

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

January 12, 2017

Ms. Mary Beth Endres Registration Manager Liberty Crop Protection, LLC 4850 Hahns Peak Drive, Suite 200 Loveland, CO 80538

Subject: Notification per PRN 98-10 – Add personal protective equipment statement. Product Name: Liberty Fomesafen 1.88SL EPA Registration Number: 89168-9 Application Date: December 21, 2016 Decision Number: 524912

Dear Ms. Endres:

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

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

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.

Page 2 of 2 EPA Reg. No. 89168-9 Decision No. 524912

Sincerely,

Ein the for

Erik Kraft, Acting Product Manager 24 Fungicide and Herbicide Branch Registration Division (7505P) Office of Pesticide Programs

Enclosure



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

Controls Weeds in Cotton, Dry Beans, Potatoes, Snap Beans, and Soybeans

ACTIVE INGREDIENT:	%BY WT.
Sodium salt of Fomesafen 5-[2-chloro-4-(trifluoromethyl)phenoxy]-N-	
(methylsulfonyl)-2-nitrobenzamide	22.1%*
OTHER INGREDIENTS:	<u>77.9%</u>
TOTAL:	100.0%
*Equivalent to 21.0% fomesafen or 1.88 lbs. fomesafen active ingredient per gal.	

# **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.)

See additional precautionary statements and directions for use in the attached booklet.

EPA Reg. No. 89168-9

EPA Est No.

Net Contents Gallons (L)

**Manufactured For:** Liberty Crop Protection LLC 4850 Hahns Peak Drive, Suite 200 Loveland, CO 80538

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	FIRST AID	
IF ON SKIN:	<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 IN EYES:	<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 treatment advice.</li> </ul>	
IF SWALLOWED:	<ul> <li>Call a Poison Control Center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to by a Poison Control Center or doctor.</li> <li>Do not give anything to an unconscious person.</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 further treatment advice.</li> </ul>	
<b>NOTE TO PHYSICIAN</b> Probable mucosal damage may contraindicate the use of gastric lavage.		
Have the produc doctor or going fe	t container or label with you when calling a Poison Control Center or or treatment.	

# HOT LINE NUMBER

For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), call **1-800-888-8372**.

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING/AVISO

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.

**CORROSIVE.** CAUSES SKIN IRRITATION. CAUSES MODERATE EYE IRRITATION. HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. Do not get on skin or on clothing. Avoid breathing vapor or spray mist. Avoid contact with eyes. Prolonged or repeated skin contact may cause allergic reactions in some individuals. WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING.

# **Personal Protective Equipment (PPE)**

Discard clothing and other absorbents materials that have been drenched or heavily contaminated with this products concentrate. Do not reuse them. Follow manufacturer's

instructions for cleaning/maintaining PPE. If so such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

# Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- $\bullet$  Chemical-resistant gloves such as barrier laminate, nitrile rubber, neoprene rubber, or  $\mathsf{Viton} \mathbb{B}$
- Chemical-resistant footwear plus socks
- Chemical-resistant apron when cleaning equipment, mixing or loading

In addition, for aerial applications mixers and loaders handling more than 150 gallons of LIBERTY FOMESAFEN 1.88SL in any single work day must wear:

 a minimum of a NIOSH approved filtering face piece respirator with any N filter (TC-84A). You can also use other NIOSH approved particulate respirators that offer more protection. For more information, see www.epa.gov/pesticide-respirators.

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

# Users should:

# USER SAFETY RECOMMNDATIONS

- 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 the 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 waters. Do not apply when weather conditions favor drift from target area.

# **Ground Water Advisory**

This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

# Surface Water Advisory

This product may impact surface water quality due to spray drift and run off of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several months after application. A level well maintained vegetative buffer strip between areas to which this product is applied and surface water features

such as ponds, streams, and springs will reduce the potential loading of fomesafen from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. See the manual for Conservation Buffers to Reduce Pesticide Losses at the following internet address: http://www.wsi.nrcs.usda.gov/products/W2Q/pest/core4.html

# **DIRECTIONS FOR USE**

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

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

# AGRICULTURAL USE REQUIREMENTS

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

# Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 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 gloves such as barrier laminate, nitrite rubber, neoprene rubber, or Viton
- Chemical-resistant footwear plus socks

# PRODUCT INFORMATION

Read the entire Directions for Use section before using this product.

LIBERTY FOMESAFEN 1.88SL selective herbicide can be applied preplant, preemergence or postemergence to control and/or suppress broadleaf weeds, grasses and sedges in beans (dry & snap), cotton, potatoes, and soybeans.

LIBERTY FOMESAFEN 1.88SL is generally works most effectively and consistently when applied postemergence by working through contact action. Complete spray coverage is essential for effective control of emerged weeds. Leaf bronzing, crinkling or spotting can occur after postemergent treatment, but listed <u>crops</u>outgrow these effects quickly and develop normally.

Applications of LIBERTY FOMESAFEN 1.88SL are most effective when applied postemergence to young actively growing broadleaf weeds that are free from stress due to moisture, temperature, low soil fertility, mechanical or chemical injury.

Some germinating broadleaf weeds, grasses and sedges can be controlled or suppressed by residual soil activity from either preplant, preemergent or postemergent applications of LIBERTY FOMESAFEN 1.88SL if it rains shortly after application. The efficacy and consistency of soil activity depends on soil characteristics, ground cover, the amount of rainfall post application and the rate of LIBERTY FOMESAFEN 1.88SL applied.

# **NOTE: Weed Resistance**

There are naturally occurring biotypes of certain broadleaf species that are resistant to this herbicide and similar products (same mode of action). Repeated application of these types of products can result in reduced and/or ineffective weed control.

If ineffective product performance is not attributed to adverse weather conditions or improper application methods, it is possible that a resistant biotype of week may be present. If this is the case, do not make additional applications with this herbicide, or similar products. Consult your local LIBERTY CROP PROTECTION, LLC representative or agricultural advisor for assistance.

# **APPLICATION INSTRUCTIONS**

# Application Timing

Apply LIBERTY FOMESAFEN 1.88SL to actively growing weeds early (14-28 days after planting) for the most complete control of susceptible broadleaf weeds. Refer to the weed control tables for specific instructions on weed growth stages and application rates.

# Spray Additives

Use spray additives cleared for use on growing crops listed under 40 CFR 180.1001 in spray mixtures. In Regions 2,3,4, and 5 (see **Regional Use Maps**), use LIBERTY FOMESAFEN 1.88SL postemergence with 1.0-2.5% v/v liquid nitrogen (28% or similar), or a minimum of 8½ lbs. ammonium sulfate per 100 gallons of spray for volume for the best broad spectrum control of susceptible broadleaf weeds.

# With Postemergence Applications Add One of the Following, except in tank mix with products prohibiting spray additives (See Tank Mix Directions for Use):

Use a Crop Oil Concentrate (COC) or Methylated Seed Oil (MSO) meeting acceptable standards at labeled rates: Acceptable crop oil concentrates would be those which contain a minimum of 80% oils and 15% emulsifier. A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all the following

criteria: be non-phytotoxic, contain only EPA-exempt ingredients, provide good mixing quality, and be successful in local experience. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils.

**Nonionic Surfactant (NIS):** Use a NIS that contains a minimum 80% active ingredient at 0.25-0.5% v/v (2-4 qts/100 gals.) of finished spray volume in Region 1, and East of I-79 and I-77 in Regions 2 and 3.

**Other Adjuvants** than COCs or NIS' can be used if the adjuvant is:

- 1. Comprised solely of EPA exempt ingredients.
- 2. Nonphytotoxic to the target crop.
- 3. Compatible in mixture. (Compatibility can be established with a jar test.)
- 4. Locally approved for use with LIBERTY FOMESAFEN 1.88SL on the target crop by university and extension instructions provided through proven field trials.

**Note:** Adjuvants are NOT needed for preplant or preemergence applications except when LIBERTY FOMESAFEN 1.88SL is being applied in a burndown.

# Mixing Order:

- 1. Fill spray tank with 1/2 the specified amount of water and begin agitation. (Compatibility agent may be added as needed, 1 gal./500 gals. of water or 0.2% v/v).
- 2. Add fertilizer (UAN, AMS).
- 3. Add dry pesticide products.
- 4. Add LIBERTY FOMESAFEN 1.88SL.
- 5. Add liquid pesticide products.
- 6. Add adjuvants (MSO, COC or NIS).
- 7. Add remaining water and agitate constantly.

# Tank Mix Compatibility Test

Perform a jar test prior to tank mixing LIBERTY FOMESAFEN 1.88SL to ensure product compatibility with tank mix partners. Add proportionate amounts of tank mixture components in a clear quart-size jar, one at a time in the specified mixing order. Shake gently or invert the capped jar and let it stand for 15-30 minutes. If the mixture clumps, forms flakes, oily films, or layers, or other precipitates, it is not compatible and the tank mixture should not be used.

# **Ground Application**

For preplant surface and preemergence applications use a minimum of 10 gallons per acre. Select a nozzle that meets the manufacturer's gallonage and pressure specifications for preplant surface or preemergence applications.

For thorough coverage of the target during postemergence application, apply adequate spray volume and pressure. Apply a spray volume of 10-20 gals./A and 30-60 psi at the nozzle tip. For complete coverage of weed foliage on large weeds and dense foliage, apply 60 psi and a minimum of 20 gals./A

For most effective postemergence application of LIBERTY FOMESAFEN 1.88SL, use flat fan nozzles. Calibrate the sprayer to ensure proper volume and application rate per acre. Adjust the boom and nozzle height to ensure thorough coverage of target weeds.

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

#### Band Applications

Complete weed coverage is essential for postemergent control. Use a minimum of two nozzles for the most complete coverage, with one directed to each side of the planted row. Do not apply with a single nozzle directed over the top of the row in postemergence applications. A single nozzle application directed over the top of the row is acceptable for preemergence applications. After band applications, cultivate untreated areas. If applying postemergence using band applications and cultivating at the same time, position nozzles in front of the cultivation device in order to reduce dust in the spray area. Dust can reduce weed coverage, intercept spray, and result in poor weed control.

For postemergent band applications, calculate the amount of LIBERTY FOMESAFEN 1.88SL and water volume needed with the following formulas:

Band width in inches Row width in inches	х	Broadcast rate per acre	=	Band herbicide rate per acre
Band width in inches Row width in inches	х	Broadcast volume per acre	=	Band herbicide volume per acre

#### Aerial Application

For thorough coverage of the target apply sufficient spray volume and pressure. Apply a minimum of 5 gals./A of spray mixture with a maximum of 40 PSI pressure. Use a minimum of 10 gals./A if broadleaf weed foliage is dense.

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

# DIRECTIONS FOR USE WITH CENTER PIVOT IRRIGATION SYSTEMS

LIBERTY FOMESAFEN 1.88SL, alone or in tank mixture with other herbicides registered for use in center pivot irrigation systems, can be applied in irrigation water preemergence (after planting, but before weeds and/or crops emerge) at rates specified in this label. LIBERTY FOMESAFEN 1.88SL may be applied postemergence to the crop and preemergence to weeds in crops where postemeregence application is permitted. Adhere to all label restrictions (height, timing, rate, etc.) to avoid illegal residues. Apply LIBERTY FOMESAFEN 1.88SL only through a center pivot irrigation system. DO NOT APPLY THIS PRODUCT THROUGH ANY OTHER TYPE OF IRRIGATION SYSTEM. Crop injury, product ineffectiveness, and/or illegal pesticide residues can result from nonuniform distribution of treated water. Contact your State Extension specialists,

equipment manufacturers, and/or other experts if you have questions about calibrating equipment. 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 system are in place. Should the system need to be shut down and/or adjustments made to the system, only a person knowledgeable of the chemigation system and who is authorized to operate the system shall adjust and operate the system.

# **Operating Instructions:**

- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located to 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 ½ 1 inch of water. Use the lower water volume (1/2 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.

PRECAUTION: Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control can occur. Where sprinkler distribution patterns overlap excessive crop injury can occur.

Posting of chemigation areas is required when:

 Any part of the treated area is within 300 feet of sensitive areas (residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes, or any public area including schools, parks, playgrounds, including 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:

- 1) Treated areas must be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive area.
- 2) Where there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas.
- 3) The printed side of the sign should face away from the treated area towards the sensitive area.
- 4) Signs must be printed in English.
- 5) Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared.
- 6) 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.
- 7) All words shall consist of letters at least 2.5 inches tall.
- 8) All letters and symbols 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.

#### Cultivation

Do not cultivate prior to application. Cultivation can stress weeds, resulting in less effective weed control. Cultivate 1-3 weeks after applying LIBERTY FOMESAFEN 1.88SL to increase weed control.

#### Soil Characteristics

Use higher rates of LIBERTY FOMESAFEN 1.88SL on soils with high organic matter and/or high clay content than soils with low organic matter and/or low clay content. See the Regional Use Maps, weeds controlled table, and crop use sections for use rates on certain soil textures.

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

Apply LIBERTY FOMESAFEN 1.88SL under environmental conditions that promote active weed growth. Do not apply LIBERTY FOMESAFEN 1.88SL to weeds or crops that are stressed due to drought, temperature changes, excess water, low humidity, low soil fertility, mechanical and/or chemical injury as these conditions can reduce weed control and injure crops.

#### Rainfastness

For best results, do not apply LIBERTY FOMESAFEN 1.88SL within 1 hour of rainfall when applied postemergence.

#### USE PRECAUTIONS

- Clean the spray system completely with water and a commercial tank cleaner before and after each use.
- Tank mix incompatibility, poor product performance, and crop injury can occur with tank mixes of LIBERTY FOMESAFEN 1.88SL with other pesticides, fertilizers or any other additives except as specified on this label or other approved Willowood supplemental labels.

#### **USE RESTRICTIONS**

- Apply LIBERTY FOMESAFEN 1.88SL postemergence to actively growing weeds. Do not apply LIBERTY FOMESAFEN 1.88SL to weeds or soybeans which are stressed from moisture, temperature, low soil fertility, mechanical or chemical injury. Poor weed control and/or crop injury can occur under these conditions.
- To avoid injury to rotational crops, do not overlap spray swaths.
- Do not exceed 10 MPH ground speed during application.
- Grazing treated areas and harvesting forage for hay is prohibited.
- Application within 45 days of soybean harvest is prohibited.

- Do not graze rotated small grain crops or harvest forage or straw for livestock.
- Region 1: Apply a maximum of 1.6 pts. of LIBERTY FOMESAFEN 1.88SL (maximum of 0.375 lb. a.i./A of fomesafen from any fomesafen product) per acre per year
- Region 2: Apply a maximum of 1.6 pts. of LIBERTY FOMESAFEN 1.88SL (maximum of 0.375 lb. a.i./A of fomesafen from any fomesafen product) per acre in alternate years.
- Region 3: Apply a maximum of 1.3 pts. of LIBERTY FOMESAFEN 1.88SL (maximum of 0.313 lb. a.i./A of fomesafen from any fomesafen product) per acre in alternate years.
- Region 4: Apply a maximum of 1 pt. of LIBERTY FOMESAFEN 1.88SL (maximum of 0.25 lb. a.i./A of fomesafen from any fomesafen product) per acre in alternate years.
- Region 5: Apply a maximum of 0.75 pt. of LIBERTY FOMESAFEN 1.88SL (0.1875 lb. a.i./A of fomesafen from any fomesafen product) per acre in alternate years in Region 5.

Refer to the Regional Maps in this label for additional instructions.

#### **ROTATIONAL CROP RESTRICTIONS**

Plant the following rotational crops after applying LIBERTY FOMESAFEN 1.88SL at specified rates in soybeans:

Crop To Be Planted	Minimum Rotation Interval (After Last LIBERTY FOMESAFEN 1.88SL Application)
Beans (Dry & Snap), soybeans, cotton and potatoes	0 Months
Small grains such as wheat, barley, rye, transplanted peppers and transplanted tomatoes	4 Months
Corn*, peanuts, peas, rice, seed corn	10 Months
To avoid crop injury do not plant alfalfa, sunflowers, sugar beets, sorghum** or any other crop within:	18 Months

\* Popcorn: Use 12 month minimum rotation interval in Ohio, Kentucky, Illinois, Indiana, Iowa and Region 4 when applied at a rate of 1.0 pt./A or more.

\* Sweet corn: Use 18 month minimum rotation interval in the states of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont and Region 5.

\*\* Sorghum may be planted back after 10 months in Region 1.

# Replanting

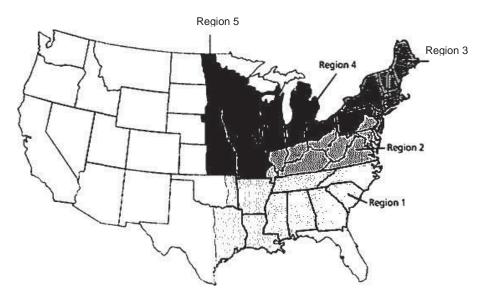
If it is necessary to replant in fields treated with LIBERTY FOMESAFEN 1.88SL, the field may be replanted with cotton, dry beans, potatoes, snap beans or soybeans. Minimize tilling to preserve the herbicide barrier for effective weed control during replanting. Do not apply a second application of LIBERTY FOMESAFEN 1.88SL or other fomesafen product. Crop injury and/or illegal residues can be present in harvested

crops. If using tank-mix combinations, refer to the product labels for any additional replanting instructions.

#### USE RATES AND WEEDS CONTROLLED WITH LIBERTY FOMESAFEN 1.88SL REFER TO MAP FOR DEFINITION OF SPECIFIED GEOGRAPHIC REGIONS

#### LIBERTY FOMESAFEN 1.88SL REGIONAL USE MAP

# NOT APPROVED FOR USE IN MIAMI, DADE COUNTY, FL IN REGION 1



#### REGION 1: Maximum Use Rate: 1.6 pints per acre per year

LIBERTY FOMESAFEN 1.88SL can be used in the following states:

Alabama, Arkansas, Florida (except for 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).

Not approved for use in Miami Dade County, FL



# **REGION 2:** Maximum Use Rate: 1.6 pints per acre, alternate years

LIBERTY FOMESAFEN 1.88SL can be used in the following states:

Delaware, Kentucky, Maryland, Virginia, and West Virginia. South of I-70 in the following states: Illinois, Indiana and Ohio and in Pennsylvania (all areas South of I-80 to the intersection of U.S. Highway 15 and East of U.S. Highway 15 and U.S. Highway 522).



#### REGION 3: Maximum Use Rate: 1.3 pints per acre, alternate years:

LIBERTY FOMESAFEN 1.88SL can be applied in the following states:

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 I-94 between Madison and Milwaukee) and North of I-70 in Illinois, Indiana and Ohio.



# REGION 4: Maximum Use Rate: 1 pint per acre, alternate years

LIBERTY FOMESAFEN 1.88SL can be applied in:

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 I-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 I-29 from Fargo South to the South Dakota state line), South Dakota (all areas East of I-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 5: Maximum Use Rate: 0.75 pints per acre, alternate years

LIBERTY FOMESAFEN 1.88SL can be applied in:

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).



LIBERTY FOMESAFEN 1.88SL applied at 1-1.6 pints/acre\*\* will control or partially control\* the following weeds by preemergence application in all soil types with up to 5% organic matter

to 5% organic matter				
Broadleaf Weeds Controlled	Broadleaf Weeds Partially Controlled*	Sedges Partially Controlled*		
Common Lambsquarters Common Purslane Common Ragweed*** Bristly Starbur Eclipta <i>Galinsoga</i> spp. Nightshade (Black & Eastern Black) Pigweed (Redwood & Smooth) Palmer Amaranth Prickly Sida*** Smallflower Morningglory Topic Croton*** Wild Poinsettia	Common Cocklebur Common Waterhemp Giant Ragweed Hairy Nightshade Morningglory (entireleaf, ivyleaf, pitted, red/scarlet, and tall) Spurred Anoda	Yellow Nutsedge		

\* Partial control means significant activity but not at levels considered acceptable by commercial weed control professionals.

**\*\***Use the higher rate range when weed population is heavy.

\*\*\*Partial control is achieved when rates less than 1.6 pints/A are used.

	LIBERTY FOMESAFEN 1.88SL Rate (pints per acre) Maximum Growth Stage Controlled At			
Weed	0.75 pt./A # of True Leaves	1 pt./A # of True Leaves	1.3 pts./A # of True Leaves	1.6 pts./A # of True Leaves
Anoda, Spurred		_		2
Balloonvine	_	_	2*	2
Carpetweed		6" Diameter Size	6" Multi-leaf Diameter	Unlimited Size
Citron (Wild Watermelon)	—	2	2	4
Cocklebur, Common <sup>2</sup>		—	2	4
Copperleaf, Hophornbeam	—	2	2	4
Copperleaf, Virginia		2	2	4
Crotalaria, Showy		4	4	6
Croton, Tropic		2	2	4
Cucumber, Volunteer		4	4	6
Eclipta		2	2	4
Groundcherry, Cutleaf		4	4	6
Hemp <sup>2</sup>		—	4	6
Horsenettle <sup>2</sup>		2*	3*	4
Jimsonweed	2	4	6	8
Ladysthumb		2	2	4
Lambsquarters, Common		2	2	2
Mexicanweed		2*	2*	2
Morningglory				
Cypressvine	—	4	4	6
Entireleaf var.	2*	2	2	4
lvyleaf	2*	2	2	4
Purple Moonflower		2	4	4
Red (Scarlet)		2	2	4
Smallflower		2	2	4
Pitted (Smallwhite)		4	4	4
Tall (Common)	2*	2	2	3*
Palmleaf (Willowleaf)		2	2	4
Mustard, Wild	2	4	6	8
Nightshade, Black	2	4	4	4
Nutsedge, Yellow	_	—		Suppression Only
Pigweed, spp.		Ì		ĺ

#### **APPLICATION RATES FOR WEED GROWTH STAGES**

Amaranth, Palmer	2*	4	4	6
Amaranth, Spiny	2*	2	2	4
Redroot	2*	4	6	6
Smooth	2*	4	4	6
Poinsettia, Wild	—	2		3
Purslane, Common	_	Multi-Leaf 6" Diameter	Multi-Leaf 8" Diameter	Multi-Leaf 8" Diameter
Pusley, Florida	—	2	2	4
Ragweed, Common	2	4	4	6
Ragweed, Giant <sup>2</sup>	—	—	4	4
Redweed	—	—	—	3
Sesbania, Hemp	—	6	6	12
Sicklepod				Cotyledon*
Sida, Prickly	—	—		Cotyledon*
Smartweed, Pennsylvania	2*	4	4	6
Smellmelon	—	—		2
Spurge, Prostrate	—	—	—	1" Diameter
Spurge, Spotted	—	—		2*
Starbur, Bristly	—	2	2	4
Sunflower, Common	—	—	—	2
Velvetleaf <sup>2</sup>	—	—	2	4
Venice Mallow	2	4	4	6
Witchweed	_	Multi-leaf Up to 7"	Multi-leaf Up to 7"	Multi-leaf Up to 10"
Waterhemp, Common	2*	2	2	6
Waterhemp, Tall	2*	2	2	4
Yellow Rocket	2	4	6	6
	1	1	1	l

\* Partial Control—significant reduction but not always at a level considered acceptable by commercial weed control professionals.

Do not apply in cotyledon stage.

<sup>2</sup> For effective control, use 1% MSO and 2.5% UAN v/v as adjuvant in Regions 2 and 3 when used on soybeans.

# USE DIRECTIONS FOR SPECIFIC WEED PROBLEMS

# Annual Grass Suppression:

LIBERTY FOMESAFEN 1.88SL suppresses annual grasses listed below by postemergence applications. It controls and/or suppresses by preemergence applications at a rate of 1-1.6 pts./A. Refer to the Use Rate Table for the maximum use rate for each region.

For full-season broad-spectrum annual grass control, Fusilade® DX or Fusion® herbicide should be used alone or in tank mix with LIBERTY FOMESAFEN 1.88SL. Consult tank mix section for additional information.

Barnyardgrass Broadleaf Signalgrass Crabgrass Foxtail Giant Green Yellow Goosegrass Johnsongrass, Seedling Panicum, Fall Panicum, Texas

#### Perennial Weed Suppression:

LIBERTY FOMESAFEN 1.88SL applied postemergence at rates of 1-1.6 pts./A will suppress the above-ground portions of the weeds listed below until crop canopy can aid suppression. Even though above-ground foliage may be controlled or suppressed, perennial weeds continue to regrow from underground rootstocks. The use of LIBERTY FOMESAFEN 1.88SL along with crop competition will suppress perennial weeds for a growing season, the rootstocks will continue to live and reestablish in subsequent years.

Milkweed, Climbing Milkweed, Honeyvine Bindweed, Field Bindweed, Hedge Trumpetcreeper

# DIRECTIONS FOR USE ON BEANS (DRY & SNAP)

Apply LIBERTY FOMESAFEN 1.88SL preplant surface or preemergence application in Regions 1, 2, 3 and 4 only to control and/or partially control the weeds listed in this label. LIBERTY FOMESAFEN 1.88SL can be applied alone or tank mixed, or with other herbicides labeled to treat dry and snap beans. To control newly emerged weeds or to control weeds on a broader spectrum refer to the Tank Mix and Sequential Application section of this label.

NOTE: Crop injury may occur on newly emerged plants that have been splashed with this product, but plants outgrow these effects and develop normally.

#### **Postemergence Application:**

Apply LIBERTY FOMESAFEN 1.88SL postemergence by broadcast application in Regions 1, 2, 3, 4, and 5 for full and/or partial control of the weeds listed on this label and in the Special Use Directions for Specific Weed Problems section. The application rate will depend on the weed species and growth stage. Two applications may be

required, but do not exceed the maximum rate specified per geographic region (Refer to the maps section for defined geographic regions). Refer to the Spray Additive section for spray additives. Crop oil concentrate can improve weed control, but may reduce crop tolerance slightly. Do not use UAN (28% or similar) or ammonium sulfate on dry nor snap beans or severe crop injury can occur. Apply to dry and snap beans when at least one fully expanded trifoliate leaf appears.

Apply LIBERTY FOMESAFEN 1.88SL alone or in tank mixes with other postemergence herbicides labeled to treat dry and snap beans to broaden control. Refer to the Tank Mix and Sequential Application section.

Bronzing, crinkling, or spotting may occur on dry and snap bean leaves following postemergence treatment, but the beans will soon outgrow these effects and develop normally.

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

LIBERTY FOMESAFEN 1.88SL can be applied sequentially or in tank mix with the following products:

Assure II®	Eptam®	Prowl®
Basagran®	Frontier®*	Raptor®
Clethodim 2E*	Imazethapyr 2SC	Sonalan®*
Dual MAGNUM	Poast®	Trifluralin 4E

\*Clethodim 2E, Frontier®, and Sonalan® are for **Dry Beans Only** 

The mixture of LIBERTY FOMESAFEN 1.88SL with one or more of these broadleaf herbicides may cause a reduction in activity of any post emergent grass herbicide in the mixture under certain conditions.

Allow 2-3 days for sequential applications of the post emergence grass herbicide before applying LIBERTY FOMESAFEN 1.88SL or LIBERTY FOMESAFEN 1.88SL mixtures. If applying LIBERTY FOMESAFEN 1.88SL or LIBERTY FOMESAFEN 1.88SL mixtures first, apply the grass herbicide when grass weeds develop new leaves (generally around 7 days).

NOTE: Crop injury can occur with tank mix applications compared to products used alone. Read and follow the label instructions, restrictions, and limitations for all products whether used along, sequentially or in tank mix. The most restrictive label directions for any product apply when in use.

# Use Precautions on Dry Beans and Snap Beans

• Refer to the regional use maps for the maximum rate of LIBERTY FOMESAFEN 1.88SL (or other fomesafen-containing products) that may be applied in each geographic region.

# Use Restrictions on Dry Beans and Snap Beans

- Do not apply more than once every two years in any field in Regions 2, 3, 4, and 5.
- Dry beans:
  - Do not exceed 1.6 pints per acre of LIBERTY FOMESAFEN 1.88SL in any single year.
  - Do not exceed the maximum rate that can be applied in all geographic regions (refer to the maps for additional instructions).
  - Do not graze animals on treated green forage or stubble.
  - Do not use treated hay or treated straw for animal feed or bedding.
  - Do not apply within 45 days of harvest.
- Snap beans:
  - Do not exceed 1.6 pints per acre of LIBERTY FOMESAFEN 1.88SL in any single year.
  - Do not exceed the maximum rate that can be applied in all geographic regions (refer to the maps for additional instructions).
  - Do not graze treated areas or harvest for forage or hay.
  - Do not use treated hay or treated straw for animal feed or bedding.
  - Do not apply within 30 days of harvest.

# DIRECTIONS FOR USE ON COTTON

#### **Preemergence Applications:**

Apply LIBERTY FOMESAFEN 1.88SL preemergence at 1-1.6 pts./A in Region 1 to control and/or partially control weeds listed on this label. Preemergence applications can only be made to coarse textured soils (sandy loam, loamy sand, sandy clay loam). DO NOT apply to fine or medium textured soils or crop injury may occur.

To broaden weed control, tank mix LIBERTY FOMESAFEN 1.88SL with other preemergence herbicides such as Caparol®, Cotoran®, Direx®, Karmex®, Solicam®, or Staple®

LIBERTY FOMESAFEN 1.88SL can be tank mixed with burndown herbicides to control emerged weeds in cotton. In reduced tillage plantings, LIBERTY FOMESAFEN 1.88SL can be applied up to 14 days prior to planting or at planting with burndown herbicide. Refer to the tank mix partner label for directions for use, restrictions, and limitations. The most restrictive label directions apply.

Cotton plants are tolerant to preemergence application of LIBERTY FOMESAFEN 1.88SL when applied at specified rates on coarse textured soils. Crinkling and spotting of cotton foliage or stunting can occur, especially if rainfall is heavy during or soon after cotton emergence; however, cotton plants will outgrow these effects and develop normally.

Cotton foliage is NOT tolerant to LIBERTY FOMESAFEN 1.88SL. Do not apply this product over the top of emerged cotton foliage as unacceptable injury will occur.

#### **Post Direction Application:**

Apply LIBERTY FOMESAFEN 1.88SL to emerged cotton as post directed treatment using precision directed hooded or shielded application equipment for complete coverage of emerged weeds. Apply LIBERTY FOMESAFEN 1.88SL at 1-1.6 pints per acre in a minimum of 10 gallons of spray solution per acre.

Post directed applications will provide contact control of emerged weeds listed on this label, and will provide residual preemergence control of labeled weeds (once the product is activated by rainfall or irrigation). See the Application Rates table for a list of controlled weeds and the specified application rates, weed growth stages, and application instructions.

Apply LIBERTY FOMESAFEN 1.88SL with a nonionic 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 LIBERTY FOMESAFEN 1.88SL or LIBERTY FOMESAFEN 1.88SL tank mixes in cotton.

Post directed applications of LIBERTY FOMESAFEN 1.88SL can broaden the weed control spectrum when tank mixed with other labeled post directed herbicides such as Caparol, Direx, Dual MAGNUM®, Envoke®, Karmex, Layby<sup>™</sup>, Pro Sequence® or Suprend®. When LIBERTY FOMESAFEN 1.88SL is applied with hooded or shielded sprayers, the product can be tank mixed with burndown products. Refer to the tank mix partner label for complete instructions and restrictions. The most restrictive product labeling applies.

Cotton foliage is NOT tolerant to LIBERTY FOMESAFEN 1.88SL. Do not apply this product to cotton foliage as unacceptable injury will occur. Calibrate application equipment (spray pressure, nozzle type, configuration, and orifice size) to avoid fine spray droplets from contacting green cotton stems and foliage.

#### Post Directed Application Timing in Cotton:

Apply this product to cotton at least 6 inches in height through lay by as a post directed application. Avoid spray contact with any green non barked parts of the cotton plant and foliage when making post directed applications as unacceptable crop injury can occur. Application timing for post directed applications should be:

Shield Hooded Applications: Make a precision post directed application of LIBERTY FOMESAFEN 1.88SL when cotton is at least 6 inches tall to avoid injury. Use hooded or shielded spray equipment to apply LIBERTY FOMESAFEN 1.88SL in cotton that is between 6-12 inches tall. Adjust nozzles to provide full coverage of emerged weeds.

Layby Applications: Make a post directed application of LIBERTY FOMESAFEN 1.88SL to the base of the cotton plant. Avoid 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. Configure application equipment to provide full coverage of emerged weeds.

#### **Use Precautions on Cotton:**

• If two consecutive yearly applications are made, allow a 2-year interval before making another application.

To Suppress Woolyleaf Bursage (Lakeweed) Ambrosia Gray in Texas: Apply 1.6 pints per acre of LIBERTY FOMESAFEN 1.88SL to cultivated areas of cropland in the fall or spring as a spot treatment. Incorporate to a 2-3 inch depth to suppress woollyleaf bursage. Apply with ground equipment.

Using adjuvants with LIBERTY FOMESAFEN 1.88SL will significantly improve initial burndown of any woollyleaf bursage, but the effect is temporary, and therefore, not necessary.

It may take 6-8 months for significant suppression to occur, but suppression should continue for 2 years after application. Cotton or soybeans can be planted in treated areas. Significant damage to cotton planted within 18 months of application may occur under certain conditions. A 3-year interval from last application to planting is required for all other crops.

# **Use Restrictions on Cotton:**

- Do not apply less than 70 days before harvest.
- Do not apply more than 1.6 pints per acre in any year.
- Do not make more than one application per year.

#### DIRECTIONS FOR USE ON POTATOES Not for use on Sweet Potatoes or Yams

Apply LIBERTY FOMESAFEN 1.88SL as a broadcast preemergence application after planting, but before potato emergence to control and/or partially control weeds listed on this label. If later cultural practices expose untreated soil reduced effectiveness will occur. For application by center pivot irrigation, see the Center Pivot Irrigation Application section for instructions.

NOTE: Plant response to LIBERTY FOMESAFEN 1.88SL may vary by potato species. Determine crop tolerance before making an initial application of LIBERTY FOMESAFEN 1.88SL to any particular species.

# Tank Mixing with Products Registered for Use on Potatoes:

For preemergence applications, tank mix LIBERTY FOMESAFEN 1.88SL with other pesticide products registered for use on potatoes with the same application methods and timing. The most restrictive label directions for use, precautions/limitations, and restrictions must be followed when tank mixing with other products. Perform a compatibility test before attempting large scale mixing if the products have not been mixed before. See the Tank Mix Compatibility section for complete instructions.

#### **Use Precautions on Potatoes:**

• Refer to the Regional Use Maps for the maximum application rates of LIBERTY FOMESAFEN 1.88SL (or other fomesafen-containing products) that may be applied per year or alternate year in each geographic region.

#### **Use Restrictions on Potatoes:**

- Do not exceed 1 pint/acre per season.
- Do not harvest potatoes within 70 days of application.
- Do not apply this product to sweet potatoes or yams.
- Do not apply this product as a preplant incorporated application—plant injury will occur.
- Do not apply to emerged potato plants or severe crop injury will occur.

# DIRECTIONS FOR USE ON SOYBEANS

#### Preplant Surface and Preemergence Application:

Apply LIBERTY FOMESAFEN 1.88SL as preplant surface or premergence application in Regions 1, 2, 3, and 4 only to control and/or partially control weeds listed on this label. LIBERTY FOMESAFEN 1.88SL and be applied alone, tank mixed, or followed up with other soybean herbicides to broaden weed control. See the Tank Mix and Sequential Application section for instructions.

LIBERTY FOMESAFEN 1.88SL can be tank mixed with a burndown herbicide labeled to control emerged weeds in soybeans. In reduced tillage plantings, apply LIBERTY FOMESAFEN 1.88SL up to 14 days prior to planting or at planting with a burndown herbicide.

#### **Postemergence Application:**

Apply LIBERTY FOMESAFEN 1.88SL as a postemergence broadcast application in Regions 1, 2, 3, 4, and 5 to control and/or partially control the weeds listed in this label. The application rate will depend on the weed species and growth stage. See the Spray Additive section for instructions for using spray additives. To enhance control of susceptible broadleaf weeds by postemergence application on soybeans in Regions 2, 3, 4, and 5 use 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.

Apply LIBERTY FOMESAFEN 1.88SL alone or in combination with other postemergence herbicides labeled for use on soybeans to increase the weed control spectrum. See the Tank Mix and Sequential Application section for additional instructions.

Bronzing, crinkling, and/or spotting of soybean leaves can occur following postemergent application; however, soybean plants outgrow these effects and develop normally.

#### SEQUENTIAL APPLICATIONS AND TANK MIXES FOR SOYBEANS

Apply LIBERTY FOMESAFEN 1.88SL sequentially or in tank mix with any of the following products: Assure II®, Basagran®, Butyrac®, Classic®, FirstRate®, Fusilade

DX, Fusion, Ignite®, Glyphosate (such as Touchdown®, Roundup®, Glyphomax<sup>™</sup>), Harmony®, Poast®, Poast Plus®, Pursuit®, Raptor®, Resource®, Scepter®, Select®, and Synchrony® STS®. The tank mixture of LIBERTY FOMESAFEN 1.88SL with any of these broadleaf herbicides can reduce the effectiveness of any postemergence grass herbicide in the mixture under certain conditions.

# **Sequential Application Instructions:**

Apply LIBERTY FOMESAFEN 1.88SL or LIBERTY FOMESAFEN 1.88SL mixtures 2-3 days after the application of the grass herbicide. If LIBERTY FOMESAFEN 1.88SL or the LIBERTY FOMESAFEN 1.88SL mixture is applied first, apply the grass herbicide when grass weeds begin to develop new leaves (generally around 7 days).

- Crop injury can occur as a result of tank mix applications compared to either product used alone.
- When mixing Butyrac with LIBERTY FOMESAFEN 1.88SL do not exceed 1 fl. oz. of Butyrac per acre.
- When tank mixing with Synchrony STS use no more than 0.25 oz./A of herbicide in the tank with labeled rates of LIBERTY FOMESAFEN 1.88SL on non-STS varieties. For additional broadleaf weed control, apply this tank mix postemergence to any soybean variety. Refer to the Synchrony STS label for more information and crop rotation restrictions.
- Always read and follow the instructions, restrictions and limitations for all products whether used alone, sequentially or in a tank mix. The most restrictive labeling of any product used applies.

# TANK MIXING LIBERTY FOMESAFEN 1.88SL WITH GLYPHOSATE PRODUCTS

For improved control of morningglory, hemp sesbania, waterhemp, and black nightshade and other weeds that are glyphosate tolerant, tank mix LIBERTY FOMESAFEN 1.88SL at 6-12 oz./A, with glyphosate products.

FOLLOW THE INSTRUCTIONS ON THE GLYPHOSATE PRODUCT LABEL FOR THE USE OF SPRAY ADDITIVES IN A GLYPHOSATE/LIBERTY FOMESAFEN 1.88SL TANK MIX. MINUTE QUANTITIES OF THIS TANK MIX CAN CAUSE SEVERE DAMAGE AND/OR DESTRUCTION TO ANY NON-TARGET VEGETATION.

Note: Postemergence application of this tank mix on soybean varieties that are not glyphosate tolerant will be severely injured or destroyed. Always read and follow the instructions, restrictions and limitations for all products used. The most restrictive labeling of any product applies.

# **Use Precautions on Soybeans:**

• Refer to the Regional Use Maps for the maximum application rates of LIBERTY FOMESAFEN 1.88SL (or other fomesafen-containing products) that may be applied per year or alternate year in each geographic region.

#### **Use Restrictions on Soybeans:**

- Do not exceed 1.6 pints/acre in one year.
- Adhere to maximum rate that may be applied to each geographical region.
- Do not graze treated areas or harvest for forage or hay.
- Do not apply within 45 days of harvest.

# AERIAL SPRAY DRIFT MANAGEMENT ADVISORY

#### 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 is 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 3/4 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 should be observed.

The applicator should be familiar with and take into account the information covered in the AERIAL DRIFT REDUCTION ADVISORY.

# AERIAL DRIFT REDUCTION ADVISORY

This section is advisory in nature and does not supersede the mandatory label requirements.

#### INFORMATION ON DROPLET SIZE

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

# CONTROLLING DROPLET SIZE

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure:** Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

- Number of Nozzles: Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation:** Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lower drift.

#### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than <sup>3</sup>/<sub>4</sub> 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 target 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 should 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 winds speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

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

#### **TEMPERATURE INVERSIONS**

Applications 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, nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

SCIENTIFIC NAME	COMMON NAME
Amaranthus palmeri	Amaranth, Palmer
Amaranthus spinosus	Amaranth, Spiny
Anoda cristata	Anoda, Spurred
Cardiospermum halicacabum	Balloonvine
Echinochloa crus-galli	Barnyardgrass
Convolvulus arvensis	Bindweed, Field
Calystegia sepium	Bindweed, Hedge
Brachiaria platyphylla	Broadleaf Signalgrass
Mollugo verticillata	Carpetweed
Citrullus vulgaris	Citron (Wild Watermelon)
Xanthium strumarium	Cocklebur, Common
Acalypha ostryifolia	Copperleaf, Hophornbeam
Acalypha virginica	Copperleaf, Virginia
<i>Digitaria</i> spp.	Crabgrass
Crotalaria spectabilis	Crotalaria, Showy
Croton glandulosus	Croton, Tropic
Cucumis sativas	Cucumber, Volunteer
Eclipta prostrata	Eclipta
Setaria faberi	Foxtail, Giant
Setaria viridis	Foxtail, Green
Setaria pumila	Foxtail, Yellow
Eleusine indica	Goosegrass
Physalis angulata	Groundcherry, Cutleaf
Cannabis sativa	Hemp
Solanum carolinense	Horsenettle
Datura stramonium	Jimsonweed
Sorghum halepense	Johnsongrass, Seedling
Polygonum persicaria	Ladysthumb
Chenopodium album	Lambsquarters, Common

Scientific Names of Weeds Listed in the LIBERTY FOMESAFEN 1.88SL label.

Caperonia castaneifolia	Mexicanweed
Sarcostemma cynanchoides	Milkweed, Climbing
Ampelamus albidus	Milkweed, Honeyvine
Ipomoea quamoclit	Morningglory, Cypressvine
<i>Ipomoea hederacea</i> var. <i>integriuscula</i>	Entireleaf
<i>Ipomoea hederacea</i> var. <i>hederacea</i>	Ivyleaf
Ipomoea turbinata	Purple Moonflower
Ipomoea coccinea	Red (Scarlet)
Jacquemontia tamnifolia	Smallflower
Ipomoea lacunosa	Pitted (Small White)
Ipomoea purpurea	Tall (Common)
Ipomoea wrightii	Palmleaf (Willowleaf)
Brassica kaber	Mustard, Wild
Solarium nigrum	Nightshade, Black
Cyperus esculentus	Nutsedge, Yellow
Panicum dichotomiflorum	Panicum, Fall
SCIENTIFIC NAME	COMMON NAME
Panicum texanum	Panicum, Texas
Amaranthus retroflexus	Pigweed, Redroot
Amaranthus hybridus	Pigweed, Smooth
Euphorbia heterophylla	Poinsettia, Wild
Portulaca oleracea	Purslane, Common
Richardia scabra	Pusley, Florida
Ambrosia artemisiifolia	Ragweed, Common
Ambrosia trifida	Ragweed, Giant
Melochia corchorifolia	Redweed
Sesbania exaltata	Sesbania, Hemp
Cassia obtusifolia	Sicklepod
Sida spinosa	Sida, Prickly
Polygonum pensylvanicum	Smartweed, Pennsylvania
Cucumis melo	Smellmelon
Euphorbia humistrata	Spurge, Prostrate
Euphorbia maculata	Spurge, Spotted
Acanthospermum hispidum	Starbur, Bristly
Helianthus annuus	Sunflower, Common
Campsis radicans	Trumpetcreeper
Abutilon theophrasti	Velvetleaf
Hibiscus trionum	Venice Mallow
Amaranthus rudis	Waterhemp, Common
Amaranthus tuberculatus	Waterhemp, Tall
Striga asiatica	Witchweed
Barbarea vulgaris	Yellow Rocket

# **STORAGE AND DISPOSAL**

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

#### **Prohibitions**

Open dumping is prohibited. Do not reuse empty container.

#### Pesticide Storage

Store above 32°F in original containers only. If product solidifies, return to room temperature and agitate to reconstitute. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area.

#### Pesticide Disposal

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

#### **Container Handling [Less Than 5 Gallons]**

Non-refillable 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 1/4 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 [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.

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

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

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of LIBERTY CROP PROTECTION LLC or Seller, To the extent consistent with applicable law, all such risks shall be assumed

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