U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7505P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460	EPA Reg. Number: 85678-57	Date of Issuance: 6/6/18
NOTICE OF PESTICIDE: <u>X</u> Registration Reregistration	Term of Issuance: Conditional	
(under FIFRA, as amended)	Name of Pesticide Product: Imazethapyr 22.87% SL	
Name and Address of Registrant (include ZIP Code): Anna Armstrong Agent for RedEagle International, LLC RedEagle International, LLC c/o Wagner Regulatory Associates, Inc. PO Box 640 Hockessin, DE 19707		
<b>Note:</b> Changes in labeling differing in substance from that accepted in connection with this regis Registration Division prior to use of the label in commerce. In any correspondence on this prod		
<ul> <li>On the basis of information furnished by the registrant, the abov under the Federal Insecticide, Fungicide and Rodenticide Act.</li> <li>Registration is in no way to be construed as an endorsement or r Agency. In order to protect health and the environment, the Adu time suspend or cancel the registration of a pesticide in accordar name in connection with the registration of a product under this registrant a right to exclusive use of the name or to its use if it has</li> <li>This product is conditionally registered in accordance with FIFR with the following conditions:</li> <li>1. Submit and/or cite all data required for registration/rereg product under FIFRA when the Agency requires all regis data.</li> </ul>	recommendation of the ministrator, on his mance with the Act. The Act is not to be cons as been covered by o RA section 3(c)(7)(A)	nis product by the otion, may at any e acceptance of any trued as giving the thers. ). You must comply review of your
Signature of Approving Official:	Date:	
Erik Kraft, Product Manager 24 Fungicide & Herbicide Branch, Registration Division (7505P) EPA Form 8570-6	6/6/18	
Providentian Matter Conditional (20160220		

- Be aware that proposed data requirements have been identified in a Work Plan. For more information on these proposed data requirements, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1
- 3. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 85678-57."
- 4. Submit one copy of the final printed label for the record before you release the product for shipment.

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

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

• Basic CSF dated 01/26/2018

If you have any questions, please contact Lisa Pahel by phone at (703) 347-0459, or via email at pahel.lisa@epa.gov.

Enclosure: Similarity Clinic memo dated 05/08/2018, DP445768; Product Chemistry review dated 04/26/2018, DP445767

By Wt.

**IMAZETHAPYR** Group

2



# Imazethapyr 22.87% SL

# For Weed Control in Alfalfa, Clover, Peas and Beans, Field Corn\*, Peanuts, and Soybeans (\*For use only on corn containing the Clearfield<sup>®</sup> trait)

# **Active Ingredient:**

EPA Reg. No.

Ammonium salt of imazethapyr (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]	
	22.070/
5-ethyl-3-pyridinecarboxylic acid*	22.87%
Other Ingredients:	<u>//.13%</u>
Total:	100.00%
*Equivalent to 21.82% (+)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic	
*Equivalent to 21.82% (+)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic	

acid (1 gallon contains 2.0 pounds 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 the label, find someone to explain it to you in detail.)

FIRST AID			
IF ON SKIN OR CLOTHING:	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>		
IF INHALED:	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>		
<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>			
HOTLINE NUMBERS			

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-Hour Medical Emergency Assistance (Human or Animal), call: 1-800-222-1222. For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), call CHEMTREC: 1-800-424-9300.

[Optional referral statements when booklets and container labels are used:

See Panel for First Aid Instructions and booklet for complete Precautionary Statements and Directions For Use. See label booklet for complete Precautionary Statements, Directions For Use, and Storage and Disposal. See label booklet for additional Precautionary Statements, Directions For Use, and Storage and Disposal. See label booklet for complete Directions For Use.]

**Manufactured For:** RedEagle International LLC 5143 S. Lakeland Dr., Suite 3 Lakeland, FL 33813

EPA Reg. No.: 85678-XX EPA Est. No.:

Net Contents: \_\_\_\_\_[Gals/L]

# PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if inhaled or absorbed through skin. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

# Applicators and other handlers must wear:

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

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

#### ENGINEERING CONTROLS STATEMENTS

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

#### PHYSICAL OR CHEMICAL HAZARDS

USER SAFETY RECOMMENDATIONS

Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

#### **Users Should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- 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**

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.

#### **Proper Handling Instructions**

This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes 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 this product through any type of irrigation system.

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

# **DIRECTIONS FOR USE**

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

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

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. 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 made of butyl rubber ≥14 mils, natural rubber ≥14 mils, neoprene rubber ≥14 mils, or nitrile rubber ≥14 mils
- Shoes plus socks

#### **PRODUCT INFORMATION**

**Imazethapyr 22.87% SL** controls weeds by root and/or foliage uptake and rapid translocation of the product to growing points. For optimum product performance, adequate soil moisture is important. When adequate soil moisture is present, **Imazethapyr 22.87% SL** 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.

#### **Precautions:**

- Internode shortening and/or temporary yellowing of crop plants may occur following **Imazethapyr 22.87% SL** applications. These effects occur infrequently and are temporary. Normal growth and appearance should resume within 7 14 days.
- When organophosphate or carbamate insecticides are tank-mixed with **Imazethapyr 22.87% SL**, temporary injury may result to the treated crops.
- Use of Imazethapyr 22.87% SL 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) Imazethapyr 22.87% SL may cause injury to subsequent planted crops. Vegetable
  crops and particularly sugar beets are sensitive to Imazethapyr 22.87% SL 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, **Imazethapyr 22.87% SL** and/or any other ALS/AHAS enzyme inhibiting mode of action herbicide should 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.

**Replanting:** If replanting is necessary in a field previously treated with **Imazethapyr 22.87% SL**, the field may be replanted to soybeans, peanuts or corn (Clearfield<sup>®</sup> corn), lima beans or Southern peas. Rework the soil no deeper than the treated zone. Do not make a second application of **Imazethapyr 22.87% SL**.

# Corn

#### **Restrictions:**

- For use only on Clearfield<sup>®</sup> Corn
- Do not apply Imazethapyr 22.87% SL to corn not containing the Clearfield® trait.

Apply Imazethapyr 22.87% SL only on Clearfield<sup>®</sup> corn. Contact your seed supplier, chemical dealer or RedEagle International LLC to obtain information regarding corn varieties.

#### **Precautions:**

- Crops growing under stressful environmental conditions can exhibit various injury symptoms which may be more pronounced if herbicides are used.
- Corn plants treated with **Imazethapyr 22.87% SL** may exhibit yellowing on new growth. Such effects occur infrequently and are temporary. Normal growth and appearance should resume within 7 to 14 days.

#### Edible Legume Vegetables

#### **Restrictions:**

- Do not apply **Imazethapyr 22.87% SL** if cold and/or wet conditions are present or predicted to occur within 7 days of application.
- Do not apply **Imazethapyr 22.87% SL** post-emergence after crop has begun to flower or crop injury may result. (Refer to specific legume vegetable crop for specific application timings).
- New York State: Not for Sale or Use on Long Island.
- Do not apply Imazethapyr 22.87% SL if planting is delayed and chance of frost prior to maturity is likely.

#### **Precautions:**

- Reduced crop growth, quality, yield and/or delayed maturity may result from a **Imazethapyr 22.87% SL** application to edible legume vegetables. Since crop maturity may be delayed, timing of harvest may need to be adjusted accordingly.
- Make application of Imazethapyr 22.87% SL ONLY if proper agronomic practices have been used, 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 ½ inch deep to reduce risk of crop injury.

#### MIXING INSTRUCTIONS

POST-EMERGENCE APPLICATIONS OF IMAZETHAPYR 22.87% SL REQUIRE THE ADDITION OF AN ADJUVANT AND A FERTILIZER SOLUTION.

#### **Restriction:**

• Fertilizer solutions may not be used in the State of California.

#### Adjuvants

• Crop Oil Concentrate: A petroleum or vegetable seed based oil concentrate may be used. Methylated seed oils are recommended when weeds are under moisture or temperature stress. Use methylated seed oils at the rate of 1.0% v/v (1 gallon per 100 gallons of spray solution), or use a crop oil concentrate at 1.25% v/v (1.25 gallons per 100 gallons of spray solution). Do not include a crop oil concentrate when applying Imazethapyr 22.87% SL 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 gallons 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**

Recommended 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 gallons per 100 gallons of spray solution. Use the higher rate when weeds are under moisture or temperature stress. Instead of a liquid fertilizer, spray grade ammonium sulfate may be used at the rate of 12 - 15 lbs. per 100 gallons of spray solution.

Note: Fertilizer solution is not required in Imazethapyr 22.87% SL 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 **Imazethapyr 22.87% SL**. Add **Imazethapyr 22.87% SL** to the spray tank while agitating. Add adjuvants and fill the remainder of the tank with water.

#### **Tank Mix Combinations With Other Herbicides**

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.

If other herbicides are tank-mixed with Imazethapyr 22.87% SL, while agitating, add components in the following order:

- 1. Fill spray tank ½ 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 Imazethapyr 22.87% SL 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 **Imazethapyr 22.87% SL** applications must be drained and thoroughly cleaned with water before being used to apply other products.

When Imazethapyr 22.87% SL 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. Label dosages of tank mix herbicide cannot be exceeded. **Imazethapyr 22.87% SL** 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. A spray pressure of 20 - 40 PSI is recommended.

To ensure thorough coverage, use a minimum of 20 gals. of water per acre when applying **Imazethapyr 22.87% SL** to minimum- or notill 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 post-emergence applications. Avoid overlaps when spraying.

#### Imazethapyr 22.87% SL Applications With a Low Volume Sprayer

**Imazethapyr 22.87% SL** may be applied to soybeans with a low volume (Spra-Coupe<sup>®</sup>-type) sprayer. When applying **Imazethapyr 22.87% SL** 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 recommended spray volume and pressure to ensure adequate spray coverage of the weeds.

When applying **Imazethapyr 22.87% SL** 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. When spraying combinations with dicamba containing products on Clearfield<sup>®</sup> corn, do not exceed 40 PSI sprayer pressure.

#### **Aerial Applications**

Imazethapyr 22.87% SL 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 **CR** a crop solution (see instructions under **APPLICATION INFORMATION - POST-EMERGENCE**).

#### SPRAY DRIFT MANAGEMENT

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

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

- 1. The distance of the outer most nozzles on the boom must not exceed 75% of the length of the wingspan or rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45°.
- 3. Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and take into account the information covered in the following **AERIAL DRIFT REDUCTION ADVISORY**. [This section is advisory in nature and does not supersede the mandatory label requirements.]

#### Importance of Droplet Size

#### **AERIAL DRIFT REDUCTION**

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

# **Controlling Droplet Size**

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows product larger droplets.
- **Pressure** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles

produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

#### **Boom Length**

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

# **Application Height**

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

#### Swath Adjustment

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

#### Wind

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

#### Temperature and Humidity

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

## **Temperature Inversions**

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

#### **Sensitive Areas**

The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

# **APPLICATION INFORMATION**

#### **POST-EMERGENCE**

**Imazethapyr 22.87% SL** is effective in controlling weeds in conservation tillage as well as in conventional production systems. Apply **Imazethapyr 22.87% SL** 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 advised growth stage. Application timing shall be based on weed size and not crop growth stage. Apply **Imazethapyr 22.87% SL** 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 **Imazethapyr 22.87% SL** 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. **Imazethapyr 22.87% SL** 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 **Imazethapyr 22.87% SL** application. This timely cultivation will enhance residual weed control, especially under dry conditions.

Imazethapyr 22.87% SL should be applied a minimum of 1 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 **Imazethapyr 22.87% SL** in weeds. Delaying a **Imazethapyr 22.87% SL** 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

**Imazethapyr 22.87% SL** controls existing weeds and provides residual control of most weeds when applied early post-emergence to Clearfield® corn or 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 advised weed size.)

If Imazethapyr 22.87% SL is applied prior to emergence of the crop, and weeds exceed the advised size, a contact herbicide should be added to Imazethapyr 22.87% SL to enhance control. (See instructions for NO-TILL OR REDUCED TILLAGE under the PRE-EMERGENCE section of this label.)

#### SOIL APPLICATIONS

**Imazethapyr 22.87% SL** provides effective weed control in conservation tillage systems designed to meet conservation compliance requirements. **Imazethapyr 22.87% SL** 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 **Imazethapyr 22.87% SL** 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, a cultivation is advised to control escaped weeds. When adequate moisture is received after dry conditions, **Imazethapyr 22.87% SL** 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.

**Imazethapyr 22.87% SL** 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

**Imazethapyr 22.87% SL** can be applied to the soil in liquid fertilizers, alone or in combination with pendimethalin or dimethenamid-p to soybeans or Clearfield<sup>®</sup> corn. Mixtures including trifluralin may be applied to soybeans only. Follow all **Imazethapyr 22.87% SL** 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 **Imazethapyr 22.87% SL** with the liquid fertilizer before mixing in the spray tank.

#### **PRE-EMERGENCE (SURFACE APPLICATIONS)**

**Imazethapyr 22.87% SL** 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 **Imazethapyr 22.87% SL** 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 **Imazethapyr 22.87% SL** with pendimethalin or dimethenamid-p. To kill existing vegetation, paraquat, glyphosate or 2,4-D (early pre-plant - see 2,4-D label for limitations) may be tank-mixed with **Imazethapyr 22.87% SL** alone or in combination with pendimethalin or dimethenamid-p. Paraquat, glyphosate, or 2,4-D should be removed 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

**Imazethapyr 22.87% SL** may be applied following land preparation and should 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 **Imazethapyr 22.87% SL** in the surface 1 to 2 inches of the finished beds. Application may be made up to 45 days prior to planting soybeans.

When **Imazethapyr 22.87% SL** 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 - USE DIRECTIONS

**Imazethapyr 22.87% SL** 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. A **Imazethapyr 22.87% SL** 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 feed or graze legumes or grasses following an Imazethapyr 22.87% SL 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 more than one application of Imazethapyr 22.87% SL per acre per year.
- Do not apply more than 6 fl. oz. per acre per single application (0.094 lb. ae/A imazethapyr).
- Do not apply more than 6 fl. oz. per acre per year (0.094 lb. ae/A imazethapyr).

# **COVER CROPS:\***

Legumes: Apply to forage legumes including alfalfa, clovers, crown vetch, birds foot trefoil, and lespedeza.

**Grasses: Imazethapyr 22.87% SL** may 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 also be planted into fields previously treated with Imazethapyr 22.87% SL for weed control in soybeans. In this case, do not make a Imazethapyr 22.87% SL application to the cover crop until the following Spring.

#### POST-EMERGENCE APPLICATIONS OF IMAZETHAPYR 22.87% SL TO CRP COVER CROPS

#### **Application Rate**

Apply Imazethapyr 22.87% SL at 4 fluid ounces per acre (0.063 lb. ae/A imazethapyr).

#### **Application Timing**

**Imazethapyr 22.87% SL** may be applied post-emergence to seedling legumes (with at least 3 fully expanded trifoliate leaves) or to established legumes. On established legumes, **Imazethapyr 22.87% SL** may be applied in the Fall or in the Spring before weeds exceed the maximum advised size for control.

# **Restriction:**

- Do not apply to seeded grasses until they have 4 leaves.
- Do not apply more than one application of **Imazethapyr 22.87% SL** per acre per year.
- Do not apply more than 4 fl. oz. per acre per single application (0.063 lb. ae/A imazethapyr).
- Do not apply more than 4 fl. oz. per acre per year (0.063 lb. ae/A imazethapyr).

Refer to the **WEEDS CONTROLLED** under the **SOYBEANS** section of this label.

#### ALFALFA AND CLOVER - USE DIRECTIONS

Apply Imazethapyr 22.87% SL at a broadcast rate of 3 - 6 fl. oz. per acre (0.047 to 0.094 lb. ae/A imazethapyr) post-emergence only.

#### Seedling Alfalfa / Clover

**Imazethapyr 22.87% SL** must be applied post-emergence to seedling alfalfa or clover. Apply **Imazethapyr 22.87% SL** when the seedling alfalfa or clover is in the 2<sup>nd</sup> trifoliate stage or larger and when the majority of the weeds are 1 - 3". For low growing weeds (such as mustards), apply **Imazethapyr 22.87% SL** before the rosette exceeds 3. When **Imazethapyr 22.87% SL** is applied to seedling alfalfa or clover, there may be a temporary reduction in growth.

#### Established Alfalfa / Clover

**Imazethapyr 22.87% SL** 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" of re-growth), or between cuttings. Any application should be made before significant alfalfa or clover growth or re-growth (3") to allow **Imazethapyr 22.87% SL** to reach the target weeds.

**Replanting:** If replanting is necessary in a field previously treated with **Imazethapyr 22.87% SL**, do not plant alfalfa or clover for 4 months following a **Imazethapyr 22.87% SL** application. Refer to the **ROTATIONAL CROP RESTRICTIONS** section on this label for plant-back interval of various. crops.

#### **Restrictions:**

- A maximum of 0.094 lb. ae/A imazethapyr (6 fl. oz. of Imazethapyr 22.87% SL) per acre per year may be applied to alfalfa or clover.
- Do not apply more than one application per acre per year.
- Do not apply more than 6 fl. oz. per acre per single application (0.094 lb. ae/A imazethapyr).
- Do not apply Imazethapyr 22.87% SL at more than 4 fl. oz. per acre per year (0.063 lb. ae/A imazethapyr) in North Dakota or Minnesota north of Highway 210.
- Do not apply more than 4 fl. oz. of product per acre per year (0.063 lb. ae imazethapyr) to alfalfa or clover during the last year of the stand.
- Pre-Harvest Interval: Do not graze or harvest alfalfa or clover for 30 days following an application of Imazethapyr 22.87% SL to alfalfa or clover.

#### Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

# WEEDS CONTROLLED

When applied as directed, **Imazethapyr 22.87% SL** will control or reduce competition from the weeds listed below. Refer to the **MIXING INSTRUCTIONS** section for specifications when weeds are at the maximum advised growth stage or are under stress.

# **NOTE:** R = Reduced Competition

Weeds noted with an "R" will be suppressed by **Imazethapyr 22.87% SL**. For best results, apply before the weeds exceed the size indicated below.

BROADLEAF WEEDS CONTROLLED					
	Imazethapyr 22.87% SL Application Rate				
Weeds Controlled	3.0 Fl. Oz./A	4.0 Fl. Oz./A Maximum Weed Size (Inches)	6.0 Fl. Oz./A		
Artichoke, Jerusalem	R	6	8		
Beets, Wild	4	5	6		
Bedstraw, Catchweed	-	3	4		
Buckwheat, Wild	-	3	4		
Chickweed,	-	5	4		
Common	R	3	4		
Mouseear	R	3	3		
Cocklebur, Common	R	8	8		
Cress, Hoary	-	R	8 R		
Dandelion	-	R	R (5)		
Dock,		N I	N (5)		
Broadleaf (Seedling)	_	-	R (6)		
Curly (Seedling)	-		R (6)		
Dodder	-				
Fiddleneck	-		R (4)		
Filaree,	-		n ( <del>4</del> )		
Redstem		D	2		
Whitestem	-	R R	3		
Fleabane, Rough	-	3	3		
Flixweed		3	4		
Goosefoot, Nettleleaf	R	3	4		
Gooseloot, Nettleleal	R		•		
Henbit	-	-	R (3)		
	-	R	3		
Jimsonweed	-	3	4		
Knotweed, Prostrate	-	R	3		
Kochia (Non-ALS Resistant)	R	3	3		
Lambsquarters, Common (1-2 Leaves)	-	R	R (2)		
Lettuce, Miners	-	3	4		
Mallow,			2		
Common	-	3	3		
Little	-	3	3		
Marshelder	-	4	6		
Morningglory,					
Entireleaf	-	R	3		
lvyleaf	-	R	3		
Pitted	-	R	3		
Smallflower	R	3	4		
Tall	-	R	3		
Mustards,					
Black	3	3	4		
Tumble	3	3	4		
Wild	3	3	4		
Nettle, Burning	-	3	4		
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,					
Redroot	4	6	8		

Smooth	4	6	Page <b>10</b> of <b>8</b>
Spiny	-	6	8
Radish, Wild	-	R	4
Ragweed,			
Common	-	2	3
Giant	-	3	3
Redmaids	-	3	4
Rocket,			
London	3	4	6
Yellow	R	3	4
Rock Purslane, Desert	-	-	3
Shepherd's Purse	3	3	4
Smartweed,			
Ladysthumb	R	3	4
Pennsylvania	R	3	4
Swamp (Seedling)	-	3	4
Spurge,			
Petty	-	3	4
Prostrate		R	3
Spotted	-	R	3
•	-	3	3
Spurry, Corn Sunflower, Common		4	6
Sunflower, Common Swinecress	R	3	3
	-	3	3
Tansymustard, Green	3	3	Δ
			4
Pinnate	3	3	4
Thistle, Russian	R	3	3
/elvetleaf	R	3	4
Nartcress, Creeping	-	2	3
Watercress	-	3	3
Willowweed, Panicle	-	3	3
	GRASSES AND SEDG		
		azethapyr 22.87% SL Applicatio	on Rate
Weeds Controlled <sup>1</sup>	4.0 Fl. Oz.//		6.0 Fl. Oz./A
		Maximum Weed Size (Inche	
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
	D		3
Smooth	R		
Cupgrass, Woolly <sup>2</sup>	3		3
Cupgrass, Woolly <sup>2</sup>			3
Cupgrass, Woolly <sup>2</sup>			<u> </u>
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green	3		
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant	3		6
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow	3 6 3		6 4
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow	3 6 3		6 4
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow ohnsongrass,	3 6 3 3		6 4 3
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow ohnsongrass, Seedling Rhizome	3 6 3 3 8		6 4 3 8
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow ohnsongrass, Seedling Rhizome Millet, Wild Proso	3 6 3 3 3 8 8 8		6 4 3 8 R (6 - 12)
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow ohnsongrass, Seedling Rhizome Millet, Wild Proso Nutsedge,	3 6 3 3 3 8 8 8		6 4 3 8 R (6 - 12) 3
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow ohnsongrass, Seedling Rhizome Millet, Wild Proso Nutsedge, Purple	3 6 3 3 3 8 R R R		6 4 3 R (6 - 12) 3 R (6)
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow ohnsongrass, Seedling Rhizome Villet, Wild Proso Nutsedge, Purple Yellow	3 6 3 3 8 8 R R R R R R R R R		6 4 3 8 R (6 - 12) 3 R (6) R (6)
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow Iohnsongrass, Seedling Rhizome Millet, Wild Proso Nutsedge, Purple Yellow Dats, Wild	3 6 3 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		6 4 3 R (6 - 12) 3 R (6)
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow Iohnsongrass, Seedling Rhizome Willet, Wild Proso Nutsedge, Purple Yellow Dats, Wild Rice, Red	3 6 3 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		6 4 3 8 R (6 - 12) 3 R (6) R (6) R (6) R (4) 4
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow Iohnsongrass, Seedling Rhizome Millet, Wild Proso Nutsedge, Purple Yellow Dats, Wild Rice, Red Shattercane	3 6 3 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8		6 4 3 8 R (6 - 12) 3 R (6) R (6) R (6) R (4) 4 10
Cupgrass, Woolly <sup>2</sup> Foxtail, Giant Green Yellow ohnsongrass, Seedling Rhizome Willet, Wild Proso Nutsedge, Purple Yellow Dats, Wild Rice, Red	3 6 3 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		6 4 3 8 R (6 - 12) 3 R (6) R (6) R (6) R (4) 4

<sup>a</sup>Imazethapyr 22.87% SL is active against many grass species. However, when heavy grass pressure is anticipated, Imazethapyr be used in a sequential application with a registered post-emergence grass herbicide such as sethoxydim for optimum control.
<sup>a</sup>Imazethapyr 22.87% SL controls emerged woolly cupgrass only.
<sup>3</sup>Quackgrass will be suppressed only when actively growing and before it exceeds 7" in height.

#### TANK MIX COMBINATIONS WITH OTHER HERBICIDES

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.

To control weeds not listed on the **Imazethapyr 22.87% SL** label, herbicides such as octanoic acid ester of bromoxynil, 2,4-DB, 2,4-D, sethoxydim, or clethodim may be tank mixed with **Imazethapyr 22.87% SL**. When **Imazethapyr 22.87% SL** 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. No label dosages may be exceeded.

# **APPLICATION INFORMATION**

**Imazethapyr 22.87% SL** is effective in controlling a broad spectrum of broadleaf and grass weeds. Alfalfa and clover are not sensitive to post-emergence applications of **Imazethapyr 22.87% SL** after the second trifoliate leaf has expanded. Minor height reduction or slight leaf yellowing may occur soon after application.

Apply **Imazethapyr 22.87% SL** as an early post-emergence treatment when the weeds are actively growing. Weeds are generally easier to control before they exceed 3" 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 Imazethapyr 22.87% SL after the alfalfa or clover has 2 fully expanded trifoliate leaves. Weeds must not exceed the size listed in the WEEDS CONTROLLED tables. Imazethapyr 22.87% SL 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 **Imazethapyr 22.87% SL** 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 **Imazethapyr 22.87% SL** to the oats when the oats have 3 - 4 leaves.

#### Established Alfalfa / Clover - Dormant

**Imazethapyr 22.87% SL** may be applied to dormant alfalfa or clover in the Fall following the last cutting. **Imazethapyr 22.87% SL** may also be applied 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"), to reduce spray interference.

#### Established Alfalfa / Clover - Growing

For weed control during the season, apply **Imazethapyr 22.87% SL** following alfalfa or clover cutting. Remove the hay from the field and apply **Imazethapyr 22.87% SL** 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, **Imazethapyr 22.87% SL** will reduce the growth and competitive effect of the grass.

# FIELD CORN - USE DIRECTIONS (Not for use in California.)

Apply **Imazethapyr 22.87% SL** at a broadcast rate of 4 fl. oz. per acre (0.063 lbs. ae/A imazethapyr) for all methods of application to Clearfield<sup>®</sup> corn: early pre-plant, pre-plant incorporated, pre-emergence, and post-emergence (including minimum- and no-till). At this broadcast rate, 1 gal. of **Imazethapyr 22.87% SL** will treat 32 acres of Clearfield<sup>®</sup> corn. (Refer to the instructions under the section **APPLICATIONS TO CORN IN NORTH DAKOTA AND MINNESOTA** for applications in North Dakota and Minnesota north of Highway 210.)

#### **Restrictions:**

- For use only on Clearfield<sup>®</sup> corn.
- A maximum of 0.063 lb. ae/A of imazethapyr (4 fl. oz./acre of Imazethapyr 22.87% SL) per year may be applied to corn.
- Do not apply more than 4 fl. oz. per acre per single application (0.063 lb. ae/A imazethapyr).
- Do not apply more than one application of Imazethapyr 22.87% SL per year.
- Do not count cotyledon leaves when determining weed stage of growth.

Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

#### WEEDS CONTROLLED

When applied as directed, **Imazethapyr 22.87% SL** will control or reduce competition from the weeds listed below. Refer to the **MIXING INSTRUCTIONS** section for specifications when weeds are at the maximum advised growth stage or are under stress.

# NOTE: C = Control, R = Reduced Competition

The number under Maximum Leaf Stage indicates the MAXIMUM number of leaves at which weeds should be sprayed postemergence.

	BROADLEAF W	EEDS	
Woods Controlled SOIL APPLIED POST-EMERGENCE			ERGENCE
Weeds Controlled	SOIL-APPLIED	Maximum Leaf Stage	Size (Inches)
Alligator Weed	-	4	1 - 3
Anoda, Spurred	C	2	1 - 2
Artichoke, Jerusalem	-	8	6 - 10
Buffalobur	C*	R	1 - 3
Carpetweed	C	-	-
Cocklebur, Common	R	8	1 - 8
Galinsoga	C	-	-
Jimsonweed	C*	4	1 - 3
Kochia (Non-ALS Resistant)	C	4	1 - 3
Lambsquarters, Common	C*	R	1 - 2
Mallow, Venice	R	-	-
Marshelder	C	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 spp.	С	4	1 - 3
Nightshade,			
Black	С	4	1 - 3
Eastern Black	С	4	1 - 3
Hairy	C	4	1 - 3
Pigweed,			
Redroot	С	8	1 - 8
Smooth	C	8	1 - 8
Spiny	C	8	1 - 8
Poinsettia, Wild	C	-	-
Puncturevine	C	_	-
Purslane, Common	C	-	-
Pusley, Florida	C		-
Sida, Prickly	C		-
Ragweed,	<u>_</u>		
Common	R	4	1 - 3
Giant	R	4	1 - 3
Sage, Barnyard	-	R	1-3
Smartweed,			T - 2
Ladysthumb	С	4	1 - 3
Pennsylvania	C	4	1-3
Spurge,	C	7	T - 2
Prostrate	С	4	1 - 3
Spotted	C	4	1-3
Starbur, Bristly	-	2	1-2
Sunflower	C*	4	1 - 3
Thistle, Canada	-	4 R	1-3
Velvetleaf	- C*	4 K	1 - 3
Vervetiear	_		1-3
	GRASS WEEL		FROENCE
Weeds Controlled <sup>2</sup>	SOIL-APPLIED	POST-EM	
Parpuardarace	R	Maximum Leaf Stage	<b>Size (Inches)</b> 1 - 3
Barnyardgrass	К	3	1-3
Crabgrass,			1 )
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	-	-

	POST-F	MERGENCE
SEDGES		
R	6	1 - 3
R	4	1 - 8
R	6	1 - 8
R	R	<1
-	3	1 - 3
R	-	-
R	-	-
R	R	1 - 3
-	R	6 - 12
C	6	1 - 8
	R R R R R R R R R R R	-     R       R     R       R     -       R     -       R     -       R     6       R     4       R     6       SEDGES

Weeds Controlled <sup>2</sup>	SOIL-APPLIED	POST-EMERGENCE	
weeus controlleu	JUIL-APPLIED	Maximum Leaf Stage	Size (Inches)
Nutsedge,			
Purple	R	R	1 - 3
Yellow	R	R	1 - 3

\*When Imazethapyr 22.87% SL is soil-applied, these weeds are more consistently controlled by pre-plant incorporated treatments. <sup>1</sup>Pre-plant incorporated treatments of **Imazethapyr 22.87% SL** are more consistent for grass control.

<sup>2</sup>Imazethapyr 22.87% SL controls many grass species. However, when heavy grass pressure is anticipated, a soil-applied grass herbicide underlay (such as pendimethalin or dimethenamid-p) is advised for optimum control. Do not incorporate pendimethalin; apply pre-emergence or early post-emergence only. Imazethapyr 22.87% SL may also be used in sequential programs with registered burndown herbicides and/or soil-applied atrazine-containing products.

#### TANK-MIXTURE HERBICIDE COMBINATIONS WITH IMAZETHAPYR 22.87% SL

(Post-Emergence	(	Emergence
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		(Post-Emergence)		
Nicosulfuron <sup>1</sup>	Dicamba <sup>2,4</sup>	Octanoic acid ester of bromoxynil <sup>2,3</sup>	Metolachlor	Dimethenamid-P
Atrazine <sup>2,3</sup>	Bentazon <sup>2</sup>	Atrazine + Dicamba <sup>2</sup>	Pendimethalin	
1.6				

<sup>1</sup>If nicosulfuron is used in combination with Imazethapyr 22.87% SL on corn containing the Clearfield<sup>®</sup> trait, any registered soil insecticide applications may be used.

<sup>2</sup>In some cases the grass activity of **Imazethapyr 22.87% SL** will be reduced when used in combination with atrazine, octanoic acid ester of bromoxynil, dicamba, bentazon, or mixtures of these.

<sup>3</sup>Some corn leaf burn may result with octanoic acid ester of bromoxynil or atrazine post-emergence combinations with **Imazethapyr 22.87% SL**. <sup>4</sup>Applications of dicamba to corn during periods of rapid growth may result in temporary leaning.

# **Restrictions:**

- Do not use crop oil concentrates as adjuvants in Imazethapyr 22.87% SL combinations with octanoic acid ester of bromoxynil.
- Do not use Counter<sup>®</sup> 15G systemic insecticide-nematicide in-furrow with Clearfield<sup>®</sup> corn.
- If Imazethapyr 22.87% SL plus nicosulfuron tank-mixes are used on Clearfield<sup>®</sup> corn, do not use Counter<sup>®</sup> 15G. Other registered organophosphate insecticides such as Counter<sup>®</sup> CR (banded applications only) or Thimet<sup>®</sup> or other registered carbamate or pyrethroid insecticides may be used when Imazethapyr 22.87% SL plus nicosulfuron tank mixes are applied to Clearfield<sup>®</sup> corn.

**Imazethapyr 22.87% SL** is active against many broadleaf and grass species. However, for long term weed management, alternate mode of action herbicides are recommended with **Imazethapyr 22.87% SL**. The application of a soil-applied grass herbicide underlay will control grass weeds not on the **Imazethapyr 22.87% SL** label and enhance the control of certain broadleaf weeds such as common lambsquarters.

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.

#### APPLICATIONS TO CLEARFIELD® CORN IN NORTH DAKOTA AND MINNESOTA (North of Highway 210)

Apply Imazethapyr 22.87% SL at 3 fl. oz. per acre (0.047 lb. ae/A imazethapyr) post-emergence only.

POST-EMERGENCE		
Maximum Leaf Stage	Size (Inches)	
4	1 - 3	
4	1 - 3	
4	1 - 3	
4	1 - 3	
4	1 - 3	
3	1 - 4	
4	1 - 4	

#### 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 - USE DIRECTIONS

(For the states east of and including: North Dakota, South Dakota, Wyoming, Colorado, and New Mexico, except the states of Vermont, Massachusetts, Connecticut, Rhode Island, New Hampshire, and Maine.) Refer to map for geographical use area.



#### **Restrictions:**

- Use only nonionic surfactants as a spray additive for post-emergence applications. Do not use crop oils, methylated seed oils, or petroleum oils.
- Do not make more than 1 application of Imazethapyr 22.87% SL per year.
- Do not apply more than 4 fl. oz. per acre per single application (0.063 lb. ae/A imazethapyr).
- A maximum of 0.063 lb. ae/A of imazethapyr (4 fl. oz./acre of Imazethapyr 22.87% SL) per year may be applied 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 **Imazethapyr 22.87% SL** post-emergence before crop has at least 1 trifoliate leaf or peas are at least 3" in height or crop injury (reduced crop growth and/or delayed maturity) may result.
- Do not apply Imazethapyr 22.87% SL 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-111 and Olathe are more sensitive to Imazethapyr 22.87% SL than other varieties.

Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

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

**Pre-Plant Incorporated Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of up to 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) 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. per acre (0.063 lb. ae/A of imazethapyr) for southern peas only, within 1 week before planting. Applied pre-plant incorporated, **Imazethapyr 22.87% SL** may be tank-mixed with a registered grass herbicide.

**Pre-Emergence Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of up to 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) to dry beans, dry edible peas and English peas, or up to 4 fl. oz. per acre (0.063 lb. ae/A of imazethapyr) for southern peas only, immediately after, or up to 3 days after planting. **Imazethapyr 22.87% SL** 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.

**Early Post-Emergence Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of up to 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) to dry beans, dry edible peas, and English peas, or up to 4 fl. oz. per acre (0.063 lb. ae/A of imazethapyr) for southern peas only. Apply to dry beans with at least 1 fully expanded trifoliate leaf. Apply to dry edible peas, English peas, and southern peas at least 3" in height but prior to 5 nodes and before flowering. The use of trifluralin prior to **Imazethapyr 22.87% SL** application may increase the likelihood and severity of crop injury. A nonionic surfactant must be added to the spray solution. The nonionic surfactant must contain at least 80% active ingredient and should be used at a rate of 2 pints per 100 gals. of spray mixture.

Bentazon may be tank-mixed with **Imazethapyr 22.87% SL** to control weeds not listed on the **Imazethapyr 22.87% SL** label. Addition of bentazon may also cause antagonism, thereby reducing control of grass weeds. Nitrogen-based fertilizer may be included as a spray additive ONLY when **Imazethapyr 22.87% SL** is tank-mixed with bentazon. Refer to the bentazon label for proper application rates and restrictions. Always use in accordance with the more restrictive label restrictions and precautions.

#### **Restrictions:**

- Do not make more than 1 application of Imazethapyr 22.87% SL per year.
- Do not apply more than 4 fl. oz. per acre per single application (0.063 lb. ae/A imazethapyr).
- Do not apply more than 3 fl. oz. per acre (0.047 lb. ae/A imazethapyr) or 4 fl. oz. per acre (0.063 lb. ae/A imazethapyr) per year

depending upon application timing and crops species. Refer to directions for use immediately above.

- In Michigan or the Delaware, Maryland, and Virginia (DelMarVa) peninsula: Do not apply more than 2 fl. oz. per acre per year (0.031 lb. ae/A of imazethapyr) of Imazethapyr 22.87% SL to sands or loamy sand soils.
- In North Dakota or north of Highway 210 in Minnesota: Do not apply more than 2 fl. oz. per acre per year (0.031 lb. ae/A of imazethapyr) of Imazethapyr 22.87% SL.

Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

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

**Pre-Plant Incorporated Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of up to 3 fl. oz. per acre (0.047 lb. ae/A imazethapyr) within 1 week before planting. Applied pre-plant incorporated, **Imazethapyr 22.87% SL** may be tank-mixed with a registered grass herbicide.

**Pre-Emergence Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of up to 3 fl. oz. per acre (0.047 lb. ae/A imazethapyr) immediately after or up to 3 days after planting. **Imazethapyr 22.87% SL** 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 Imazethapyr 22.87% SL to white lupins grown on sand or loamy sand soils.
- Do not apply more than one application per acre per year.
- Do not apply more than 3 fl. oz. per acre per single application (0.047 lb. ae/A imazethapyr).
- Do not apply more than 3 fl. oz. per acre (0.047 lb. ae/A imazethapyr) per year.
- In Michigan or the Delaware, Maryland, and Virginia (DelMarVa) peninsula: Do not apply more than 2 fl. oz. per acre per year (0.031 lb. ae/A imazethapyr) of Imazethapyr 22.87% SL to sands or loamy sand soils.
- In North Dakota or north of Highway 210 in Minnesota: Do not apply more than 2 fl. oz. per acre per year (0.031 lb. ae/A imazethapyr) of Imazethapyr 22.87% SL.
- Do not count cotyledon leaves when determining weed stage of growth.

Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

#### WEEDS CONTROLLED

**Imazethapyr 22.87% SL** applied at the broadcast rate of 2 fl. oz. per acre (0.031 lb. ae/A imazethapyr) pre-plant incorporated, preemergence, or early post-emergence will control: Mustard (wild) and Nightshade (black\* and Eastern black\*) \*suppression only.

**Imazethapyr 22.87% SL** applied at the broadcast rate of 3 fl. oz. per acre (0.047 lb. ae/A imazethapyr) pre-plant incorporated, preemergence, or early post-emergence will control: Mustard (wild), Nightshade (black, Eastern black, hairy), and Pigweed (redroot).

Post-emergence applications of 3 fl. oz. per acre (0.047 lb. ae/A imazethapyr) must be made to weeds less than 2" tall for best results.

When applied as directed at the broadcast rate of 4 fl. oz. per acre (0.063 lb. ae/A imazethapyr) (for southern peas only), **Imazethapyr** 22.87% SL 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 should be sprayed postemergence.

BROADLEAF WEEDS					
Weeds Controlled		POST-EMERGENCE			
Weeds Controlled	SOIL-APPLIED	Maximum Leaf Stage	Size (inches)		
Anoda, Spurred	С	2	1 - 2		
Artichoke, Jerusalem	-	8	6 - 10		
Buffalobur	C*	-	-		
Carpetweed	С	-	-		
Cocklebur, Common	C*	8	1 - 8		
Galinsoga	С	-	-		
Jimsonweed	C**	4	1 - 3		
Kochia (Non-ALS Resistant)	С	4	1 - 3		
Lambsquarters	C**	R	1 - 2		
Mallow, Venice	R	2	1 - 2		
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 spp.	С	4	1 - 3		
Nightshade,					
Black	С	4	1 - 3		

4	1 - 4 - - - - - -
	-
	-
4	
4	-
	1 - 3
4	1 - 3
R	1 - 3
4	1 - 3
4	1 - 3
4	1 - 3
4	1 - 3
2	1 - 2
4	1 - 3
R	1 - 3
4	1 - 3
POST-EMER	
Leaf Stage	Size (Inches)
3	1 - 3
_	
3	1 - 3
3	1 - 3
***	1 - 3
6	1-6
-	1 - 3
3	1 - 3
3	1 - 3
3 3	1 - 3
3 3 3	-
3 3	
3 3 3 3 -	
3 3 3 3 - 6	1 - 8
3 3 3 3 - 6	1 - 8 1 - 8
3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1 - 8
3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4	1 - 8
3 3 3 3 - 6 R - 7 - 7	1 - 8 - -
3 3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	1 - 8 - - 1 - 3
3 3 3 3 - 6 R - 7 - 7	1 - 8 - -
	6 R

Weeds Controlled	SOIL-APPLIED	POST-EMERGENCE		
weeds controlled		Maximum Leaf Stage	Size (Inches)	
Nutsedge,				
Purple	R	R	1 - 3	
Yellow	R	R	-	

<sup>1</sup>When soil-applied to grasses, more consistent control can be obtained from pre-plant incorporated treatments.

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

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

\*\*\*Imazethapyr 22.87% SL controls emerged woolly cupgrass only. Refer to the PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS section for additional instructions.

# **RED KIDNEY BEANS - USE DIRECTIONS**

(For the State of California.)

**Post-Emergence Applications:** Apply **Imazethapyr 22.87% SL** at the rate of 3 fl. oz. per acre (0.047 lb. ae/A imazethapyr). A non-ionic surfactant must be added to the spray solution. The nonionic surfactant must contain at least 80% active ingredient and should be used at a rate of 2 pts. per 100 gals. of spray mixture.

Apply Imazethapyr 22.87% SL 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 Imazethapyr 22.87% SL application. This timely

# **Restrictions:**

- Do not apply by aerial application.
- Do not apply **Imazethapyr 22.87% SL** post-emergence when the crop and weeds have been subjected to stress conditions such as temperature or moisture extremes.
- Do not make more than 1 application of Imazethapyr 22.87% SL per year.
- Do not apply more than 3 fl. oz. per acre per single application (0.047 lb. ae/A imazethapyr).
- A maximum of 0.047 lb. ae/A of imazethapyr (3 fl. oz./acre of Imazethapyr 22.87% SL) per year may be applied to red kidney beans.
- Do not apply **Imazethapyr 22.87% SL** post-emergence before crop has at least 1 true-leaf or crop injury (reduced crop growth and/or delayed maturity) may result.
- Allow at least 60 days between application and harvest.

Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

# WEEDS CONTROLLED

When applied as directed, **Imazethapyr 22.87% SL** will control or reduce competition from the weeds listed below. Refer to the **MIXING INSTRUCTIONS** section for specifications when weeds are at the maximum advised growth stage or are under stress.

The number under Maximum Leaf Stage indicates the MAXIMUM number of leaves at which weeds should be sprayed postemergence.

BROADLEAF WEEDS			
Weeds Construction	POST-EMERGENCE		
Weeds Controlled	Maximum Leaf Stage	Size (Inches)	
Kochia (Non-ALS Resistant)	4	1 - 3	
Mustard, Wild	4	1 - 3	
Nightshade,			
Black	4	1 - 3	
Eastern Black	4	1 - 3	
Hairy	4	1 - 2	
Pigweed, Redroot	4	1 - 3	

# **SNAP BEANS - USE DIRECTIONS**

(For the states of Alabama, Florida, Georgia, Illinois, Minnesota, Michigan, New Jersey, North Carolina and Wisconsin.)

**Pre-Plant Incorporated Applications:** Apply **Imazethapyr 22.87% SL** at 1.5 fl. oz. per acre (0.023 lb. ae/A of imazethapyr) within 1 week of planting. Applied pre-plant incorporated, **Imazethapyr 22.87% SL** may be tank-mixed with a registered grass herbicide.

**Pre-Emergence Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of 1.5 fl. oz. per acre (0.023 lb. ae/A of imazethapyr) immediately after, or up to 1 day after planting. **Imazethapyr 22.87% SL** 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 by aerial application.
- Do not make more than 1 application of Imazethapyr 22.87% SL per acre per year.
- Do not apply more than 1.5 fl. oz. per acre per single application (0.023 lb. ae/A imazethapyr).
- A maximum of 0.023 lb. ae/A of imazethapyr (1.5 fl. oz./acre of Imazethapyr 22.87% SL) per year may be applied to snap beans.
- Do not apply Imazethapyr 22.87% SL after July 31<sup>st</sup> (June 20<sup>th</sup> in New Jersey).
- Allow at least 30 days between application and harvest.

Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

# WEEDS SUPPRESSED

**Imazethapyr 22.87% SL** applied at the broadcast rate of 1.5 fl. oz./A (0.023 lb. ae/A of imazethapyr) pre-plant incorporated or preemergence will suppress or reduce competition of the following weeds: Mustard (wild), Nightshade (Eastern black), Pigweed (redroot), and Purslane (common).

# (For 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).)

**Post-emergence Applications:** Apply **Imazethapyr 22.87% SL** at 1.5 fl. oz. per acre (0.023 lb. ae/A of imazethapyr) in a tank-mix combination with bentazon. A nonionic surfactant must be added to the spray solution. The nonionic surfactant must contain at least 80% active ingredient and should be used at a rate of 2 pts. per 100 gals. of spray mixture.

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

# **Restrictions:**

- Allow at least 30 days between application and harvest.
- A maximum of 0.023 lb. ae/A of imazethapyr (1.5 fl. oz./acre of Imazethapyr 22.87% SL) per year may be applied to snap beans.
- Do not apply by aerial application.
- Do not apply Imazethapyr 22.87% SL after July 31<sup>st</sup>.
- Do not make more than 1 application of Imazethapyr 22.87% SL per year.
- Do not apply more than 1.5 fl. oz. per acre per single application (0.023 lb. ae/A imazethapyr).
- Do not apply Imazethapyr 22.87% SL post-emergence before crop has at least 1 true-leaf or crop injury (reduced crop growth and/or delayed maturity) may result.

Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

#### WEEDS SUPPRESSED

**Imazethapyr 22.87% SL** applied at the broadcast rate of 1.5 fl. oz./A (0.023 lb. ae/A of imazethapyr) post-emergence will suppress or reduce competition of the following weeds: Nightshade (Eastern black) and Pigweed (redroot).

# SUCCULENT PEAS, DRY EDIBLE PEAS, LENTILS, CHICKPEAS, AND LIMA BEANS - USE DIRECTIONS

# (For the states of Idaho, Montana, Nevada, Oregon, Utah, and Washington.)

**Pre-Plant Applications (No-Till and Minimum Tillage Systems Only):** Apply **Imazethapyr 22.87% SL** at a broadcast rate of 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) within 30 days before planting. In no-till and minimum tillage systems, **Imazethapyr 22.87% SL** may be applied 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 **Imazethapyr 22.87% SL** in the Fall when soil temperature at the 4" depth is less than 55°F and before the ground is frozen.

**Pre-Plant Incorporated Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) within 1 week before planting. Do not incorporate deeper than 3".

**Pre-Emergence Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) after planting, but prior to crop emergence. **Imazethapyr 22.87% SL** may be tank-mixed with metribuzin to assist in the control of lambsquarters or mayweed-chamomile (dogfennel). Refer to the metribuzin product label for proper application rates and restrictions.

**Post-Emergence Applications (Dry Edible Peas Only):** Apply **Imazethapyr 22.87% SL** at 2 fl. oz. per acre (0.031 lb. ae/A of imazethapyr). A nonionic surfactant must be added to the spray solution. The nonionic surfactant must contain at least 80% active ingredient and should be used at a rate of 2 pts. per 100 gals. of spray mixture.

Bentazon may be tank-mixed with **Imazethapyr 22.87% SL** to control weeds not listed on the **Imazethapyr 22.87% SL** label. Addition of bentazon may also cause antagonism, thereby reducing control of grass weeds. Nitrogen- based fertilizer may be included as a spray additive only when **Imazethapyr 22.87% SL** is tank mixed with bentazon. Use liquid fertilizer at 1.25 - 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:**

- If incorporated, do not incorporate deeper than 3".
- Do not apply Imazethapyr 22.87% SL post-emergence before crop has at least 1 trifoliate leaf or peas are at least 3" in height or crop injury (reduced crop growth and/or delayed maturity) may result. Do not apply Imazethapyr 22.87% SL post-emergence to lima beans, lentils, or chickpeas.
- Do not make more than 1 application of Imazethapyr 22.87% SL per year.
- Do not apply more than 3 fl. oz. per acre per single application (0.047 lb. ae/A imazethapyr).
- A maximum of 0.047 lb. ae/A of imazethapyr (3 fl. oz./acre of Imazethapyr 22.87% SL) per year may be applied to peas and beans in this region.
- 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.

# Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

WEEDS CONTROLLED

Imazethapyr 22.87% SL applied pre-plant incorporated and/or pre-emergence at 3 fl. oz./A (0.047 lb. ae/A of imazethapyr) will control:

NOTE: C = 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	

**Imazethapyr 22.87% SL** applied post-emergence at the broadcast rate of 2 fl. oz./A (0.031 lb. ae/A of imazethapyr) will control: Mustard (wild), Nightshade (black\*, Eastern black\*, hairy\*) \*suppression only.

<b>CHICKPEAS - USE DIRECTIONS</b>	
(For the states of Arizona and California.)	

**Pre-Plant Incorporated Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of up to 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) within 1 week before planting. Applied pre-plant incorporated, **Imazethapyr 22.87% SL** may be tank-mixed with a registered grass herbicide.

**Pre-Emergence Applications:** Apply **Imazethapyr 22.87% SL** at the broadcast rate of up to 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) immediately after or up to 3 days after planting. **Imazethapyr 22.87% SL** 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 make more than 1 application of Imazethapyr 22.87% SL per year.
- Do not apply more than 3 fl. oz. per acre per single application (0.047 lb. ae/A imazethapyr).
- A maximum of 0.047 lb. ae/A of imazethapyr (3 fl. oz./acre of Imazethapyr 22.87% SL) per year may be applied to chickpeas in this region.
- Allow at least 30 days between application and harvest of succulent chickpeas. Allow at least 60 days between application and harvest of dry chickpeas.

Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

WEEDS	CONTROLLED

Weeds Controlled	PRE-PLANT INCORPORATED	PRE-EMERGENCE
Buckwheat, Wild	С	С
Kochia (Non-ALS Resistant)	С	С
Lambsquarters, Common	C	-
Mustard, Wild	С	С
Nightshade,		
Black	С	С
Eastern Black	С	С
Hairy	С	С
Pigweed, Redroot	С	С
Shepherd's Purse	C	С
Thistle, Russian	С	С

#### **PEANUTS - USE DIRECTIONS**

#### (Not for use in California.)

**Pre-Plant Incorporated, Pre-Emergence, Ground-Cracking, and Post-Emergence Applications:** Apply **Imazethapyr 22.87% SL** at a broadcast rate of 4 fl. oz. per acre (0.063 lb. ae/A of imazethapyr) for all methods of application (except sequential - see below). At this broadcast rate, 1 gal. of **Imazethapyr 22.87% SL** will treat 32 acres of peanuts.

Sequential Application: The sequential (split) application of Imazethapyr 22.87% SL consists of an application of 2 fl. oz. of product soil-applied (either pre-plant incorporated or pre-emergence) followed by 2 fl. oz. applied either at ground-crack or post-emergence. When applied as a sequential treatment, Imazethapyr 22.87% SL will control the weeds listed under the "SOIL-APPLIED" and "AT-CRACK" applications in the below BROADLEAF WEEDS and GRASS WEEDS tables. It enhances the control of yellow and purple nutsedge. Apply the second application before the nutsedge exceeds 3 leaves.

# **Restrictions:**

- Do not make more than 1 application of Imazethapyr 22.87% SL per year.
- A maximum of 0.063 lb. ae/A of imazethapyr (4 fl. oz./acre of Imazethapyr 22.87% SL) per year may be applied to peanuts.
- Do not apply more than 4 fl. oz. per acre per single application (0.063 lb. ae/A imazethapyr).
- Arizona: For use only in Yuma and La Paz counties.
- Do not count cotyledon leaves when determining weed stage of growth.

In West Texas and New Mexico, wait until late cracking (most of the peanuts have emerged) before applying Imazethapyr 22.87% SL.

Refer to the **PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS** section for additional instructions.

# WEEDS CONTROLLED

When applied as directed, **Imazethapyr 22.87% SL** will control or reduce competition from the weeds listed below. Refer to the **MIXING INSTRUCTIONS** section for specifications when weeds are at the maximum advised growth stage or are under stress.

"AT-CRACK" application refers to the time when the soil cracks due to the emerging peanut seedling. This generally occurs from 10 - 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.

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

The number under Maximum Leaf Stage indicates the MAXIMUM number of leaves at which weeds should be sprayed postemergence.

BROADLEAF WEEDS <sup>1</sup>				
Weeds Controlled	SOIL-APPLIED	AT-CRACK	POST-EMERGENCE	
	SOIL-APPLIED	AT-CRACK	Maximum Leaf Stage	Size (Inches)
Alligator Weed	-	С	4	1 - 3
Anoda, Spurred	С	С	2	1 - 2
Buffalobur	C*	С	R	1 - 3
Carpetweed	С	С	-	-
Cocklebur, Common	R	С	8	1 - 8
Devil's Claw	C	С	-	-
Galinsoga	С	С	-	-
Jimsonweed	C*	С	4	1 - 3
Lambsquarters, Common	C*	С	R	1 - 2
Morningglory,				
Entireleaf	R	С	2	1 - 2
lvyleaf	R	С	2	1 - 2
Pitted	R	С	2	1 - 2
Smallflower	С	С	4	1 - 3
Tall	R	С	2	1 - 2
Mustard spp.	С	С	4	1 - 3
Nightshade,				
Black	С	С	4	1 - 3
Eastern Black	С	С	4	1 - 3
Hairy	С	С	4	1 - 3
Pigweed,				
Redroot	С	С	8	1 - 8
Smooth	C	C	8	1 - 8
Spiny	C	C	8	1 - 8
Poinsettia, Wild	C	C	_	-
Puncturevine	C	C	-	-
Purslane, Common	C	C	-	-
Pusley, Florida	C	C	-	-
Ragweed,		-		
Common	R	R	4	1 - 3
Giant	R	R	4	1 - 3
Sida, Prickly (Teaweed)	C*	C	-	-
Smartweed,				
Ladysthumb	С	С	4	1 - 3
Pennsylvania	C	C	4	1-3
Spurge,		C	T	
Prostrate	С	С	4	1 - 3
Spotted	C	C	4	1-3
Toothed	C	C	-	-
Starbur, Bristly	-	-	2	1 - 2
Sunflower	C*	C	4	1-3
Velvetleaf	C*	<u>с</u>	4	1-3

	GR	ASS WEEDS <sup>1</sup>		
Weeds Controlled	SOIL-APPLIED*	AT-CRACK	POST-EMERGENCE	
weeds controlled	SOIL-APPLIED	AT-CRACK	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	С	6	1 - 6
Green	С	С	3	1 - 3
Yellow	С	С	3	1 - 3
Goosegrass	R	R	-	-
Johnsongrass,				
Seedling	С	С	6	1 - 8
Rhizome	-	-	R	6 - 12
Panicum,				
Fall	R	-	-	-
Texas	R	-	-	-
Rice, Red	-	-	3	1 - 3
Shattercane	R	R	6	1 - 8
Signalgrass, Broadleaf	R	С	4	1 - 6
		SEDGES		
Weeds Controlled	SOIL-APPLIED*	AT-CRACK	POST-EMERGENCE	
weeds controlled	SOIL-AFFLIED	AT-CRACK	Maximum Leaf Stage	Size (Inches)
Nutsedge,				
Purple	С	С	3	1 - 3
Yellow	С	С	3 htly controlled by pre-plant incorp	1 - 3

# **SOYBEANS - USE DIRECTIONS**

Apply **Imazethapyr 22.87% SL** at a broadcast rate of 4 fl. oz. per acre (0.063 lb. ae/A of imazethapyr) for all methods of application: early pre-plant, pre-plant incorporated, pre-emergence, and post-emergence (including minimum- and no-till). At this broadcast rate, 1 gal. of **Imazethapyr 22.87% SL** 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.)

#### **Restrictions:**

- Only 1 application of Imazethapyr 22.87% SL may be made during the year.
- A maximum of 0.063 lb. ae/A of imazethapyr (4 fl. oz./A of Imazethapyr 22.87% SL) per year may be applied to soybeans.
- Do not apply more than 4 fl. oz. per acre per single application (0.063 lb. ae/A imazethapyr).
- Not for use in California.
- Do not count cotyledon leaves when determining weed stage of growth.

Refer to the PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS section for additional instructions.

#### WEEDS CONTROLLED

When applied as directed, **Imazethapyr 22.87% SL** will control or reduce competition from the weeds listed below. Refer to the **MIXING INSTRUCTIONS** section for specifications when weeds are at the maximum advised growth stage or are under stress. **NOTE:** C = Control, R = Reduced Competition

The number under Maximum Leaf Stage indicates the MAXIMUM number of leaves at which weeds should be sprayed postemergence.

BROADLEAF WEEDS				
Weeds Controlled	SOIL-APPLIED	POST-EMERGENCE		
weeds controlled	30IL-APPLIED	Maximum Leaf Stage	Size (Inches)	
Alligator Weed	-	4	1 - 3	
Anoda, Spurred	С	2	1 - 2	
Artichoke, Jerusalem	-	8	6 - 10	
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	

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R	1 - 2
-	-
4	1 - 3
	1 - 2
	1 - 2
2	1 - 2
4	1 - 3
2	1 - 2
4	1 - 3
4	1 - 3
4	1 - 3
4	1 - 3
8	1 - 8
8	1 - 8
8	1 - 8
_	-
-	-
-	-
-	-
-	_
R	1 - 3
	1 - 3
1 5	
Δ	1 - 3
	1 - 3
	1-5
Λ	1 - 3
	1-3
	1-2
	1-2
	1-3
	1-3
	1-5
	EMERGENCE
	Size (inches)
	1 - 3
	1 0
3	1 - 3
	1 - 3
	1 - 3
5	1 5
6	1 - 6
	1-3
	1-3
	-
-	-
6	1 0
	<u>1 - 8</u> 6 - 12
	6 - 12
ĸ	1-3
-	-
-	-
2	4 2
3	1-3
6	1 - 8
6 4	1 - 8 1 - 8
6 4 6	1 - 8
6 4 6 SES	1 - 8 1 - 8 1 - 3
6 4 6 jES POST-1	1 - 8 1 - 8 1 - 3 EMERGENCE
6 4 6 SES	1 - 8 1 - 8 1 - 3
6 4 6 iES Maximum Leaf Stage	1 - 8 1 - 8 1 - 3 EMERGENCE Size (inches)
6 4 6 jES POST-1	1 - 8 1 - 8 1 - 3 EMERGENCE
	2 2 2 4 2 4 2 4 2 4 2 4 2 4 4 4 4 4 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8

\*When Imazethapyr 22.87% SL is soil-applied, these weeds are more consistently controlled by pre-plant incorporated treatments.

<sup>1</sup>Pre-plant incorporated treatments of **Imazethapyr 22.87% SL** are more consistent for grass control. <sup>2</sup>**Imazethapyr 22.87% SL** is active against many broadleaf and grass species. However, when heavy grass or common lambsquarters pressure is anticipated, **Imazethapyr 22.87% SL** should be used in combination with a registered soil-applied grass herbicide (see **HERBICIDE COMBINATIONS** section).

<sup>3</sup>Imazethapyr 22.87% SL only controls emerged woolly cupgrass.

#### HERBICIDE COMBINATIONS

#### **GRASS WEEDS**

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.

A selective post-emergence grass herbicide such as sethoxydim may be mixed with **Imazethapyr 22.87% SL** to control volunteer corn or grasses not controlled by **Imazethapyr 22.87% SL**. For best results, use crop oil concentrate AND liquid fertilizer with grass herbicide tank-mixtures.

#### Imazethapyr 22.87% SL + Sethoxydim For Enhanced Grass Control

Apply Imazethapyr 22.87% SL at the rate of 4 fl. oz. per acre (0.063 lb. ae/A of imazethapyr).

Refer to the sethoxydim product label for the appropriate rate for enhanced grass control. The addition of sethoxydim to **Imazethapyr 22.87% SL** at the directed rates will control the grasses listed below. (Refer to the sethoxydim product label for additional weeds controlled).

Annual Grasses Controlled	Size (Inches)
Barnyardgrass	3 - 8
Corn, Volunteer	4 - 10
Crabgrass, Large	3 - 6
Crabgrass, Smooth	3 - 6
Cupgrass, Woolly	3 - 8
Foxtail, Green	3 - 8
Foxtail, Giant	3 - 8
Foxtail, Yellow	3 - 8
Goosegrass	3 - 6
Johnsongrass, Seedling	3 - 8
Junglerice	3 - 8
Panicum, Fall	3 - 8
Panicum, Texas	3 - 8
Proso Millet, Wild	4 - 10
Shattercane	3 - 12
Signalgrass, Broadleaf	3 - 8
Sprangletop, Red	3 - 8
Witchgrass	3 - 8

The addition of sethoxydim to **Imazethapyr 22.87% SL** enhances the grass control, especially when heavy infestations of grass exist. It also provides control of grasses not controlled by **Imazethapyr 22.87% SL**. In some cases, the activity of sethoxydim may be reduced when mixed with **Imazethapyr 22.87% SL**. The reduction in activity may be overcome by delaying the application of sethoxydim for 7 days following the application of **Imazethapyr 22.87% SL**. If sethoxydim is applied first, wait 3 days before applying **Imazethapyr 22.87% SL**.

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 **Imazethapyr 22.87% SL** and sethoxydim labels). Refer to the sethoxydim label for additional information regarding application rates, restrictions, precautions, weeds controlled, adjuvants recommended, and other information.

## BROADLEAF WEEDS

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.

Broadleaf herbicides that can be tank-mixed with Imazethapyr 22.87% SL include: acifluorfen, bentazon, lactofen, cloransulammethyl, paraquat, bentazon + acifluorfen, and Fomesafen.

Glyphosate may be tank-mixed with Imazethapyr 22.87% SL to aid in control of certain weeds only in Roundup Ready Soybeans.

See the glyphosate product label for rates and weeds controlled and other restrictions. Certain herbicides should not be applied with Imazethapyr 22.87% SL (see PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS section).

# Imazethapyr 22.87% SL + Acifluorfen For Enhanced Control of Common Ragweed and Pigweeds (including tall and common waterhemp)

The addition of acifluorfen to **Imazethapyr 22.87% SL** 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 product label for specified rates and additional weeds controlled. When tank-mixing acifluorfen with **Imazethapyr 22.87% SL**, apply **Imazethapyr 22.87% SL** at the rate of 4 fl. oz. per acre (0.063 lb. ae/A of imazethapyr).

# Imazethapyr 22.87% SL + Cloransulam-methyl for Enhanced Control of Ragweed Species

Cloransulam-methyl may be tank-mixed with **Imazethapyr 22.87% SL** to aid in the control of common and giant ragweed. See the cloransulam-methyl product label for specified rates and precautions.

# Imazethapyr 22.87% SL + Sulfentrazone Containing Compounds

**Imazethapyr 22.87% SL** 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 (such as sulfentrazone + chlorimuron-ethyl) may be tank-mixed with **Imazethapyr 22.87% SL** in soil applications for enhanced weed control in soybeans.

Imazethapyr 22.87% SL 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.

# Imazethapyr 22.87% SL + Thifensulfuron-methyl for Enhanced Control of Common Lambsquarters

For optimal weed control management, apply a soil-applied grass herbicide such as pendimethalin or trifluralin followed by **Imazethapyr 22.87% SL** post-emergence. If common lambsquarters are not adequately controlled by the soil-applied treatment, thifensulfuron-methyl may be tank-mixed with **Imazethapyr 22.87% SL** for additional activity.

The addition of thifensulfuron-methyl to **Imazethapyr 22.87% SL** may cause severe injury and/or stunting to soybeans, especially when applied under hot, humid conditions. To the extent consistent with applicable law, the USER ASSUMES ALL RISKS AND CONSEQUENCES associated with applications of this tank-mixture to soybeans.

#### 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 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

#### Imazethapyr 22.87% SL + Imazaquin for Volunteer Corn and Common Sunflower

The application of **Imazethapyr 22.87% SL** plus imazaquin may be applied to states or portions of states described as Region 2 or Region 3 on the Imazaquin product 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.

#### **Restriction:**

• Do not use this tank mixture in North Dakota or in Minnesota north of State Highway 210.

The tank mixture of Imazethapyr 22.87% SL plus imazaquin will suppress volunteer corn. Apply to volunteer corn up to 10" in height.

The tank-mixture of **Imazethapyr 22.87% SL** and imazaquin will enhance the control of common sunflowers. Apply to sunflowers up to 3" in size. Refer to the imazaquin product label for additional weeds controlled.

A post-emergence application of Imazethapyr 22.87% SL plus imazaquin will NOT suppress volunteer field corn that possesses the Clearfield<sup>®</sup> trait.

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

Apply Imazethapyr 22.87% SL at 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) post-emergence only.

Weeds Controlled	POST-EMERGENCE		
	Maximum Leaf Stage	Size (Inches)	
Cocklebur, Common <sup>1</sup>	4	1 - 4	
Kochia (Non-ALS Resistant)	4	1 - 3	
Mustard spp.	4	1 - 3	
Nightshade,			
Black	4	1 - 3	
Eastern Black	4	1 - 3	
Hairy	4	1 - 3	
Oats, Wild <sup>2</sup>	3	1 - 4	

Pigweed, Redroot	4	1 - 4		
<sup>1</sup> For control of common cocklebur, add acifluorfen at the rate specified on the acifluorfen product label.				
<sup>2</sup> Imazethapyr 22.87% SL will reduce competition from wild oats.				

#### ROTATIONAL CROP RESTRICTIONS

The following rotational crops may be planted after applying **Imazethapyr 22.87% SL** at the specified rate (planting earlier than the specified interval may result in crop injury):

Crops	Plantback Interval (Months)	
Clearfield <sup>®</sup> corn, Lima beans, Peanuts, Southern peas, and Soybeans	Anytime	
Alfalfa, Clover, Edible beans and peas (other than lima beans and Southern peas), Rye (Except in North Dakota and Minnesota north of Highway 210), and Wheat	4	
Field corn and Field corn grown for seed	8.5	
Barley and Tobacco	9.5	
Cotton*, Lettuce, Oats, Popcorn, Rice, Rye (in North Dakota and Minnesota north of Highway 210), Sorghum, and Sunflower	18	
Sunflower and Sweet corn		
Flax and Potatoes	26	
All Crops Not Listed Elsewhere in these <b>ROTATIONAL CROP RESTRICTIONS</b> **	40	

\*Refer to the following table for a Cotton Rotation Interval following **Imazethapyr 22.87% SL** application to alfalfa or clover grown for seed production. These instructions do not apply to **Imazethapyr 22.87% SL** applications made to alfalfa grown for hay or forage (use the 18 month rotational interval above).

\*\*Following 40 months after a **Imazethapyr 22.87% SL** 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 should 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.

#### Cotton Rotation Following Application of Imazethapyr 22.87% SL to Alfalfa or Clover Grown For Seed

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

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 **Imazethapyr 22.87% SL** 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.

# 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 **Imazethapyr 22.87% SL** application in these states.

**Clearfield® Canola:** Clearfield® varieties of canola may be planted as a rotational crop the next season after an application of **Imazethapyr 22.87% SL** at label rates on registered crops.

**Corn Inbred Lines:** Corn inbred seed lines may be planted the year following an application of **Imazethapyr 22.87% SL**. Several seed companies have tested a wide range of inbreds for sensitivity to **Imazethapyr 22.87% SL** soil residues and have reported good crop safety. However, due to the proprietary nature of seed production, RedEagle International LLC has not been given access to the inbred data. Growers are directed to contact the seed company for information and directions regarding the planting of corn grown for seed in fields treated with **Imazethapyr 22.87% SL** the previous year. Since growing conditions, environmental conditions and grower practices are beyond the control of RedEagle International LLC, all risks and consequences associated with planting seed corn inbreds into fields treated previously with **Imazethapyr 22.87% SL** 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 Imazethapyr 22.87% SL. Some sweet corn and popcorn varieties may be injured when planted at less than 18 months following an application of Imazethapyr 22.87% SL. Before planting sweet corn for processing, contact the processor company for information and advice regarding the sensitivity of sweet corn varieties planned for fields treated with Imazethapyr 22.87% SL use. Before planting popcorn, contact the popcorn company for information and advice regarding the sensitivity of popcorn varieties planned for fields treated with Imazethapyr 22.87% SL use. Before planting popcorn, contact the popcorn company for information and advice regarding the sensitivity of popcorn varieties planned for fields treated with Imazethapyr 22.87% SL the previous year. Since growing conditions, environmental conditions and grower practices are beyond the control of RedEagle International 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 IMAZETHAPYR 22.87% SL SHALL BE ASSUMED BY THE USER.

Stunting and maturity delay or other adverse effects may result when sweet corn or popcorn are planted following **Imazethapyr 22.87% SL** 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 **Imazethapyr 22.87% SL**: 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 9.5 months after an application of **Imazethapyr 22.87% SL** if all of the following criteria are met:

- Imazethapyr 22.87% SL applied to peanuts only.
- Soil texture is sandy loam or loamy sand only.
- Greater than 16" of rainfall and/or irrigation is received following application of **Imazethapyr 22.87% SL** through October of the application year.

Field Corn and Field Corn Grown For Seed: (Arizona, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming) 9.5 months after Imazethapyr 22.87% SL application.

**Snap Beans:** When applied at no more than 1.5 fl. oz. per acre (0.023 lb. ae/A of imazethapyr) to snap beans in the use areas defined on this label, snap beans may be replanted at any time after application of **Imazethapyr 22.87% SL**.

Wheat: Wheat may be planted 3 months following a Imazethapyr 22.87% SL application in areas east of Interstate Highway 35.

When Imazethapyr 22.87% SL is applied at no more than 3 fl. oz. per acre (0.047 lb. ae/A of imazethapyr) to edible legumes in the use areas described the following rotational restrictions apply:

- Chickpeas, lentils, and peas may be planted anytime following a **Imazethapyr 22.87% SL** application.
- Snap beans may be planted 3 months and barley 4 months following an application of Imazethapyr 22.87% SL.

#### PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS

#### CORN

#### **Precautions:**

- Corn containing the Clearfield<sup>®</sup> trait may occasionally exhibit injury symptoms when soil insecticides are used in combination with **Imazethapyr 22.87% SL**.
- Other registered organophosphate insecticides such as banded applications of Counter CR or Thimet soil and systemic insecticide, or in-furrow applications of Counter CR or other registered carbamate or pyrethroid insecticides may be used in combination with Imazethapyr 22.87% SL applications. RedEagle International LLC has not tested all corn in which the Clearfield<sup>®</sup> trait is claimed and to the extent consistent with applicable law, cannot be responsible for factors which are beyond its control, such as growing conditions, environmental conditions, grower practices and the specific genetics of each variety sensitivity to Imazethapyr 22.87% SL and insecticide applications.

#### **Restrictions:**

- For use only on Clearfield<sup>®</sup> corn
- There must be an interval of at least 45 days between an application of Imazethapyr 22.87% SL and corn harvest (silage, fodder, or grain).
- Do not graze or feed treated corn forage, silage, fodder, or grain for at least 45 days after an application of Imazethapyr 22.87% SL.
- Do not use Counter 15G systemic insecticide-nematicide in-furrow with Clearfield<sup>®</sup> corn.

# SOYBEANS

# Precautions:

- If soybeans are furrow irrigated, till the soil prior to planting winter wheat or barley. The beds should be broken up and the soil mixed with tillage equipment set to cut 4 6" deep.
- Imazethapyr 22.87% SL applications should be made before soybean bloom.
- Imazethapyr 22.87% SL may be applied post-emergence following a soil application of clomazone.

#### **Restrictions:**

- There must be an interval of at least 85 days between an application of Imazethapyr 22.87% SL and soybean harvest.
- Do not graze or feed treated soybean forage, hay or straw to livestock.
- Do not tank-mix Imazethapyr 22.87% SL with clomazone containing herbicides.

#### PEANUTS

#### Precaution:

• Chlorimuron-ethyl may be applied post-emergence to peanuts following an Imazethapyr 22.87% SL application. Refer to the chlorimuron-ethyl product label for specific use directions.

#### **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 **Imazethapyr 22.87% SL** and peanut harvest.
- Do not apply pendimethalin + imazethapyr to peanuts the same year as Imazethapyr 22.87% SL.

#### NON-GRASS ANIMAL FEED (ALFALFA AND CLOVER)

#### **Restriction:**

• Do not feed, graze or harvest alfalfa or clover for 30 days following an application of Imazethapyr 22.87% SL to alfalfa or clover.

#### **EDIBLE VEGETABLE LEGUMES**

# **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.

#### **ALL CROPS**

#### **Precautions:**

- Full rate application of products containing chlorimuron-ethyl, cloransulam-methyl, flumetsulam, imazaquin or products containing imazethapyr the same year as **Imazethapyr 22.87% SL** may increase the risk of injury to sensitive follow crops. Consult labels for directed uses of these products in combinations.
- 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.

#### **Restrictions:**

- 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<sup>®</sup> corn can be replanted.
- Do not work the soil deeper than 2".

# **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

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

# CONTAINER HANDLING [Less Than 5 Gallons]

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank. Drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

# CONTAINER HANDLING [Greater Than 5 Gallons]

Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

#### CONTAINER HANDLING [For Bulk and Mini-Bulk Containers]

Refillable container. Refill this container with pesticide only. Do not use 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 person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by State and local authorities.

# WARRANTY AND DISCLAIMER STATEMENT

**NOTICE:** Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of RedEagle International LLC. To the extent allowable under State law, all such risks shall be assumed by the user or buyer.

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