



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

March 7, 2017

Mr. Solito Sumulong  
Manager of Registrations  
Loveland Products Inc.  
P.O. Box 1286  
Greeley, CO 80632-1286

Subject: Notification per PRN 98-10 – Changed Primary Brand Name  
Product Name: Top Gun Flex  
EPA Registration Number: 34704-1104  
Application Date: February 3, 2017  
Decision Number: 525940

Dear Mr. Sumulong:

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

The primary brand name “Top Gun Flex” has been added to the product record.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act 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 have any questions, you may contact BeWanda Alexander at (703)347-0313 or via email at alexander.bewanda@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Shaja B. Joyner".

Shaja B. Joyner, Product Manager 20  
Fungicide and Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

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

[Note to reviewer: {Text} in braces denotes where in the final label text will appear.]

{BOOKLET FRONT PANEL LANGUAGE}

GROUP 14 HERBICIDE

Top Gun Flex

For Control of Certain Weeds in Cotton, Dry Beans, Potatoes, Snap Beans, and Soybeans

ACTIVE INGREDIENT:

Sodium salt of fomesafen

5-[2-chloro-4-(trifluoromethyl)phenoxy]-N-(methylsulfonyl)-2-nitrobenzamide ..... 22.1%

OTHER INGREDIENTS: ..... 77.9%

TOTAL: ..... 100.0%

Equivalent to 21.0% or 1.88 pounds fomesafen per gallon.

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

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.)

Table with 2 columns: Condition (IF IN EYES, IF SWALLOWED, IF ON SKIN OR CLOTHING, IF INHALED) and First Aid instructions. Includes sections for HOT LINE NUMBER and NOTE TO PHYSICIAN.

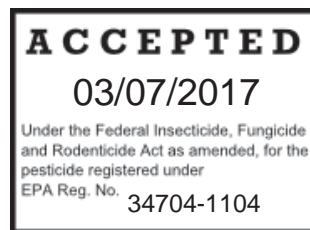
See inside label booklet for Precautionary Statements and Directions for Use including Storage and Disposal instructions.

EPA Reg. No. 34704-1104

Net Contents:

Manufactured for: Loveland Products, Inc. P.O. Box 1286 Greeley, CO 80632-1286

EPA Est. No.



## {LANGUAGE INSIDE BOOKLET}

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** This product contains fomesafen which has been determined to cause tumors in laboratory animals (mice). Risks can be reduced by closely following use directions and precautions and by wearing the protective clothing specified elsewhere on this label.

Causes substantial but temporary eye injury. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray or vapors. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of any waterproof material such as polyethylene or polyvinyl chloride. **All mixers, loaders, applicators, and other handlers must wear:** Protective eyewear (goggles, face shield, safety glasses), long-sleeved shirt and long pants, shoes, socks, and chemical-resistant gloves (barrier laminate, nitrile rubber, neoprene rubber, or viton).

**In addition, for aerial applications, mixers and loaders handling more than 150 gallons of this product in any single workday must wear:** Wear a minimum of a NIOSH approved filtering face piece respirator with any N, R, or P filter (TC-84A). You can also use other NIOSH approved particulate respirators that offer more protection, such as a half face or full face respirator with any N, R, or P filter or a powered air purifying respirator with an HE filter.

#### USER SAFETY REQUIREMENTS

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.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

#### USER SAFETY RECOMMENDATIONS

##### Users should:

- 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 3) 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 wash water or rinsate. Do not apply when weather conditions favor drift from target area.

#### Groundwater Advisory

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where permeable, particularly where the water table is shallow.

#### PHYSICAL OR CHEMICAL HAZARDS

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

## DIRECTIONS FOR USE

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

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

### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls over short-sleeved shirt and short pants, chemical-resistant footwear plus socks, and chemical-resistant gloves made of any waterproof material.

### **PRODUCT INFORMATION**

Read the label before using this product.

This product is a selective herbicide which may be applied pre-plant surface, pre-emergence and/or post-emergence for control or partial control of broadleaf weeds, grasses and sedges in cotton, dry beans, potatoes, snap beans and soybeans.

#### **Pre-plant Surface and Pre-emergence Applications**

Certain germinating broadleaf weeds, grasses and sedges can be controlled or partially controlled by soil residual activity from either preplant surface or pre-emergence applications of this product. Moisture is necessary to activate this product in soil for residual weed control. Dry weather following applications of this product may reduce effectiveness. When adequate moisture is not received after application of this product, weed control may be improved by overhead irrigation with at least a one-fourth inch of water.

#### **Post-emergence Applications**

This product is generally most effective when used post-emergence, working through contact action. Therefore, emerged weeds must have thorough spray coverage for effective control. Best broad-spectrum post-emergence control of susceptible broadleaf weeds is obtained when this product is applied early to actively growing weeds. This usually occurs within 14 to 28 days after planting. Refer to the weed control tables for specific directions on weed growth stages and rates. Some bronzing, crinkling or spotting of labeled crop leaves may occur following post-emergence applications, but labeled crops soon outgrow these effects and develop normally.

#### **Environmental and Agronomic Conditions**

Always apply this product under favorable environmental conditions that promote active weed growth. Avoid applying this product to weeds or labeled crops which are under stress from drought, extreme temperatures, excessive water, low humidity, low soil fertility, mechanical or chemical injury as reduced weed control and/or increased crop injury may result.

#### **Rainfastness**

This product requires a 1 hour rain-free period for best results when applied post-emergence.

#### **Cultivation**

Cultivation prior to post-emergence application is not recommended. Cultivation may put weeds under stress, reducing weed control. Timely cultivation 1 to 3 weeks after applying this product may assist weed control.

## Information of Weed Resistance

|       |    |           |
|-------|----|-----------|
| GROUP | 14 | HERBICIDE |
|-------|----|-----------|

This product is a Group 14 Herbicide.

Naturally occurring biotypes of certain broadleaf species with resistance to this herbicide and related products (same mode of action) are known to exist. Selection of resistant biotypes, through repeated use of these herbicides, may result in control failures.

If poor performance cannot be attributed to adverse weather conditions or improper application methods, a resistant biotype may be present. In such a case, additional treatments with this herbicide or similar mode of action products are not recommended. Consult your local company representative or agricultural advisor for assistance.

### Soil Characteristics

Application of this product to soils with high organic matter and/or high clay content may require higher rates than soils with low organic matter and/or low clay content. Refer to the Regional Use Map for this product, weed control tables, and specific crop use sections for directions on use rates based on soil texture.

## APPLICATION DIRECTIONS

### Time of Application

Best broad spectrum post-emergence control of susceptible broadleaf weeds is obtained when this product is applied early to actively growing weeds. This usually occurs 14 to 28 days after planting. Refer to the weed control tables for specific directions on weed growth stages and rates.

### Spray Additives

Only spray additives cleared for use on growing crops under 40 CFR Part 180 may be used in the spray mixture.

For best broad spectrum post-emergence control of susceptible broadleaf weeds in Regions 2, 3, 4 and 5 (see Regional Use Maps). This product should be used with 1 to 2.5% v/v liquid nitrogen (28% or similar) or a minimum of 8.5 pounds ammonium sulfate per 100 gallons of spray volume.

**For Post-emergence Applications, Always Add One of the Following: Except in tank mix with products prohibiting spray additives – (See Tank Mix Directions for Use).**

**Crop Oil Concentrate (COC) or Methylated Seed Oil (MSO):** Use a non-phytotoxic COC or MSO containing 15 to 20% approved emulsifier at 0.5 to 1% v/v (2 to 4 quarts per 100 gallons) of finished spray volume. COC or MSO can improve weed control but may slightly reduce crop tolerance.

**Nonionic Surfactant (NIS):** Use NIS containing at least 80% active ingredient at 0.25 to 0.5% v/v (2 to 4 quarts per 100 gallons) of finished spray volume (Region 1 and East of Interstates 79 and 77 for Regions 2 and 3).

**Other Adjuvants:** Adjuvants other than COC or NIS may be used provided the product meets the following criteria:

1. Contains only EPA exempt ingredients.
2. Is non-phytotoxic to the target crop.
3. Is compatible in mixture. (May be established through a jar test.)
4. Is supported locally for use with this product on the target crop through proven field trials and through university and extension recommendations.

**Note:** No adjuvants are needed for preplant or pre-emergence applications unless this product is being used in a burndown.

### Mixing Order:

1. Fill spray tank with half the required amount of water and begin agitation.\*
2. Add fertilizer (UAN, AMS).
3. Add dry pesticide formulations.
4. Add this product.
5. Add liquid pesticide formulation.
6. Add adjuvant (MSO, COC, or NIS).

7. Add remainder of water and then maintain constant agitation.

\* Compatibility agent, 1 gallon per 500 gallons of water or 0.2% v/v, may be added as needed.

### **Ground Application**

Use sufficient spray volume and pressure to ensure complete coverage of the target. A minimum spray volume of 15 gallons per acre and 30 to 60 psi at the nozzle tip is recommended. On large weeds and/or dense foliage, use 60 psi and a minimum of 20 gallons per acre to ensure coverage of weed foliage.

The use of flat fan nozzles will result in the most effective post-emergence application of this product. The sprayer must be calibrated to provide the proper volume and rate per acre. In addition, the boom and nozzle height must be adjusted to provide complete coverage of target weeds.

**DO NOT USE FLOOD TYPE OR OTHER SPRAY NOZZLES WHICH DELIVER COARSE, LARGE DROPLET SPRAYS.**

### **Band Applications**

Thorough weed coverage is important for post-emergent control. Best coverage is obtained with a minimum of two nozzles, one directed to each side of the planted row. Application with a single nozzle directed over the top of the row is not recommended for post-emergence applications but is suitable for pre-emergence applications. Cultivation of untreated areas may be needed following band applications. When making post-emergence band applications and cultivating in the same operation, position nozzles in advance of the cultivation device. This will reduce dust in the spray area. Dust can intercept spray, reducing weed coverage, resulting in less than adequate weed control.

Calculate the amount of herbicide and water volume needed for band treatment by the following formulas:

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

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

### **Aerial Application**

Use sufficient spray volume and pressure to ensure complete coverage of the target. A minimum of 5 gallons per acre of spray mixture should be applied with a maximum of 40 psi pressure. When broadleaf weed foliage is dense, use a minimum of 10 gallons per acre to ensure coverage of weed foliage.

**DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM EXCEPT CENTER PIVOT SYSTEMS.**

### **CENTER PIVOT IRRIGATION APPLICATION**

This product alone or in tank mixture with other herbicides on this label, which are registered for center pivot application, may be applied in irrigation water pre-emergence (after planting but before weeds or crop emerge) at rates specified on this label. This product also may be applied post-emergence to the crop and pre-emergence to weeds in crops where post-emergence applications are allowed on this label. Follow all restrictions (height, timing, rate, etc) to avoid illegal residues. Apply this product only through center pivot irrigation system. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### **Operating Instructions**

- The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.



- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Prepare a mixture with a minimum of 1 part water to 1 part herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of equipment. Maintain sufficient agitation to keep the herbicide in suspension.
- Meter into irrigation water during entire period of water application.
- Apply in 0.5 to 1 inch of water. Use the lower water volume (0.5 inch) on coarser soils and the higher volume (1 inch) on fine-textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

*Precautions for center pivot applications: Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.*

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive area. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other locations affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2.5 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

Posting required for chemigation does not replace other posting and reentry interval requirements for farm worker safety.

### **Specific Instructions for Public Water Systems**

- 1) Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 2) Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction.

There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

- 3) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 4) The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 5) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or, in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.

#### **USE RESTRICTIONS**

- Region 1\*: A maximum of 1.6 pints of this product (or a maximum of 0.375 pound fomesafen per acre from any product containing fomesafen) may be applied per acre per year.
- Region 2\*: A maximum of 1.6 pints of this product (or a maximum of 0.375 pound fomesafen per acre from any product containing fomesafen) may be applied per acre in alternate years.
- Region 3\*: A maximum of 1.3 pints of this product (or a maximum of 0.313 pound fomesafen from any product containing fomesafen) may be applied per acre in alternate years.
- Region 4\*: A maximum of 1 pint of this product (or a maximum of 0.25 pound fomesafen from any product containing fomesafen) may be applied per acre in alternate years.
- Region 4a\*: A maximum of 1 pint of this product (or a maximum of 0.25 pound fomesafen from any product containing fomesafen) may be applied per acre in alternate years in Region 4a. **Apply only to soybeans in Region 4a.** Do not apply this product after June 20<sup>th</sup>. Cumulative rainfall plus overhead irrigation must total 15 inches from the period of product application to soybean crop maturity to allow planting of rotational crops listed in this label (refer to Rotation Crop Restrictions section). If the soybean crop is lost or the required cumulative rainfall plus irrigation is not received as outlined above, plant only soybeans the following growing season.
- Region 5\*: A maximum of 0.75 pint of this product (or a maximum of 0.1875 pound fomesafen from any product containing fomesafen) may be applied per acre in alternate years.
- Do not graze treated areas or harvest for forage or hay.
- Do not apply within 45 days of soybean harvest.

\*See Regional Use Map

#### **USE PRECAUTIONS**

- Thoroughly clean the spray system with water and a commercial tank cleaner before and after each use.
- Tank mixes of this product with other pesticides, fertilizers or any other additives except as specified on this label or other approved supplemental labels may result in tank mix incompatibility, unsatisfactory performance and/or crop injury.
- Apply post-emergence to actively growing weeds. Avoid applying this product to weeds or soybeans which are under stress from moisture, temperature, low soil fertility, mechanical or chemical injury, as reduced weed control and/or increased crop injury may result.
- Avoid overlapping spray swaths, as injury may occur to rotational crops.
- To provide adequate spray coverage, it is recommended that ground speed not exceed 10 mph during application.



## Replanting

If replanting is necessary in fields previously treated with this product, the field may be replanted to cotton, dry beans, snap beans or soybeans. During replanting, a minimum of tillage is recommended to preserve the herbicide barrier for effective weed control. If tank mix combinations were used, refer to product labels for any additional replanting instructions. **Restriction:** Do not apply a second application of this product or other products containing fomesafen or other fomesafen containing product as crop injury or illegal residues may occur in harvested crops.

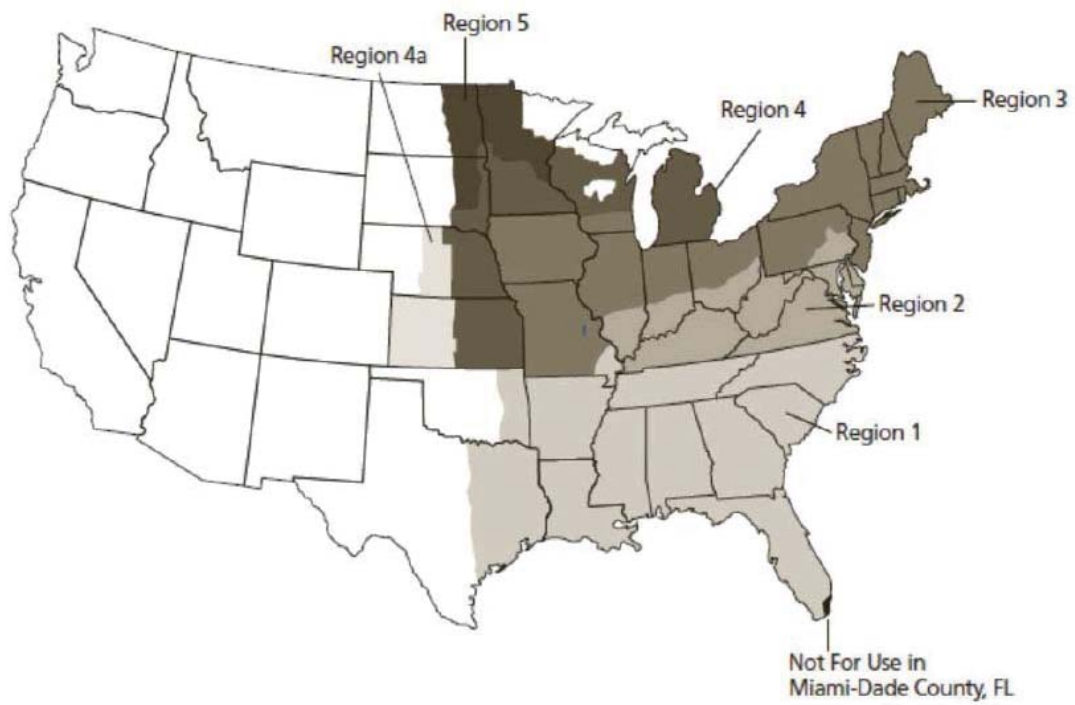
## ROTATIONAL CROP RESTRICTIONS

The following rotational crops may be planted after applying this product at specified rates in soybeans:

| Crop To Be Planted   | Minimum Rotation Interval<br>(After Last Application of the Product) |
|--|--|
| Bean, Dry<br>Bean, Snap<br>Cotton<br>Potato<br>Soybean<br>Soybean, Succulent (edamame)   | 0 months   |
| Bean, Lima<br>Pea, Succulent<br>Peanut<br>Small Grains such as Wheat, Barley, Rye  | 4 months   |
| Corn, Field<br>Corn, Seed<br>Corn, Sweet <sup>5</sup><br>Pepper (transplanted) <sup>1</sup><br>Popcorn <sup>4</sup><br>Pumpkin <sup>2</sup><br>Rice<br>Tomato (transplanted) <sup>1</sup><br>Watermelon <sup>2</sup>   | 10 months  |
| Bean, Succulent (other than edamame, snap bean and lima bean)<br>Cantaloupe <sup>2</sup><br>Cucumber <sup>2</sup><br>Edible-podded beans and peas not otherwise specified in this table<br>Eggplant<br>Pea, Dry<br>Pepper (direct-seeded)<br>Squash <sup>2</sup><br>Sweet Potato<br>Tomato (direct-seeded)   | 12 months  |
| Sorghum <sup>3</sup>   | 18 months  |
| All other crops not listed above   | 18 months  |
| <sup>1</sup> 4 months in Region 1<br><sup>2</sup> 8 months in Region 1<br><sup>3</sup> 10 months in Region 1<br><sup>4</sup> 12 months in the states of Ohio, Kentucky, Illinois, Indiana, Iowa, and Regions 4 and 4a when applied at rates of 1 pint per acre or more<br><sup>5</sup> 18 months in the states of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont and Region 5 |  |

**Restriction:** Do not graze rotated small grain crops or harvest forage or straw for livestock.

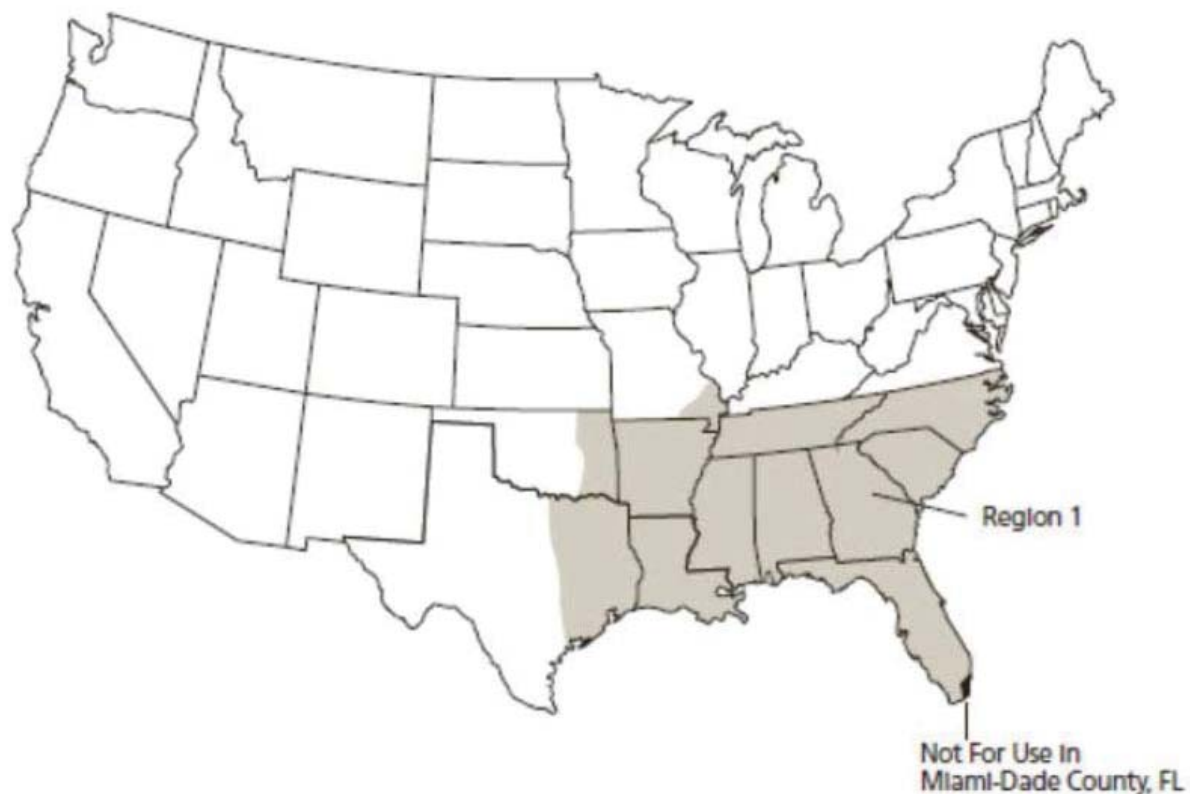
**USE RATES OF THIS PRODUCT AND WEEDS CONTROLLED  
REFER TO MAP FOR DEFINITION OF SPECIFIED GEOGRAPHIC REGIONS  
REGIONAL USE MAP**



## REGION 1

(Maximum Rate: 1.6 pints per acre per year)

**REGION 1** – Includes the following states or portion of states where this product may be applied: Alabama, Arkansas, Florida (except Miami-Dade County), Georgia, Louisiana, Mississippi, Missouri (counties of Bollinger, Butler, Cape Girardeau, Dunklin, Madison, Mississippi, New Madrid, Pemiscot, Perry, Ripley, Scott, Stoddard and Wayne), North Carolina, Oklahoma (East of U.S. Highway 75 and East of Indian Nation Parkway), South Carolina, Tennessee, and Texas (all areas East of U.S. Highway 77 to State Road 239, including all of Calhoun County).



## REGION 2

(Maximum Rate: 1.6 pints per acre, alternate years.)

**REGION 2** – Includes the following states or portion of states where this product may be applied: Delaware, Kentucky, Maryland, Virginia, and West Virginia. South of Interstate 70 in the following states: Illinois, Indiana and Ohio and in Pennsylvania (all areas South of Interstate 80 to the intersection of U.S. Highway 15 and East of U.S. Highway 15 and U.S. Highway 522).



### REGION 3

(Maximum Rate: 1.3 pints per acre, alternate years)

**REGION 3** – Includes the following states or portion of states where this product may be applied: Connecticut, Iowa, Maine, Massachusetts, Missouri (all counties except for those listed in Region 1), New Hampshire, New Jersey, New York, Pennsylvania (all areas except those listed in Region 2), Rhode Island, Vermont, Wisconsin (South of U.S. Highway 18 between Prairie Du Chien and Madison, and South of Interstate 94 between Madison and Milwaukee), and North of Interstate 70 in following states: Indiana, Illinois and Ohio.



## REGION 4

(Maximum Rate: 1 pint per acre, alternate years)

**REGION 4** – Includes the following states or portion of states where this product may be applied: Kansas (all counties East of or intersected by U.S. Highway 281), Michigan (Southern Peninsula), Minnesota (all areas South of Interstate 94), Nebraska (all counties East of or intersected by U.S. Highway 281), and Wisconsin (all areas, except those in Region 3, South of Interstate 94 from Minnesota state line to Eau Claire and South of U.S. Highway 29 from Eau Claire to Green Bay plus Barron, Chippewa, Clark, Door, Dunn, Eau Claire, Kewaunee, Marathon, Menominee, Oconto, Polk, Shawano, and St. Croix counties). The following counties are excluded: Adams, Marquette, Portage, Waupaca, Waushara and Wood. North Dakota (all areas East of Interstate 29 from the North Dakota state line to Watertown, all areas East of Highway 81 from Watertown to Madison and all areas East and South of State Road 34 and U.S. Highway 281 to the Nebraska state line).





## REGION 4a

(Maximum Rate: 1 pint per acre, alternate years\*)

**REGION 4a** – Includes the following portion of states where this product may be applied: Kansas (all areas west of U.S. Highway 281 to the Colorado state line), Nebraska (all areas that intersect west of U.S. Highway 281 and east of U.S. Highway 83).



\*Refer to the Use Precautions section for additional requirements that must be followed to use this product in Region 4a.

## REGION 5

(Maximum Rate: 0.75 pint per acre, alternate years)

**REGION 5** – Includes the following states or portion of states where this product may be applied: North Dakota (all areas East of U.S. Highway 281 except those areas in Region 4), South Dakota (all areas East of U.S. Highway 281 except those areas in Region 4) and Minnesota (all areas South of U.S. Highway 2 except those areas in Region 4), plus Betrami, Clearwater, Lake of the Woods, Kittson, Marshall, Pennington, Polk, Red Lake, and Roseau.



## WEEDS CONTROLLED

**Table 1. Weeds controlled or partially controlled\* by preplant surface or preemergence application of this product at 1 to 1.6 pints per acre.<sup>1</sup>**

| <b>Broadleaf Weeds Controlled</b>  | <b>Soil Texture</b> | <b>Organic Matter</b> |
|--|---------------------|-----------------------|
| Amaranth, Palmer   | All soil types      | Up to 5%              |
| Croton, tropic <sup>2</sup>  |                     |                       |
| Eclipta  |                     |                       |
| Galinsoga spp.   |                     |                       |
| Lambsquarters, common  |                     |                       |
| Morningglory, Smallflower  |                     |                       |
| Nightshade, black  |                     |                       |
| Nightshade, Eastern black  |                     |                       |
| Pigweed, redroot   |                     |                       |
| Pigweed, smooth  |                     |                       |
| Poinsettia, wild   |                     |                       |
| Purslane, common   |                     |                       |
| Ragweed, common <sup>2</sup>   |                     |                       |
| Sida, prickly <sup>2</sup>   |                     |                       |
| Starbur, bristly   |                     |                       |
| <b>Broadleaf Weeds Partially Controlled*</b>   |                     |                       |
| Anoda, spurred   |                     |                       |
| Cocklebur, common  |                     |                       |
| Morningglory, entireleaf   |                     |                       |
| Morningglory, Ivyleaf  |                     |                       |
| Morningglory, pitted   |                     |                       |
| Morningglory, red/scarlet  |                     |                       |
| Morningglory, tall   |                     |                       |
| Nightshade, hairy  |                     |                       |
| Ragweed, giant   |                     |                       |
| Waterhemp, common  |                     |                       |
| <b>Sedges Partially Controlled*</b>  |                     |                       |
| Nutsedge, yellow   |                     |                       |
| *Partial control means significant activity but not always at a level considered acceptable for commercial weed control. |                     |                       |
| <sup>1</sup> Use the higher end of the rate range when heavy weed populations are anticipated.                           |                     |                       |
| <sup>2</sup> Rates less than 1.6 pints per acre will provide only partial control of this weed.                          |                     |                       |

**Table 2. Weeds controlled or partially controlled\* by postemergence activity of this product.**

| Weed/Scientific Name             | Rate of This Product<br>(Maximum Growth Stage Controlled At) |                                       |   |  |
|----------------------------------|--|---------------------------------------|---|--|
|                                  | 0.75 pints per acre<br>No. of True Leaves                    | 1 pint per acre<br>No. of True Leaves | 1.25 pints per acre<br>No. of True Leaves | 1.6 pints per acre<br>No. of True Leaves |
| Anoda, Spurred                   | --   | 2*                                    | 2   | 4  |
| Balloonvine                      | --   | --                                    | 2   | 4  |
| Carpetweed                       | --   | 8" Diameter size                      | Unlimited size                            | Unlimited Size                           |
| Citron (Wild Watermelon)         | --   | 2                                     | 4   | 4  |
| Cocklebur, Common <sup>a,b</sup> | 2  | 4                                     | 6   | 8  |
| Copperleaf, Hophornbeam          | --   | 4                                     | 4   | 6  |
| Copperleaf, Virginia             | --   | 4                                     | 4   | 6  |
| Crotalaria, Showy                | --   | 6                                     | 6   | 8  |
| Croton, Tropic                   | --   | 4                                     | 4   | 6  |
| Cucumber, Volunteer              | --   | 4                                     | 6   | 8  |
| Eclipta                          | --   | 2                                     | 4   | 4  |
| Groundcherry, Cutleaf            | --   | 4                                     | 6   | 8  |
| Hemp <sup>b</sup>                | --   | 4                                     | 6   | 6  |
| Horsenettle <sup>b</sup>         | --   | 2*                                    | 4*  | 4*                                       |
| Jimsonweed                       | 4  | 6                                     | 8   | 8  |
| Ladysthumb                       | 2*   | 2                                     | 4   | 6  |
| Lambsquarters, Common            | 2*   | 2*                                    | 2*  | 2*                                       |
| Mexicanweed                      | --   | 2*                                    | 2   | 4  |
| Morningglory:                    |  |                                       |   |  |
| Cypressvine                      | 2  | 4                                     | 6   | 6  |
| Entireleaf var.                  | 3*   | 3                                     | 4   | 5  |
| Ivyleaf                          | 3*   | 3                                     | 4   | 5  |
| Purple Moonflower                | 3*   | 3                                     | 5   | 6  |
| Red (Scarlet)                    | 3*   | 3                                     | 6   | 6  |
| Smallflower                      | 3*   | 3                                     | 4   | 6  |
| Pitted (Smallwhite)              | 4*   | 4                                     | 6   | 6  |
| Tall (Common)                    | 2*   | 2                                     | 3   | 5  |
| Palmleaf (Willowleaf)            | 3*   | 3                                     | 6   | 6  |
| Mustard, Wild                    | 4  | 6                                     | 8   | 8  |
| Nightshade, Black                | 2  | 4                                     | 6   | 6  |
| Nutsedge, Yellow                 | --   | --                                    | *   | *  |
| Pigweed, spp.                    |  |                                       |   |  |
| Amaranth, Palmer                 | 2  | 4                                     | 6   | 6  |
| Amaranth, Spiny                  | 2  | 2                                     | 4   | 6  |
| Redroot                          | 2  | 4                                     | 6   | 8  |
| Smooth                           | 2  | 4                                     | 6   | 6  |
| Poinsettia, Wild                 | --   | 2                                     | 4   | 6  |
| Purslane, Common                 | --   | Multi-Leaf<br>6" Diameter             | Multi-Leaf<br>8" Diameter                 | Multi-Leaf<br>8" Diameter                |
| Pusley, Florida                  | --   | 2                                     | 2   | 4  |
| Ragweed, Common                  | 4*   | 4                                     | 6   | 8  |
| Ragweed, Giant <sup>b</sup>      | 4*   | 4                                     | 6   | 8  |
| Redweed                          | --   | --                                    | 2*  | 3*                                       |
| Sesbania, Hemp                   | --   | 8                                     | 12  | 12                                       |
| Sicklepod                        | --   | --                                    | Cotyledon*                                | Cotyledon*                               |
| Sida, Prickly                    | --   | 2*                                    | 2   | 4  |
| Smartweed, Pennsylvania          | 4*   | 4                                     | 6   | 6  |

| Weed/Scientific Name  | Rate of This Product<br>(Maximum Growth Stage Controlled At) |  |   |  |
|---|--|--|---|--|
|   | 0.75 pints<br>per acre<br>No. of True<br>Leaves              | 1 pint per acre<br>No. of True<br>Leaves | 1.25 pints per<br>acre<br>No. of True<br>Leaves | 1.6 pints per<br>acre<br>No. of True<br>Leaves |
| Smellmelon  | --   | 2  | 2   | 4  |
| Spurge, Prostrate   | --   | --                                       | 1" Diameter*                                    | 2" Diameter*                                   |
| Spurge, Spotted   | --   | --                                       | 2*  | 2  |
| Starbur, Bristly  | --   | 4  | 4   | 6  |
| Sunflower, Common   | --   | --                                       | 2   | 4  |
| Velvetleaf  | --   | 2  | 4   | 4  |
| Venice Mallow   | 4  | 6  | 6   | 8  |
| Witchweed   | --   | Multi-Leaf<br>Up to 7"                   | Multi-Leaf<br>Up to 10"                         | Multi-Leaf<br>Up to 10"                        |
| Waterhemp, Common   | 2*   | 2  | 4   | 6  |
| Waterhemp, Tall   | 2*   | 2  | 4   | 6  |
| Yellow Rocket   | 4  | 4  | 6   | 8  |
| *Suppression only.<br><sup>a</sup> Do not apply in cotyledon stage.<br><sup>b</sup> For effective control of this weed, it is necessary to use 1% MSO and 2.5% UAN v/v as an adjuvant in Regions 2 and 3 (soybeans only). |  |  |   |  |

## SPECIAL USE DIRECTIONS FOR ADDITIONAL WEED PROBLEMS

### Partial Control\* of Annual Grasses

The grasses listed below may be partially controlled by pre-emergence applications of this product at 1 to 1.6 pints per acre.

Crabgrass  
 Goosegrass  
 Panicum, Texas  
 Signalgrass, Broadleaf

The grasses listed below may be partially controlled by post-emergence applications of this product at 1 to 1.6 pints per acre.

Barnyardgrass  
 Crabgrass  
 Foxtail (Green, Giant, Yellow)  
 Goosegrass  
 Johnsongrass, Seedling  
 Panicum, Fall  
 Panicum, Texas  
 Signalgrass, broadleaf

### Partial Control\* of Perennial Weeds

Use of this product post-emergence at rates of 1 to 1.6 pints per acre will aid in suppressing the above-ground portions of the weeds listed below until crop canopy can assist in suppression. Perennial weeds continue to regrow from underground rootstocks even if above-ground foliage is temporarily controlled or retarded. Even though this product and crop competition can suppress perennial weeds for a growing season, the rootstocks will continue to live and reestablishment will occur in subsequent years.

Bindweed, Field  
 Bindweed, Hedge  
 Milkweed, Climbing

Milkweed, Honeyvine  
Trumpet creeper

\*Partial control means significant activity but not always at a level considered acceptable for commercial weed control.

## CROP USE DIRECTIONS

### COTTON

#### Preemergence Application:

Apply this product at 1.1 to 1.6 pints per acre as a pre-emergence application to coarse textured soils (sandy loam, loamy sand, sandy clay loam) only. Refer to Table 1 for a list of weeds controlled or partially controlled. Do not apply as a pre-emergence application to medium or fine-textured soils as crop injury will likely occur.

#### Pre-plant Surface Application to Medium or Fine-Textured Soils

Apply this product at 1.1 pints per acre as a pre-plant surface application to medium or fine-textured soils (i.e., soil types heavier than coarse-textured soils) up to 21 days prior to planting cotton. Apply after the last tillage operation is completed. Refer to Table 1 for a list of weeds controlled or partially controlled. Do not exceed 1.1 pints per acre of this product on medium or fine-textured soils. Also, to avoid severe crop injury, the following directions must be followed when application is made to medium or fine-textured soils:

- After this product application, a minimum of 0.5 inch of rainfall or overhead irrigation must occur before planting cotton.
- Cotton must be planted at least 0.75 inch in depth.
- Avoid overlapping spray swaths.
- Do not disturb or re-work the seedbed following application.

The use of an in-furrow or seed applied fungicide will generally assist with seedling establishment and development.

Cotton plants are tolerant to pre-plant surface or pre-emergence applications of this product when applied at specified rates and application use directions. Some crinkling or spotting of cotton or foliage or stunting may occur but cotton plants normally outgrow these effects and develop normally.

Cotton foliage is not tolerant to this product. Do not apply this product over the top of emerged cotton as unacceptable cotton injury will occur.

#### Post-Directed Application (All Soil Types)

Apply this product in emerged cotton as a post-directed treatment using precision post-directed, hooded or shielded application equipment to provide complete coverage of emerged weeds. Apply this product at 1.1 to 1.6 pints per acre in a minimum of 10 gallons spray solution per acre. Applications may be made broadcast or banded. Post-directed applications of this product will provide contact control of labeled emerged weeds and residual pre-emergence control of labeled weeds (once activated by rainfall or irrigation).

Refer to the **Weeds Controlled** section for a list of weeds controlled, application rates, weed growth stages, and application directions.

This product should be applied with a non-ionic surfactant at 0.25 to 0.5% v/v, or crop oil concentrate at 1% v/v to emerged weeds. Do not add liquid nitrogen (28% or similar) to this product or tank mixes of this product in cotton.

Cotton foliage is not tolerant to applications of this product. Avoid contact to cotton foliage as unacceptable injury will occur. Application equipment should be calibrated (spray pressure, nozzle type and configuration, and orifice size) to avoid fine spray droplets contacting green cotton stems and foliage.

#### Post-Directed Application Timing in Cotton:

This product may be applied to cotton at least 6 inches in height through lay-by as a post-directed application. All post-directed applications should avoid spray contact with any green non-barked parts of



the cotton plant or foliage as unacceptable injury will occur. Follow the application timing below for post-directed applications in cotton.

**Shield and Hooded Applications:**

Make a precision post-directed application of this product to the base of the cotton plant avoiding contact with the cotton stem or foliage when cotton is at least 6 inches in height to avoid cotton injury. Use only hooded or shielded spray equipment to apply this product in cotton that is 6 inches to 12 inches in height. Adjust nozzles to provide full coverage of emerged target weeds.

**Lay-by Applications:**

Make a post-directed application of this product to the base of the cotton plant avoiding contact with any non-barked portion of the cotton plant or foliage. Use precision post-directed equipment or hooded or shielded sprayers on cotton that has developed a minimum of 4 inches of brown bark through layby. Application equipment should be configured to provide full coverage of emerged target weeds.

**Tank Mix and Sequential Application**

To broaden the weed control spectrum, this product can be tank mixed with other herbicides as listed below. Refer to the tank mix partner label for use directions, restrictions and limitations. The most restrictive product labeling applies.

|  |   |  |
|--|---|--|
| Diuron<br>Fluometuron<br>Glyphosate<br>Linuron | Metolachlor<br>MSMA<br>Norflurazon<br>Prometryn | Pyrithiobac<br>S-metolachlor<br>Trifloxysulfuron |
|--|---|--|

**Use Restrictions – Cotton**

- Do not apply this product later than 70 days before harvest.
- Do not apply more than 1.6 pints per acre of this product in any year.
- Do not apply more than 1.1 pints per acre of this product as a pre-plant surface application to medium or fine textured soils.
- Do not apply as a pre-emergence application to medium or fine-textured soils as crop injury will likely occur.
- Do not add liquid nitrogen (28% or similar) to this product or tank mixes of this product in cotton.

**Special Use Directions for the Suppression of Woollyleaf Bursage (Lakeweed), *Ambrosia grayi*, in Texas**

Apply this product to cultivated areas of cropland in the fall or spring as a spot treatment at a rate of 1.6 pints per acre and incorporate to a depth of 2 to 3 inches for suppression of Woollyleaf bursage. Applications should be made with ground equipment.

The use of adjuvants, as specified under the **Spray Additives** section, will significantly improve the initial burndown of any emerged woollyleaf bursage, but this effect is only temporary. Therefore, an adjuvant may be used if desired, but is not necessary.

Significant suppression may not be seen until 6 to 8 months after application, but should then continue for at least 2 years after application. Cotton or soybeans may be planted in treated areas. Under certain conditions, significant damage may occur to cotton planted within 18 months of application. A 3-year interval from last application to planting is required for all other crops.

**Restrictions:** Do not make more than one application of this product per year. Do not apply more than 1.6 pints per acre of this product in any year. If two consecutive year applications are made, allow a 2 year interval before another application.

**DRY BEANS AND SNAP BEANS**

**Pre-plant Surface and Pre-emergence Application:**

Apply this product as a pre-plant surface or pre-emergence application in Regions 1, 2, 3, and 4 only for control or partial control of the weeds listed in Table 1. This product can be applied alone, or tank mixed or followed sequentially with other labeled dry bean or snap bean herbicides to broaden the weed control

spectrum or control newly emerged weeds. Refer to the **Tank Mix and Sequential Application** section for additional information.

**NOTE:** Treated soil that is splashed onto newly emerged seedlings may result in temporary crop injury but plants normally outgrow these effects and develop normally.

**Post-emergence Application:**

Apply as a post-emergent broadcast application in Regions 1, 2, 3, 4 and 5 for control or partial control of the weeds listed in Table 2 and in the **Special Use Directions for Additional Weed Problems** section. Application rate depends on weed species and growth stage. Two applications may be made if necessary but not to exceed the maximum rate specified per geographic region. (Refer to map for definition of specified geographic regions). Refer to the **Spray Additive** section for spray additives. Use of crop oil concentrate can improve weed control but may slightly reduce crop tolerance. Do not use UAN (28% or similar) or ammonium sulfate on dry beans or snap beans as severe crop injury may occur. Apply when dry beans or snap beans have at least one fully expanded trifoliolate leaf.

This product can be applied alone or in tank mix with other labeled dry bean or snap bean post-emergence herbicides to broaden the weed control spectrum. Refer to the **Tank Mix and Sequential Application** section.

Some bronzing, crinkling or spotting of dry bean or snap bean leaves may occur following post-emergent applications, but dry beans and snap beans soon outgrow these effects and develop normally.

**Tank Mix and Sequential Applications for Dry Beans and Snap Beans**

To broaden the weed control spectrum, this product can be tank mixed with other herbicides as listed below. Refer to the tank mix partner label for use directions, restrictions and limitations. The most restrictive product labeling applies.

| Dry Beans and Snap Beans  | Dry Beans Only                               |
|---|--|
| Bentazon<br>EPTC<br>Imazamox<br>Imazethapyr<br>Metolachlor<br>Pendimethalin<br>Quizalofop<br>Sethoxydim<br>S-metolachlor<br>Trifluralin | Clethodim<br>Dimethenamid-P<br>Ethalfluralin |

Under certain conditions, the mixture of this product with one or more of the above mentioned broadleaf herbicides may cause a reduction in activity of any post-emergence grass herbicide in the mixture.

For sequential applications, allow 2 to 3 days after the application of the post-emergence grass herbicide before applying this product or mixtures of this product. Where this product or mixtures of this product is applied first, apply the grass herbicide when the grass weeds begin to develop new leaves (generally around 7 days).

**NOTE:** Tank mix applications can result in increased crop injury as compared to either product used alone.

Always read and follow the directions, restrictions and limitations for all products whether used alone, sequentially or in a tank mix. The most restrictive labeling of any product used applies.

**Use Restrictions – Dry Beans and Snap Beans**

- Refer to the Regional Use Map for the maximum use rate of this product (or other fomesafen containing products) that may be applied in each geographic region.
- Do not apply to any field in Regions 2, 3, 4, or 5 more than once every two years.
- Do not use UAN (28% or similar) or ammonium sulfate on dry beans or snap beans as severe crop injury may occur.

- **For Snap Beans:** Do not exceed 1.6 pints per acre of this product in any one year and also adhere to the maximum rate that may be applied in each geographic region (refer to the Regional Use Map). Do not graze treated areas or harvest for forage or hay. Do not utilize hay or straw for animal feed or bedding. Do not apply within 30 days of harvest.
- **For Dry Beans:** Do not exceed 1.6 pints per acre of this product in any one year and also adhere to the maximum rate that may be applied in each geographic region (refer to the Regional Use Map). Do not graze animals on green forage or stubble. Do not utilize hay or straw for animal feed or bedding. Do not apply within 45 days of harvest.

## POTATOES

Apply this product at 1 pint per acre as a broadcast pre-emergence application after planting but before potato emergence for control or partial control of weeds listed in Table 1. Effectiveness will be reduced if later cultural practices expose untreated soil. For application by center pivot irrigation, see the **Center Pivot Irrigation Application** section of this label.

**Note:** Potato varieties may vary in their response to this product. When using this product for the first time on a particular variety, always determine crop tolerance before using.

### Tank Mixtures with Other Products Registered for Use in Potatoes

For pre-emergence applications in potatoes, this product may be tank mixed with other pesticide products registered for use in this way and timing in potatoes. Follow the directions for use, observe the stated precautions, and abide by the limitations and restrictions on the most restrictive of the product labels. If you have no previous experience mixing these products under your conditions, perform a compatibility test before attempting large-scale mixing.

### Use Restrictions – Potatoes

- Do not exceed 1 pint per acre of this product per year. Refer to the Regional Use Map for the maximum rate of this product (or other fomesafen containing products) that may be applied per year or alternate year in each geographic region.
- Do not harvest potatoes treated with this product within 70 days of application.
- Do not apply this product to sweet potatoes or yams.
- Do not apply this product as a pre-plant incorporated application in potatoes or crop injury may occur.
- Do not apply to emerged potato plants or severe crop injury will occur.
- Do not use on potatoes in Nassau and Suffolk Counties, New York.

## SOYBEANS

### Pre-plant Surface and Pre-emergence Application

Apply this product as a pre-plant surface or pre-emergence application in Regions 1, 2, 3, and 4 only for control or partial control of the weeds listed in Table 1. This product can be applied alone or tank mixed or followed sequentially with other labeled soybean herbicides to broaden the weed control spectrum or control newly emerged weeds. Refer to the **Tank Mix and Sequential Application** section for additional information.

In reduced tillage plantings, this product can be applied up to 14 days prior to planting or at planting with a burndown herbicide.

### Post-emergence Application

Apply this product as a post-emergence broadcast application in Regions 1, 2, 3, 4 and 5 for control or partial control of weeds listed in Table 2 and in the **Special Use Directions for Additional Weed Problems** section. Application rate depends on weed species and growth stage. Refer to the **Spray Additive** section for recommended spray additives. To enhance post-emergence control of susceptible broadleaf weeds (**Soybeans only**) in Regions 2, 3, 4 and 5 (see Regional Use Map), this product can be used with a minimum of 2.5% liquid nitrogen (28% or similar) or a minimum of 10 pounds of ammonium sulfate per 100 gallons of spray volume.

This product can be applied alone or in combination with other labeled Soybean post-emergence herbicides to broaden the weed control spectrum. Refer to the **Tank Mix and Sequential Application** section.

Some bronzing, crinkling or spotting of Soybean leaves may occur following post-emergent applications, but soybeans soon outgrow these effects and develop normally.

**TANK MIX AND SEQUENTIAL APPLICATIONS FOR SOYBEANS:**

To broaden the weed control spectrum, this product can be tank mixed with other herbicides as listed below. Refer to the tank mix partner label for use directions, restrictions and limitations. The most restrictive product labeling applies.

|             |                |
|-------------|----------------|
| 2,4-DB      | Glyphosate     |
| Bentazon    | Imazamox       |
| Chlorimuron | Imazaquin      |
| Clethodim   | Imazethapyr    |
| Fluazifop   | Quizalofop     |
| Flumiclorac | Sethoxydim     |
| Glufosinate | Thifensulfuron |

Under certain conditions, the mixture of this product with one or more of the above mentioned broadleaf herbicides may cause a reduction in activity of any post-emergence grass herbicide in the mixture.

For sequential applications allow 2 to 3 days after the application of the grass herbicide before applying this product or mixtures of this product. Where this product or mixtures of this product is applied first, apply the grass herbicide when grass weeds begin to develop new leaves (generally around 7 days).

**Roundup Ready (Glyphosate Tolerant) Soybean Tank Mixes**

This product can be tank mixed with glyphosate products that are labeled for Roundup Ready (glyphosate tolerant) soybeans for improved post-emergence control of many weeds such as Morningglory spp., Hemp sesbania, Waterhemp, and Black nightshade which are known to have tolerance to glyphosate, but are susceptible to this product (fomesafen).

**FOLLOW THE DIRECTIONS ON THE GLYPHOSATE PRODUCT LABEL FOR THE USE OF SPRAY ADDITIVES IN THIS TANK MIX.**

**Restriction:** Do not allow this tank mix to move off target as contact by even minute quantities can cause severe damage or death to any non-target vegetation.

**NOTE:** Post-emergence application of this tank mix on soybean varieties which do not contain the Roundup Ready gene will result in severe crop injury or death of the soybean crop. Always read and follow the directions, restrictions and limitations for all products used. The most restrictive labeling of any product applies.

**Product Use Restrictions – Soybeans**

- Refer to Regional Use Map for maximum rate of this product (or other fomesafen containing products) that may be applied in each geographic region. Do not apply to any field in Regions 2, 3, 4 or 5 more than once every two years.
- Do not exceed 1.6 pints of this product per acre in any one year and also adhere to the maximum rate that may be applied in each geographic region (refer to the Regional Use Map). Do not graze treated areas or harvest for forage or hay. Do not apply within 45 days of harvest.

**AERIAL SPRAY DRIFT MANAGEMENT**

**SPRAY DRIFT MANAGEMENT**

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target 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 three-fourths 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 degrees.

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 **Aerial Drift Reduction**.

## **AERIAL DRIFT REDUCTION**

### **INFORMATION ON DROPLET SIZE**

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

### **CONTROLLING DROPLET SIZE**

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – 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 horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lower drift.

### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

### **APPLICATION HEIGHT**

Applications must not be made at a height greater than 10 feet 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 to 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 spray drift.

### **TEMPERATURE AND HUMIDITY**

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



## TEMPERATURE INVERSIONS

Applications 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 concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward 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).

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool, dry area away from heat or ignition source. Do not stack over 2 pallets high. Move containers by handles or cases. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Store in original containers only. Unloading storage and work areas must be as clean as possible to prevent contamination if spilled. If concentrate or spray solution is allowed to dry on flammable objects, the chlorate component can act as oxidizer. If the contents are leaking or material is spilled, follow these steps:

1. Contain spill. Absorb with a material such as sawdust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with soap and water to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Clothing contaminated with chlorate solution must be removed at once before solution dries. Dried contaminated clothes can be ignited easily. Wash contaminated clothing immediately.
6. Do not allow runoff to enter sewer or contaminate water supplies.
7. Dispose of waste as indicated below:

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### CONTAINER HANDLING:

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Refillable Container (≥ 250 gallons & Bulk):** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% 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.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.**

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

**BEFORE BUYING OR USING THIS PRODUCT**, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

[01/25/2017]