply **Axill Solutions Imazethapyr** after July 31st.
- DO NOT MAKE MORE THAN ONE APPLICATION OF AXILL SOLUTIONS IMAZETHAPYR PER YEAR.
- DO NOT apply more than 1.5 fl. oz./Acre of Axill Solutions Imazethapyr (0.023 lb. ai/Acre) per application.
- DO NOT apply more than 1.5 fl. oz./Acre of Axill Solutions Imazethapyr (0.023 lb. ai/Acre) per year to Snap Beans.
- Allow at least 30 days between application and harvest.
- DO NOT APPLY AXILL SOLUTIONS IMAZETHAPYR POST-EMERGENCE BEFORE CROP HAS AT LEAST ONE TRUE LEAF OR CROP INJURY (REDUCED CROP GROWTH AND/OR DELAYED MATURITY) MAY RESULT.

# **APPLICATION INSTRUCTIONS**

#### **Post-Emergence Applications:**

Apply **Axill Solutions Imazethapyr** at 1.5 fl. oz./Acre (0.023 lb. ai/Acre) in a tank-mix combination with sodium bentazon. A non-ionic surfactant must be added to the spray solution. The non-ionic surfactant must contain at least 80% active ingredient and used at a rate of 2 pts. per 100 gals. of spray mixture.

Refer to the sodium bentazon label for proper application rates and restrictions.

#### **WEEDS SUPPRESSED**

**Axill Solutions Imazethapyr** applied at the broadcast rate of 1.5 fl. oz./Acre (0.023 lb. ai/Acre) post-emergence will suppress or reduce competition of the following weeds:

Eastern Black Nightshade Redroot Pigweed

Refer to the ADDITIONAL USE INFORMATION section for additional instructions.

#### SUCCULENT PEAS, DRY EDIBLE PEAS, LENTILS, CHICKPEAS, AND LIMA BEANS

**DIRECTIONS FOR USE** in the states of Idaho, Montana, Nevada, Oregon, Utah, and Washington.

#### **APPLICATION RATE AND TIMING**

Pre-Plant Applications for No-Till and Minimum Tillage Systems Only:

Apply **Axill Solutions Imazethapyr** at a broadcast rate of 3 fl. oz./Acre (0.047 lb. ai/Acre) within 30 days before planting. If incorporated, **DO NOT** incorporate deeper than 3 inches.

In no-till and minimum tillage systems, apply **Axill Solutions Imazethapyr** in the fall prior to spring planting. Rainfall is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity. Apply **Axill Solutions Imazethapyr** in the fall when soil temperature at the 4-inch depth is less than 55°F and before the ground is frozen.

#### **Pre-Plant Incorporated Applications:**

Apply **Axill Solutions Imazethapyr** at the broadcast rate of 3 fl. oz./Acre (0.047 lb. ai/Acre) within 1 week before planting. **DO NOT** incorporate deeper than 3 inches.

# **Pre-Emergence Applications:**

Apply **Axill Solutions Imazethapyr** at the broadcast rate of 3 fl. oz./Acre (0.047 lb. ai/Acre) after planting, but prior to crop emergence.

Tank mix **Axill Solutions Imazethapyr** with metribuzin to assist in the control of lambsquarters or mayweed-chamomile (dogfennel). Refer to the metribuzin label for proper application rates and restrictions.

# Post-Emergence Applications (Dry Edible Peas Only):

Apply **Axill Solutions Imazethapyr** at 2 fl. oz./Acre (0.031 lb. ai/Acre). A non-ionic surfactant must be added to the spray solution. The nonionic surfactant must contain at least 80% active ingredient and used at a rate of 2 pts. per 100 gals. of spray mixture.

Sodium bentazon may be tank-mixed with **Axill Solutions Imazethapyr** to control weeds not listed on the **Axill Solutions Imazethapyr** label. Addition of sodium bentazon may also cause antagonism, thereby reducing control of grass weeds.

Nitrogen-based fertilizer may be included as a spray additive only when **Axill Solutions Imazethapyr** is tank-mixed with sodium bentazon. Use liquid fertilizer at 1.25 to 2.5 gals. per 100 gals. of spray solution or ammonium sulfate at the rate of 12 – 15 lbs./100 gals. of spray solution.

#### RESTRICTIONS

- DO NOT apply more than 3 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.047 lb. ai/Acre) per application to Peas and Beans in this region.
- DO NOT apply more than 3 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.047 lb. ai/Acre) per year to Peas and Beans in this region.
- DO NOT MAKE MORE THAN ONE APPLICATION OF AXILL SOLUTIONS IMAZETHAPYR PER YEAR.
- DO NOT APPLY AXILL SOLUTIONS IMAZETHAPYR POST-EMERGENCE BEFORE CROP HAS AT LEAST ONE TRIFOLIATE LEAF OR
  PEAS ARE AT LEAST THREE INCHES IN HEIGHT OR CROP INJURY (REDUCED CROP GROWTH AND/OR DELAYED MATURITY) MAY
  RESULT.
- DO NOT APPLY AXILL SOLUTIONS IMAZETHAPYR POST-EMERGENCE TO LIMA BEANS, LENTILS, OR CHICKPEAS.
- Allow at least 30 days between application and harvest for succulent peas and succulent lima beans.
- Allow at least 60 days between application and harvest for dry edible peas, chickpeas, lentils, and dry lima beans.

#### WEEDS CONTROLLED

Axill Solutions Imazethapyr applied PPI and/or Pre-emergence at 3 fl. oz./Acre (0.047 lb. ai/Acre) will control:

Weeds Controlled	Pre-Plant Incorporated	Pre-Emergence
Buckwheat, wild	С	С
Kochia (non-ALS resistant)	С	С
Lambsquarters, common	С	-
Mustard, wild	С	С
Nightshade,		
black	С	С
Eastern black	С	С
hairy	С	С
Pigweed, redroot	С	С
Shepherd's purse	С	С
Thistle, Russian	С	С

NOTE: C = Control

Axill Solutions Imazethapyr applied post-emergence at the broadcast rate of 2 fl. oz./Acre (0.031 lb. ai/Acre) will control:

Black nightshade\*
Eastern black nightshade\*
Hairy nightshade\*
Wild mustard
\*Suppression only

Refer to the **ADDITIONAL USE INFORMATION** section for additional instructions.

#### **CHICKPEAS**

**DIRECTIONS FOR USE** in the states of Arizona and California.

#### **APPLICATION RATE AND TIMING**

#### **Pre-Plant Incorporated Applications:**

Apply Axill Solutions Imazethapyr at the broadcast rate of up to 3 fl. oz./Acre (0.047 lb. ai/Acre) within 1 week before planting.

Applied pre-plant incorporated, Axill Solutions Imazethapyr may be tank-mixed with a registered grass herbicide.

# **Pre-Emergence Applications:**

Apply **Axill Solutions Imazethapyr** at the broadcast rate of up to 3 fl. oz./Acre (0.047 lb. ai/Acre) immediately after or up to 3 days after planting. **Axill Solutions Imazethapyr** may be applied in a tank-mix with a registered grass herbicide or applied pre-emergence following a pre-plant incorporated application of a registered grass herbicide.

#### RESTRICTIONS

- DO NOT apply more than 3 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.047 lb. ai/Acre) per application to Chickpeas in this region.
- DO NOT apply more than 3 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.047 lb. ai/Acre) per year to Chickpeas in this region.
- DO NOT MAKE MORE THAN ONE APPLICATION OF AXILL SOLUTIONS IMAZETHAPYR PER YEAR.
- Allow at least 30 days between application and harvest of succulent chickpeas. Allow at least 60 days between application and harvest of dry chickpeas.

#### WEEDS CONTROLLED

Weeds Controlled	Pre-Plant Incorporated	Pre-Emergence
Buckwheat, wild	С	С
Kochia (non-ALS resistant)	С	С
Lambsquarters, common	С	-
Mustard, wild	С	С
Nightshade,		
Black	С	С
Eastern black	С	С
hairy	С	С
Pigweed, redroot	С	С
Shepherd's purse	С	С
Thistle, Russian	С	С

**NOTE:** C = Control

Refer to the ADDITIONAL USE INFORMATION section for additional instructions.

# PEANUTS (Not for use in California)

# **DIRECTIONS FOR USE**

USE RATE: 4 fl. oz./Acre (0.063 lb. ai/Acre)

Apply **Axill Solutions Imazethapyr** at a broadcast rate of 4 fl. oz./Acre (0.063 lb. ai/Acre) for all methods of application (except sequential – see below): pre-plant incorporated, pre-emergence, ground-cracking and post-emergence. At this broadcast rate, 1 gal. of **Axill Solutions Imazethapyr** will treat 32 acres of peanuts.

**Axill Solutions Imazethapyr** may also be applied in a sequential application. Apply 2 fl. oz./Acre (0.031 lb. ai/Acre) in a soil application (pre-plant incorporated or preemergence) followed by 2 fl. oz./Acre (0.031 lb. ai/Acre) applied at ground-crack or post-emergence.

#### RESTRICTIONS

- DO NOT apply more than 4 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.063 lb. ai/Acre) per application.
- DO NOT apply more than 4 fl. oz./Acre of Axill Solutions Imazethapyr (0.063 lb. ai/Acre) per year to Peanuts.
- DO NOT make more than one application per year at the 4 fl. oz./Acre rate (0.063 lb. ai/Acre) or two applications at the 2 fl. oz./Acre rate (0.031 lb. ai/Acre).
- DO NOT graze or feed treated peanut forage, vines, hay or straw to livestock.
- There must be an interval of at least 85 days between an application of Axill Solutions Imazethapyr and peanut harvest.
- DO NOT apply pendimethalin + imazethapyr herbicides to peanuts the same year as Axill Solutions Imazethapyr.

**NOTE:** In Arizona for use only in Yuma and La Paz counties.

#### **WEEDS CONTROLLED**

When applied as directed, **Axill Solutions Imazethapyr** will control or reduce competition from the weeds listed below. Refer to the **MIXING INSTRUCTIONS** section for instructions when weeds are at the maximum specified growth stage, or are under stress. (The number under **Maximum Leaf Stage** indicates the MAXIMUM number of leaves at which weeds are to be sprayed post-emergence.)

**NOTE:** C = Control, R = Reduced Competition

# **BROADLEAF WEEDS CONTROLLED**

		EDS CONTROLLED	POST-EMER	GENCE	
Broadleaf Weeds	SOIL APPLIED	AT-CRACK	Maximum Leaf Stage Size (Inches)		
Alligator weed	_	С	4	1-3	
Anoda, spurred	С	С	2	1-2	
Bristly starbur	_		2	1-2	
Buffalobur	C*	С	R	1-3	
Carpetweed	C	С	_		
Cocklebur, common	R	С	8	1-8	
Devil's claw	C	С	_		
Galinsoga	С	С	_	_	
Jimsonweed	C*	С	4	1-3	
	C*	С	R	1-3	
Lambsquarters, common	C	C	, n	1-2	
Morningglory, Entireleaf	R	C	1	1-2	
		С	2		
lvyleaf	R	С	2	1 – 2	
Pitted	R	С	2	1 – 2 1 – 3	
Smallflower	C	С	4		
Tall	R	С	2	1-2	
Mustard sp.	С	С	4	1-3	
Nightshade,		_			
black	C	C	4	1 – 3	
Eastern black	C	С	4	1 – 3	
hairy	С	С	4	1-3	
Pigweed,					
redroot	C	C	8	1-8	
smooth	C	C	8	1 – 8	
spiny	C	C	8	1-8	
Poinsettia, wild	С	С	-		
Puncturevine	C	С	_	_	
Purslane, common	С	С	-	_	
Pusley, Florida	C	С	-	_	
Ragweed,					
common	R	R	4	1 – 3	
giant	R	R	4	1-3	
Sida, prickly (teaweed)	C*	С	_	_	
Smartweed,					
Ladysthumb	С	С	4	1 – 3	
Pennsylvania	С	С	4	1-3	
Spurge					
prostrate	С	С	4	1-3	
spotted	С	С	4		
toothed	С	С	-	-	
Sunflower	C*	С	4	1-3	
Velvetleaf	C*	С	4	1-3	

<sup>\*</sup>When **Axill Solutions Imazethapyr** is soil applied, these weeds are more consistently controlled by pre-plant incorporated treatments.

# **GRASS WEEDS CONTROLLED**

Grass Weeds	SOIL APPLIED*	AT-CRACK	POST-EMERGENCE		

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			Maximum Leaf Stage	Size (Inches)
Barnyardgrass	R	R	3	1-3
Crabgrass,				
large	R	С	3	1 – 3
smooth	R	С	3	1 – 3
Cupgrass, woolly	_	_	3	1-3
Foxtail,				
giant	С		6	1-6
green	С		3	1 – 3
yellow	С		3	1-3
Goosegrass	R		-	-
Johnsongrass,				
seedling	С	С	6	1-8
rhizome	_	_	R	6 – 12
Panicum,				
fall	R	_	_	-
Texas	R	_	_	_
Red rice	_	_	3	1-3
Shattercane	R	R	6	1-8
Signalgrass, broadleaf	R	С	4	1-6

<sup>\*</sup>When **Axill Solutions Imazethapyr** is soil applied to grasses, more consistent control can be obtained from pre-plant incorporated treatments.

#### **SEDGES**

Manda Controlled	SOIL APPLIED*	AT CDACK	POST-EMERGENCE	
Weeds Controlled	SOIL APPLIED	AT-CRACK	Maximum Leaf Stage	Size (Inches)
Nutsedge,				
purple	С	С	3	1 – 3
yellow	С	С	3	1-3

<sup>\*</sup>When **Axill Solutions Imazethapyr** is soil applied to grasses, more consistent control can be obtained from pre-plant incorporated treatments.

**DO NOT** count cotyledon leaves when determining weed stage of growth.

"AT-CRACK" APPLICATION refers to the time when the soil cracks due to the emerging peanut seedling. This generally occurs from 10 to 14 days following planting. At this time weeds have generally not germinated, or are in the seedling stage. If weeds have more than 2 true leaves, refer to the **POST-EMERGENCE** weed control column for weeds controlled.

In West Texas and New Mexico, wait until late cracking (most of the peanuts have emerged) before applying **Axill Solutions Imazethapyr**.

**Axill Solutions Imazethapyr** is active against many broadleaf and grass species. However, when heavy grass or common lambsquarters pressure is anticipated, apply **Axill Solutions Imazethapyr** in combination with a registered soil-applied grass herbicide (See **HERBICIDE COMBINATIONS** section).

# WEEDS CONTROLLED BY SEQUENTIAL APPLICATIONS OF AXILL SOLUTIONS IMAZETHAPYR

The sequential (split) application of **Axill Solutions Imazethapyr** consists of an application of 2 fl. oz./Acre (0.031 lb. ai/Acre) of product soil applied (either pre-plant incorporated or pre-emergence) followed by 2 fl. oz./Acre (0.031 lb. ai/Acre) applied either at ground-crack or post-emergence.

When applied as a sequential treatment, **Axill Solutions Imazethapyr** will control the weeds listed under the "**SOIL APPLIED**" and "**AT-CRACK**" applications in the **BROADLEAF WEEDS** and **GRASS WEEDS** tables (in the **PEANUTS** section of the label). It enhances the control of yellow and purple nutsedge. Apply the second application before the nutsedge exceeds 3 leaves.

When applied as directed, **Axill Solutions Imazethapyr** pre-plant incorporated or pre-emergence combination treatments with pendimethalin, trifluralin, alachlor, S-metolachlor, isoxaflutole, or ethalfluralin will control the weeds listed in following table, in addition to those controlled by **Axill Solutions Imazethapyr** alone.

GRASSES	Pendimethalin <sup>a</sup>	Trifluralin b	Alachlor	S-metolachlor	Isoxaflutole <sup>b</sup>	Ethafluralin <sup>b</sup>
Barnyardgrass	Х	Х	Х	Х	Х	Х
Crabgrass, smooth	Х	Х	Х	Х	Х	Х
Crabgrass, large	Х	Х	Х	Х	Х	Х
Crowfootgrass	Х	Х	-	-	Х	-
Goosegrass	Х	Х	Х	Х	Х	Х
Panicum, fall	Х	Х	Х	Х	Х	Х
Panicum, Texas	Х	Х	-	-	Х	Х
Sandbur, field	х	Х	-	-	Х	Х
Signalgrass, broadleaf	Хp	Х	Х	Х	Х	Х
Witchgrass	Х	Х	Х	Х	-	Х

<sup>&</sup>lt;sup>a</sup> Pre-plant incorporated tank-mixture applications of **Axill Solutions Imazethapyr** plus pendimethalin will suppress the growth of itchgrass and rhizome johnsongrass.

A selective post-emergence grass herbicide such as sethoxydim or fenoxaprop-p-ethyl may be mixed with **Axill Solutions Imazethapyr** to control grasses not controlled by **Axill Solutions Imazethapyr**. In some cases the activity of the grass herbicide may be reduced when mixed with **Axill Solutions Imazethapyr**. The reduction in activity may be overcome by delaying the application of the post-emergence grass herbicide 7 days following the application of **Axill Solutions Imazethapyr**. If the post-emergence grass herbicide is applied first, wait 3 days before applying **Axill Solutions Imazethapyr**. Refer to the respective grass herbicide label for directed application rate, weed size and restrictions.

#### **BROADLEAF WEEDS**

Broadleaf herbicides that can be tank-mixed with **Axill Solutions Imazethapyr** include sodium bentazon, acifluorfen, flufenacet and 2,4-DB.

For the control of sicklepod, morningglories, prickly sida and common ragweed, add 2,4-DB to the **Axill Solutions Imazethapyr** spray mixture. For the control of Florida beggarweed, add flufenacet to the spray mixture. Refer to the 2,4-DB or flufenacet label for specific directions for use, application rates and restrictions.

**Axill Solutions Imazethapyr** may also be applied post-emergence in tank-mixture with chlorothalonil, acephate, or boron.

# SOYBEANS (Not for Use in California)

**DIRECTIONS FOR USE** 

USE RATE: 4 fl. oz./Acre (0.063 lb. ai/Acre)

Apply **Axill Solutions Imazethapyr** at a broadcast rate of 4 fl. oz./Acre (0.063 lb. ai/Acre) for all methods of application: early preplant, pre-plant incorporated, pre-emergence, and post-emergence (including minimum and no-till). At this broadcast rate, 1 gal. of **Axill Solutions Imazethapyr** will treat 32 acres of soybeans. (See instructions under section **APPLICATIONS TO SOYBEANS IN NORTH DAKOTA AND MINNESOTA** for applications in North Dakota and Minnesota north of highway #210.). Make **Axill Solutions Imazethapyr** applications before soybean bloom.

#### RESTRICTIONS

- DO NOT apply more than 4 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.063 lb. ai/Acre) per application.
- DO NOT apply more than 4 fl. oz./Acre of **Axill Solutions Imazethapyr** (0.063 lb. ai/Acre) per year to Soybeans.

<sup>&</sup>lt;sup>b</sup> Pre-plant incorporated treatments only.

- DO NOT make more than one application per year.
- There must be an interval of at least 85 days between an application of Axill Solutions Imazethapyr and soybean harvest.
- DO NOT graze or feed treated soybean forage, hay or straw to livestock.
- DO NOT tank-mix **Axill Solutions Imazethapyr** with clomazone containing herbicides. **Axill Solutions Imazethapyr** may be applied post-emergence following a soil application of a clomazone containing herbicide.

# **WEEDS CONTROLLED**

When applied as directed, **Axill Solutions Imazethapyr** will control or reduce competition from the weeds listed below. Refer to the **MIXING INSTRUCTIONS** section for instructions when weeds are at the maximum specified growth stage, or are under stress. (The number under **Maximum Leaf Stage** indicates the MAXIMUM number of leaves at which weeds need to be sprayed post-emergence.)

**NOTE:** C = Control, R = Reduced Competition

**DO NOT** count cotyledon leaves when determining weed stage of growth.

#### BROADLEAF WEEDS CONTROLLED

Broadleaf Weeds	SOIL APPLIED	POST-EMER	RGENCE
Broadleaf weeds	SOIL APPLIED	Maximum Leaf Stage	Size (Inches)
Alligator weed	_	4	1-3
Anoda, spurred	С	2	1 – 2
Artichoke, Jerusalem	_	8	6 – 10
Bristly starbur	-	2	1-2
Buffalobur	C*	R	1-3
Carpetweed	С	_	_
Cocklebur, common	R	8	1-8
Galinsoga	С	_	_
Jimsonweed	C*	4	1-3
Kochia (non-ALS resistant)	С	4	1-3
Lambsquarters, common	C*	R	1-2
Mallow, Venice	R	-	_
Marshelder	С	4	1-3
Morningglory,			
entireleaf	R	2	1-2
ivyleaf	R	2	1-2
pitted	R	2	1 – 2
smallflower	С	4	1-3
tall	R	2	1 – 2
Mustard sp.	С	4	1-3
Nightshade,			
black	С	4	1-3
Eastern black	С	4	1-3
Hairy	С	4	1-3
Pigweed,			
redroot	С	8	1-8
smooth	С	8	1-8
spiny	С	8	1-8
Poinsettia, wild	С	_	_
Puncturevine	С	_	
Purslane, common	С	_	
Pusley, Florida	С	_	
Ragweed,			
Common	R	R	1-3
Giant	R	R	1-3
Sage, barnyard	R	1-3	_
Sida, prickly	C*	_	_

Smartweed,			
ladysthumb	С	4	1-3
Pennsylvania	С	4	1-3
Spurge			
prostrate	C	4	1-3
spotted	C	4	1-3
Sunflower	C*	4	1-3
Thistle, Canada	_	R	1-3
Velvetleaf	C*	4	1-3

<sup>\*</sup>When **Axill Solutions Imazethapyr** is soil applied, these weeds are more consistently controlled by pre-plant incorporated treatments.

#### GRASS WEEDS CONTROLLED\*

C \\\	COUL ADDILLED	POST-EME	RGENCE	
Grass Weeds**	SOIL APPLIED	Maximum Leaf Stage	Size (Inches)	
Barnyardgrass	R	3	1-3	
Crabgrass,				
large	R	3	1-3	
smooth	R	3	1-3	
Cupgrass, woolly***	_	3	1-3	
Foxtail,				
Giant	С	6	1-6	
green	С	3	1-3	
yellow	С	3	1-3	
Goosegrass	R	-	_	
Johnsongrass,				
seedling	R	6	1-8	
rhizome	С	R	6 – 12	
Panicum,				
fall	R	_	_	
Texas	R	_	_	
Red rice	_	3	1-3	
Shattercane	R	6	1-8	
Signalgrass, broadleaf	R	4	1-8	
Sorghum, almum	R	6	1-3	

<sup>\*</sup>Pre-plant incorporated treatments of Axill Solutions Imazethapyr are more consistent for grass control.

#### **SEDGES**

Weeds Controlled	COIL ADDLIED	POST-EMERGENCE		
weeds Controlled	SOIL APPLIED	Maximum Leaf Stage Size (Inches		
Nutsedge,				
purple	R	R	1-3	
yellow	R	R	1-3	

# **HERBICIDE COMBINATIONS**

#### **GRASS WEEDS**

Use a soil applied grass herbicide (such as pendimethalin) to control grass weeds not on the **Axill Solutions Imazethapyr** label and to enhance the control of certain broadleaf weeds such as common lambsquarters and pigweeds. Refer to the pendimethalin (or other grass herbicide) label for specific use instructions, rates and precautions.

When applied as directed, **Axill Solutions Imazethapyr** pre-plant incorporated or pre-emergence combination treatments with pendimethalin, trifluralin, dimethenamide-P, alachlor, or S-metholachlor will control the weeds listed in following table, in addition to those controlled by **Axill Solutions Imazethapyr** alone.

<sup>\*\*</sup>Axill Solutions Imazethapyr is active against many broadleaf and grass species. However, when heavy grass or common lambsquarters pressure is anticipated, use Axill Solutions Imazethapyr in combination with a registered soil-applied grass herbicide (such as pendimethalin) for optimum control (See HERBICIDE COMBINATIONS section).

<sup>\*\*\*</sup>Axill Solutions Imazethapyr only controls emerged woolly cupgrass.

GRASSES	Pendimethalin <sup>a</sup>	Trifluralin <sup>b</sup>	Alachlor	S-metholachlor	Dimethenamide-P
Barnyardgrass	Х	Х	Х	Х	Х
Crabgrass, smooth	Х	Х	Х	Х	Х
Crabgrass, large	Х	Х	Х	Х	Х
Crowfootgrass	Х	Х			
Goosegrass	Х	Х	Х	Х	Х
Millet, wild proso	Х	Х			
Panicum, fall	Х	Х	Х	Х	Х
Panicum, Texas	Х	Х			
Sandbur, field	Х	Х			
Shattercane	χb	Х			
Signalgrass, broadleaf	χb	Х	Х	Х	Х
Witchgrass	Х	Х	Х	Х	Х

<sup>&</sup>lt;sup>a</sup> Pre-plant incorporated tank-mixture applications of **Axill Solutions Imazethapyr** plus pendimethalin will suppress the growth of itchgrass and rhizome johnsongrass.

A selective post-emergence grass herbicide such as sethoxydim may be mixed with **Axill Solutions Imazethapyr** to control volunteer corn or grasses not controlled by **Axill Solutions Imazethapyr**. For best results use crop oil concentrate AND liquid fertilizer with grass herbicide tank-mixtures.

#### Axill Solutions Imazethapyr + Sethoxydim For Enhanced Grass Control

Apply **Axill Solutions Imazethapyr** at the rate of 4 fl. oz./Acre (0.063 lb. ai/Acre). The addition of sethoxydim to **Axill Solutions Imazethapyr** at the specified rates will control the grasses listed below. (Refer to the sethoxydim label for additional weeds controlled.)

Sethoxydim <u>*</u> (oz. per acre)	Annual Grasses Controlled	Size (inches)
	Wild Proso Millet	4 – 10"
	Shattercane	3 – 12"
	Foxtail, Giant	3 – 8"
	Junglerice	3 – 8"
	Panicum, Fall	3 – 8"
	Texas	3 – 8"
	Signalgrass, Broadleaf	3 – 8"
	Volunteer Corn	4 – 10"
Refer to product label	Barnyardgrass	3 – 8"
Neier to product laber	Crabgrass, Large	3 – 6"
	Smooth	3 – 6"
	Cupgrass, Woolly	3 – 8"
	Foxtail, Green	3 – 8"
	Yellow	3 – 8"
	Goosegrass	3 – 6"
	Johnsongrass, Seedling	3 – 8"
	Sprangletop, Red	3 – 8"
	Witchgrass	3 – 8"

<sup>\*</sup>If a mixture of grasses are present, use the highest rate indicated for the grasses present.

The addition of sethoxydim to **Axill Solutions Imazethapyr** enhances the grass control, especially when heavy infestations of grass exist. It also provides control of grasses not controlled by **Axill Solutions Imazethapyr**. In some cases the activity of sethoxydim may be reduced when mixed with **Axill Solutions Imazethapyr**. The reduction in activity may be overcome by delaying the application of sethoxydim herbicide 7 days following the application of **Axill Solutions Imazethapyr**. If sethoxydim is applied first, wait 3 days

<sup>&</sup>lt;sup>b</sup> Pre-plant incorporated treatments only.

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before applying Axill Solutions Imazethapyr.

For optimum control, apply the tank-mixture to actively growing weeds at the sizes indicated in the table above (for sequential applications refer to application rates and weeds sizes indicated in the **Axill Solutions Imazethapyr** and sethoxydim labels). Refer to the sethoxydim label for additional information regarding application rates, restrictions, precautions, weeds controlled, adjuvants specified and other information.

#### **BROADLEAF WEEDS**

Broadleaf herbicides that can be tank-mixed with **Axill Solutions Imazethapyr** include acifluorfen, sodium bentazon, lactofen, cloransulam-methyl, paraquat dichloride, sodium bentazon + sodium acifluorfen, or fomesafen. Glyphosate may be tank-mixed with **Axill Solutions Imazethapyr** to aid in control of certain weeds only in Roundup Ready Soybeans. See the glyphosate label for rates and weeds controlled and other restrictions. **DO NOT** apply **Axill Solutions Imazethapyr** with certain herbicides (see **RESTRICTIONS** section).

Axill Solutions Imazethapyr + Acifluorfen For Enhanced Control of Common Ragweed and Pigweeds (including tall and common waterhemp)

The addition of acifluorfen to **Axill Solutions Imazethapyr** at the specified rates will enhance the control of several broadleaf weeds, including common and giant ragweed, pigweed species and waterhemps. (Refer to the acifluorfen label for additional weeds controlled.)

When tank-mixing acifluorfen with **Axill Solutions Imazethapyr**, apply **Axill Solutions Imazethapyr** at the rate of 4 fl. oz./Acre (0.063 lb. ai/Acre). Refer to the acifluorfen label for applicable rates and directions for use.

#### Axill Solutions Imazethapyr + Cloransulam-methyl for Enhanced Control of Ragweed Species

Cloransulam-methyl may be tank-mixed with **Axill Solutions Imazethapyr** to aid in the control of common and giant ragweed. See the cloransulam-methyl label for specified rates and precautions.

# Axill Solutions Imazethapyr + Sulfentrazone Containing Compounds

**Axill Solutions Imazethapyr** provides control of many grasses and broadleaf weeds when applied to the soil or applied post-emergence to weeds. It also provides season-long control of many weeds. Sulfentrazone containing products may be tank- mixed with **Axill Solutions Imazethapyr** in soil applications for enhanced weed control in soybeans.

Axill Solutions Imazethapyr may be applied post-emergence to soybeans previously treated with sulfentrazone containing products.

NOTE: Sulfentrazone-containing products are only labeled for soil applications to soybean.

#### Axill Solutions Imazethapyr + Thifensulfuron for Enhanced Control of Common Lambsquarters

For optimal weed control management, apply a soil applied grass herbicide such as pendimethalin or trifluralin followed by **Axill Solutions Imazethapyr** post-emergence. If common lambsquarters are not adequately controlled by the soil applied treatment, thifensulfuron may be tank-mixed with **Axill Solutions Imazethapyr** for additional activity.

The addition of thifensulfuron to **Axill Solutions Imazethapyr** may cause severe injury and/or stunting to soybeans, especially when applied under hot, humid conditions. The USER ASSUMES ALL RISKS AND CONSEQUENCES associated with applications of this tankmixture to soybeans.

When tank-mixing thifensulfuron with **Axill Solutions Imazethapyr**, use the following rates:

**Axill Solutions Imazethapyr** – 4 fl. oz./Acre (0.063 lb. ai/Acre) AND

Specified label rate of thifensulfuron

Add to the spray mixture:

Non-ionic surfactant – 1 quart per 100 gals. (0.25% v/v)

AND

Liquid nitrogen based fertilizer (such as 28%N, 32%N, or 10-34-0) at the rate of 1.25 to 2.5 gals. per 100 gals. of spray solution. Instead of a liquid fertilizer, spray grade ammonium sulfate may be used at the rate of 12 – 15 lbs. per 1.00 gals. of spray solution.

Apply to 1 - 3 trifoliate stage soybeans only.

# **Other Tank-Mixture Combinations**

# Axill Solutions Imazethapyr + Imazaquin for Volunteer Corn and Common Sunflower

The application of **Axill Solutions Imazethapyr** plus imazaquin may be applied to states or portions of states described as Region 2 or Region 3 on the imazaquin label, and the following counties in South Dakota: Yankton, Bon Homme, Hutchinson, McCook, Hanson, Davison, Miner, Lake, and Kingsbury. Refer to the respective labels for the specified use area. **DO NOT** use this tank-mixture in North Dakota or in Minnesota north of state highway #210.

Apply the products at the following rate:

# Axill Solutions Imazethapyr – 4 fl. oz./Acre (0.063 lb. ai/A) AND Specified label rate of imazaquin

The tank-mixture of **Axill Solutions Imazethapyr** plus imazaquin will suppress volunteer corn. Apply to volunteer corn up to 10 inches in height.

The tank-mixture of **Axill Solutions Imazethapyr** and imazaquin will enhance the control of common sunflowers. Apply to sunflowers up to 3 inches in size.

Refer to the imazaguin label for additional weeds controlled.

A post-emergence application of **Axill Solutions Imazethapyr** plus imazaquin will NOT suppress volunteer CLEARFIELD<sup>®</sup> corn (field corn hybrids which possess resistance to imidazolinone herbicides i.e., **Axill Solutions Imazethapyr** and imazaquin).

# APPLICATIONS TO SOYBEANS IN NORTH DAKOTA AND MINNESOTA (north of highway #210)

Application Rate: Apply Axill Solutions Imazethapyr at 3 fl. oz./Acre (0.047 lb. ai/Acre) post-emergence only.

Weeds Controlled	POST-EMER	POST-EMERGENCE	
	Maximum Leaf Stage	Size (Inches)	
Cocklebur, common*	4	1 – 4	
Kochia (non-ALS resistant)	4	1-3	
Mustard sp.	4	1-3	
Nightshade,			
black	4	1-3	
Eastern black	4	1-3	
hairy	4	1-3	
Pigweed, redroot	4	1 – 4	
Wild oats**	3	1 – 4	

<sup>\*</sup>For control of common cocklebur, add acifluorfen at the label specified rate to the spray solution.

#### ROTATIONAL CROP RESTRICTIONS

The following rotational crops may be planted after applying **Axill Solutions Imazethapyr** at the specified rate: (Planting earlier than the specified interval may result in crop injury.)

Стор	Months after Axill Solutions Imazethapyr application
CLEARFIELD® corn hybrids (resistant to <b>Axill Solutions Imazethapyr</b> )	
Lima beans	
Southern peas	Anytime
Soybeans	
Peanuts	

<sup>\*\*</sup>Axill Solutions Imazethapyr will reduce competition from wild oats.

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Alfalfa	
Clover	
Rye (Except in North Dakota and Minnesota north of highway #210)	4
Wheat	
Edible beans and peas (other than lima beans and Southern peas)	
Field corn	8 1/2
Field corn grown for seed	0 1/2
Barley	9 1/2
Tobacco	9 1/2
Cotton*	
Lettuce	
Oats	
Popcorn	
Rye in North Dakota and Minnesota north of highway #210	18
Safflower	
Sorghum	
Sunflower	
Sweet corn	
Potatoes	26
Flax	20
All crops not listed elsewhere in this ROTATIONAL CROP GUIDELINE**	40

<sup>\*</sup>Refer to the following table for a Cotton Rotation Interval following **Axill Solutions Imazethapyr** application to alfalfa or clover grown for seed production. These guidelines **do not** apply to **Axill Solutions Imazethapyr** applications made to alfalfa grown for hay or forage (Use the 18- month Rotational Interval above).

Sugar beet production can be reduced when grown in soil conditions with a pH less than 6.5. If the field is limed to adjust pH prior to planting rotational crops not listed in the **ROTATIONAL CROP RESTRICTIONS**, apply the lime at least 12 months prior to planting the rotational crop.

Use of **Axill Solutions Imazethapyr** herbicide in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

Cotton Rotation Following Application of Axill Solutions Imazethapyr to Alfalfa or Clover Grown For Seed

	Rotation Interval	
Irrigation/Precipitation Requirements	Less than 3 acre feet or 36" of water	40 Months
	Greater than or equal to 3 acre feet or 36" of water	18 Months

# **EXCEPTIONS TO ROTATIONAL CROP RESTRICTIONS**

**Barley:** (States of Delaware, Indiana, Kentucky, Maryland, New Jersey, Ohio, Pennsylvania, and Virginia only.) Barley may be planted 4 months following a **Axill Solutions Imazethapyr** application in these states.

Barley: (North Dakota only.) Barley may be planted 18 months following an Axill Solutions Imazethapyr application.

**CLEARFIELD** canola: CLEARFIELD varieties of canola, such as Pioneer 45A71 and Pioneer 46A76, may be planted as a rotational crop the next season after an application of **Axill Solutions Imazethapyr** herbicide at label rates on registered crops.

Corn inbred lines: Corn inbred seed lines may be planted the year following an application of Axill Solutions Imazethapyr. Several seed companies have tested a wide range of inbreds for sensitivity to Axill Solutions Imazethapyr soil residues and have reported good crop safety. However, due to the proprietary nature of seed production, Axill Solutions, LLC has not been given access to the inbred data. Growers are directed to contact the seed company for information and instructions regarding the planting of corn grown for seed in fields treated with Axill Solutions Imazethapyr the previous year. Since growing conditions, environmental

<sup>\*\*</sup>Following forty months after a **Axill Solutions Imazethapyr** application, and before planting any crop not listed elsewhere in the **ROTATIONAL CROP RESTRICTIONS**, a successful field bioassay must be completed. The field bioassay consists of a test strip of the intended rotational crop planted across the previously treated field and grown to maturity. The test strip must include low areas and knolls, and include variations in soil such as type and pH. If no crop injury is evident in the test strip, the intended rotational crop may be planted the following year.

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conditions and grower practices are beyond the control of Axill Solutions, LLC, all risks and consequences associated with planting seed corn inbreds into fields treated previously with Axill Solutions Imazethapyr shall, to the extent allowable by applicable law, be assumed by the user.

Sweet corn and popcorn varieties: (States of Illinois, Indiana, Iowa, Minnesota, Ohio, Tennessee, and Wisconsin only.) Sweet corn and popcorn varieties may be planted the year following an application of **Axill Solutions Imazethapyr**. Some sweet corn and popcorn varieties may be injured when planted at less than 18 months following an application of Axill Solutions Imazethapyr herbicide. Before planting sweet corn for processing, contact the processor company for information and specifications regarding the sensitivity of sweet corn varieties planned for fields treated with Axill Solutions Imazethapyr the previous year. DO NOT plant fresh market sweet corn varieties prior to 18 months after Axill Solutions Imazethapyr use. Before planting popcorn, contact the popcorn company for information and instructions regarding the sensitivity of popcorn varieties planned for fields treated with Axill **Solutions Imazethapyr** the previous year.

Since growing conditions, environmental conditions and grower practices are beyond the control of AXILL SOLUTIONS, LLC, TO THE EXTENT ALLOWABLE BY APPLICABLE LAW, ALL RISKS AND CONSEQUENCES ASSOCIATED WITH PLANTING SWEET CORN OR POPCORN VARIETIES INTO FIELDS TREATED PREVIOUSLY WITH AXILL SOLUTIONS IMAZETHAPYR SHALL BE ASSUMED BY THE USER.

Stunting and maturity delay or other adverse effects may result when sweet corn or popcorn are planted following Axill Solutions Imazethapyr use.

Certain vegetable crops: (States of Alabama, Delaware, Florida, Georgia, Indiana, Kentucky, Maryland, New Jersey, North Carolina, Pennsylvania, South Carolina, and Virginia only.) The following crops may be planted 18 months following the last application of Axill Solutions Imazethapyr: bahiagrass, cabbage, cantaloupe, cucumber, Irish potato, onion, sweet potato transplants, sweet pepper transplants, tomato transplants, and watermelon.

Cotton: (States of North Carolina, South Carolina, and Virginia only.) Cotton may be planted nine and one-half months after an application of Axill Solutions Imazethapyr if all of the following criteria are met:

- **Axill Solutions Imazethapyr** applied to peanuts only.
- Soil texture is sandy loam or loamy sand only.
- Greater than 16 inches of rainfall and/or irrigation is received following application of Axill Solutions Imazethapyr through October of the application year.

Field Corn and Field Corn Grown for Seed: (Arizona, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming) Nine and one-half months after **Axill Solutions Imazethapyr** application.

Snap Beans: When applied at no more than 1.5 fl. oz./Acre (0.023 lb. ai/Acre) to snap beans in the use areas defined on this label, snap beans may be replanted at any time after application of Axill Solutions Imazethapyr.

Wheat: Wheat may be planted 3 months following an Axill Solutions Imazethapyr application in areas east of Interstate highway I-35.

When Axill Solutions Imazethapyr is applied at no more than 3 oz./Acre (0.047 lb. ai/A) to edible legumes in the use areas described the following rotational restrictions apply:

- Chickpeas, lentils and peas may be planted anytime following an **Axill Solutions Imazethapyr** application.
- Snap beans may be planted 3 months and barley 4 months following an application of **Axill Solutions Imazethapyr**.

# **ADDITIONAL USE INFORMATION**

# **EDIBLE LEGUMES VEGETABLES**

#### **Restrictions:**

- There must be an interval of at least 30 days between application and harvest of snap beans, lima beans, chickpeas (Arizona and California), English peas, and Southern peas.
- There must be an interval of at least 60 days between application and harvest of dry edible peas, lentils, chickpeas, red kidney beans, and other dry bean or pea types listed on this label.

When Axill Solutions Imazethapyr is applied at no more than 3 fl. oz./Acre (0.047 lb. ai/A) to edible legumes in the use areas described, the following rotational restrictions apply:

Chickpeas, lentils and peas may be planted anytime following an Axill Solutions Imazethapyr application.

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Snap beans may be planted 3 months and barley 4 months following an application of Axill Solutions Imazethapyr.

# NON-GRASS ANIMAL FEED (ALFALFA AND CLOVER)

**Restriction: DO NOT** feed, graze or harvest alfalfa or clover for 30 days following an application of **Axill Solutions Imazethapyr** to alfalfa or clover.

#### **SOYBEANS**

#### **Restrictions:**

- There must be an interval of at least 85 days between an application of **Axill Solutions Imazethapyr** and soybean harvest.
- Make **Axill Solutions Imazethapyr** applications before soybean bloom.
- **DO NOT** graze or feed treated soybean forage, hay or straw to livestock.
- **DO NOT** tank-mix **Axill Solutions Imazethapyr** with clomazone containing herbicides. **Axill Solutions Imazethapyr** may be applied post-emergence following a soil application of clomazone.

If soybeans are furrow irrigated, till the soil prior to planting winter wheat or barley. Break the beds up and the soil mixed with tillage equipment set to cut 4 to 6 inches deep.

#### **PEANUTS**

# **Restrictions:**

- Do not graze or feed treated peanut forage, vines, hay or straw to livestock.
- There must be an interval of at least 85 days between an application of Axill Solutions Imazethapyr and peanut harvest.
- DO NOT apply pendimethalin + imazethapyr herbicides to peanuts the same year as **Axill Solutions Imazethapyr**.

Chlorimuron may be applied post-emergence to peanuts following a **Axill Solutions Imazethapyr** application. Refer to the chlorimuron label for specific use directions.

#### **ALL CROPS**

Full rate application of products containing chlorimuron ethyl, chloransulam-methyl, flumetsulam, imazaquin, or products containing imazethapyr the same year as **Axill Solutions Imazethapyr** may increase the risk of injury to sensitive follow crops. Consult labels for specific uses of these products in combinations.

Only rotational crops harvested at maturity may be used for feed or food.

In the event of a crop loss due to weather, soybeans, peanuts, or CLEARFIELD corn can be replanted. **DO NOT** work the soil deeper than 2 inches.

#### STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep from freezing: DO NOT store below 32°F.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. 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 region office for guidance.

#### **CONTAINER HANDLING:**

**NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS):** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or

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equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available.

**REFILLABLE CONTAINER:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times

#### **CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Axill Solutions, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Axill Solutions, LLC and Seller harmless for any claims relating to such factors.

Axill Solutions, LLC 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 this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or Axill Solutions, LLC and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, Axill Solutions, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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[EPA approval date]