

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

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

March 10, 2017

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

Subject: Notification per PRN 98-10 – Change brand names to chemical names Product Name: LIBERTY METRIBUZIN 4L EPA Registration Number: 89168-62 Application Date: 1/11/2017 Decision Number: 525126

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 Sarah Meadows at 703-347-0505 or via email at meadows.sarah@epa.gov.

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Sincerely,

FOR

Reuben Baris, Product Manager 25 Herbicide Branch Registration Division (7505P) Office of Pesticide Programs



#### 89168-62

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:

3/10/2017

Group 5

Herbicide

# **LIBERTY METRIBUZIN 4L**

For control of certain grasses and broadleaf weeds.

ACTIVE INGREDIENT: %	BY WT.
Metribuzin: 4-Amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one	41.0%
OTHER INGREDIENTS:	<u>59.0%</u>
TOTAL:	100.0%

This product contains 3.8 lbs. of Metribuzin per gallon

### KEEP OUT OF REACH OF CHILDREN CAUTION / PRECAUCIÓN

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.)

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300

#### SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS.

EPA REG. NO. 89168-62

EPA EST. NO.: \_\_\_\_\_

NET CONTENTS: \_\_\_\_GAL (\_\_\_\_L)

Manufactured for: LIBERTY CROP PROTECTION LLC 4850 Hahns Peak Drive, Suite 200 Loveland, CO 80538

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	FIRST AID
IF	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> </ul>
SWALLOWED:	<ul> <li>Have person sip a glass of water if able to swallow.</li> </ul>
	<ul><li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>Do not give anything to an unconscious person.</li></ul>
<b>IF ON SKIN OR</b>	Take off contaminated clothing.
<b>CLOTHING:</b>	<ul> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> </ul>
	<ul> <li>Call a poison control center or doctor for treatment advice.</li> </ul>

#### NOTE TO PHYSICIAN

Treat the patient symptomatically. Symptoms of Poisoning. The compound does not cause any definite symptoms that would be diagnostic. Poisoning is accompanied by breathing difficulties and sedation.

#### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 or your poison control center at 1-800-222-1222.

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, and clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

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

#### **Engineering Control Statements:**

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

#### Users should:

#### USER SAFETY RECOMMENDATIONS

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

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwater or rinsate.

**Groundwater Advisory:** Metribuzin is a chemical which can travel (seep or leach) through soil and can contaminate groundwater which may be used as drinking water. Metribuzin has been found in groundwater as a result of agricultural use. Users are advised not to apply metribuzin where the water table (groundwater) is close to the surface, and where the soils are very permeable, i.e., well drained soils such as loamy sands. Contact your local agricultural agencies for further information on the type of soil in your area and the location of groundwater.

#### PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow to come into 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. Read entire label before using this product. This label must be in the possession of the user at the time of pesticide application. 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 12 hours. **Exception**: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, chemical-resistant gloves and shoes plus socks.

#### **PRODUCT INFORMATION**

LIBERTY METRIBUZIN 4L is a Group 5 herbicide for use on a broad spectrum of grass and broadleaf weeds in a wide variety of crops, as listed in this label. LIBERTY METRIBUZIN 4L can be used pre- and post- emergence for foliar and soil applications, with residual weed control.

#### **Restrictions:**

- Do not use on other crops grown for food or forage. Apply this product only as specified on this label.
- Do not allow sprays to drift onto adjacent desirable plants.
- Observe all cautions and limitations on labeling of all products used in mixtures.
- For all uses: Low pressure and high volume handwand equipment is prohibited.
- Do not rotate any crop not listed on this label for 18 months following application of this product.

#### **RESISTANCE MANAGEMENT**

LIBERTY METRIBUZIN 4L is a Group 5 herbicide based on the mode of action classification system of the Weed Science Society of America and a C1 photosynthesis photosystem II inhibitor as classified by the Herbicide Resistant Action Committee (HRAC). Any weed population may contain or develop plants naturally resistant to LIBERTY METRIBUZIN 4L and other Group 5 herbicides. Weed species with natural or acquired resistance to Group 5 may eventually dominate the weed population if Group 5 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. Such resistant weed plants may not be effectively managed using Group 5 herbicides but may be effectively managed utilizing another herbicide alone or in mixtures from a different Group and/or by using cultural or mechanical practices. However, the herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides.

To delay herbicide resistance, consider using diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides:

• Avoid the consecutive use of LIBERTY METRIBUZIN 4L or other target site of action Group 5 herbicides that have a similar target site of action on the same weed species.

- Using tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or premix rate on the weed(s) of concern.
- Base herbicide use on a comprehensive Integrated Pest Management (IPM) and Integrated Resistance Management (IRM) program.
- Use labeled rate and directions for use to delay selection for resistance.
- Monitor treated weed populations to facilitate the early identification of weeds shifts and/or weed resistance development (also provides direction on future weed management practices).
- Control escaped weeds by implementing measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively is one of the best ways to contain resistant populations.
- Contact your local extension specialist, certified crop advisor, and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

#### **APPLICATION PROCEDURES**

LIBERTY METRIBUZIN 4L cannot be applied with low pressure or high volume handwand equipment.

Use a standard low pressure (20 to 40 psi.) herbicide boom sprayer equipped with suitable nozzles and screens no finer than 50-mesh in nozzle and in-line strainers. Agitate thoroughly before and during application with bypass agitation.

**Ground Application**: Apply the proper rate of LIBERTY METRIBUZIN 4L in a minimum of 10 to 40 gallons of spray mixture per acre broadcast.

**Banded Application:** Use proportionally less LIBERTY METRIBUZIN 4L per acre in a band versus a broadcast application. For band application use 1/4 to 1 gallon of spray mix per inch of band width regardless of row spacing.

For band applications, calculate amount to be applied per acre as follows:

Band width in inchesxBroadcast rate per acre=Amount needed per acre of fieldRow spacing in inchesx

**Aerial Application:** Where permitted, apply specified rate in a minimum of 2 to 10 gallons of spray mixture per acre. Do not apply aerially when wind speed is greater than 10 mph.

**Note:** Do not apply aerially when LIBERTY METRIBUZIN 4L is tank mixed with Alachlor.

**For All Applications of LIBERTY METRIBUZIN 4L:** Sprayer must be accurately calibrated before applying LIBERTY METRIBUZIN 4L. Check sprayer during application to be sure it is working properly and delivering a uniform spray pattern. As the volume of spray mixture decreases per acre, the importance of accurate calibration and uniform application increases. Avoid over application, misapplication, and boom and spray swath overlapping that will increase spray dosage. (Crop injury may occur as a result). Avoid spray skips and gaps which allow weeds to grow in untreated soil.

Do not apply when weather conditions favor spray drift and/or when sensitive or cool season crops, such as cole crops, onions, peas, or strawberries are present in adjacent fields or in areas where wheat is growing in coarse textured soils.

**SOIL TEXTURE:** As used on this label, "Coarse soils" are loamy sand or sandy loam soils. "Medium soils" are loam, silt loam, silt, sandy clay, or sandy clay loam. "Fine soils" are silty clay, silty clay loam, clay, or clay loam. Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

#### **APPLICATION OF LIBERTY METRIBUZIN 4L IN FLUID FERTILIZERS**

LIBERTY METRIBUZIN 4L may be applied in fluid fertilizer solutions to alfalfa and soybeans by following the appropriate mixing procedures and compatibility check. When using tank mix combinations, be sure all components are compatible. Compatibility checks of LIBERTY METRIBUZIN 4L and tank mix combinations which include LIBERTY METRIBUZIN 4L should be made for each batch of fluid fertilizer because of the variability of these fertilizers.

#### **Compatibility Check:**

- 1. Premix 2 teaspoons of LIBERTY METRIBUZIN 4L with 8 teaspoons of water (1:4 ratio) in a quart jar by adding the water first and follow with LIBERTY METRIBUZIN 4L. Mix thoroughly. If a second herbicide is to be used, double the amount of water (1:8 ratio) and add the second herbicide after mixing LIBERTY METRIBUZIN 4L first.
- 2. Then pour 1 pint of fluid fertilizer into the quart jar and shake well.
- 3. Allow to stand for 5 minutes.

This compatibility check should only be used when mixing with fluid fertilizers.

**Interpretation of Results:** If the solution in the jar appears to be uniform, without signs of agglomeration, or without a separation of an oily film on top of the fertilizer, the mixture may be used. If not, repeat the compatibility check using twice the amount of water or add a compatibility agent to the water. If separation occurs, but the mixture can be resuspended by shaking, then application is possible with good agitation in the spray tank.

#### Tank Mixing Guidelines:

- 1. Add the required amount of water and compatibility agent (if required) to the tank. Start agitation system while adding LIBERTY METRIBUZIN 4L and follow by adding the fluid fertilizer and agitate.
- 2. If a second herbicide is to be used, follow as above in 1, but use twice the amount of water. Start agitation and add LIBERTY METRIBUZIN 4L and follow by adding the second herbicide, and then continue filling the tank with fluid fertilizer.
- 3. Maintain continuous agitation to assure uniform spray mixture until the tank is emptied.

## COMMERCIAL IMPREGNATION AND APPLICATION OF LIBERTY METRIBUZIN 4L ON DRY BULK FERTILIZER

Dry bulk fertilizer may be impregnated or coated with LIBERTY METRIBUZIN 4L for application to established alfalfa and soybeans. All recommendations, cautions, and special precautions on this label must be followed along with state regulations relating to dry bulk fertilizer blending, impregnating and labeling.

**Impregnation:** To impregnate, use a system consisting of a belt, conveyor, or closed drum which is used for dry bulk fertilizer blending. Any commonly used fertilizer can be impregnated with LIBERTY METRIBUZIN 4L except ammonium nitrate, or fertilizers containing ammonium nitrate, potassium nitrate, or sodium nitrate. Do not use on powder limestone.

Apply using a minimum of 200 pounds dry bulk fertilizer per acre and up to a maximum of 450 pounds per acre. To impregnate or coat dry bulk fertilizer, mix LIBERTY METRIBUZIN 4L with sufficient water to form a sprayable slurry. The delivery nozzles must be directed to deliver a fine spray toward the fertilizer for thorough coverage while avoiding spray contact with mixing equipment. Uniform impregnation of LIBERTY METRIBUZIN 4L to dry bulk fertilizer will vary and if the absorptivity is not adequate, an adsorptive powder may be added to produce a dry, free-flowing mixture. Micro-Cel E (Johns Manville Product Corporation) is the recommended absorbent powder. When another herbicide is used with LIBERTY METRIBUZIN 4L, mix and impregnate immediately.

Apply immediately after impregnation unless experience has shown that impregnated fertilizer can be stored without becoming lumpy and difficult to spread.

**Rates:** Select the indicated rate of LIBERTY METRIBUZIN 4L per acre from the appropriate section of this label and refer to the formula below to determine the amount of LIBERTY METRIBUZIN 4L which is to be impregnated on a ton of dry bulk fertilizer based on the amount of fertilizer which will be distributed on one acre.

Pt LIBERTY METRIBUZIN 4L	V	2000 lb. Fertilizer	_	Pt LIBERTY METRIBUZIN 4L
Per Acre	~	Acre	=	Ton of Fertilizer

**APPLICATION:** Uniform application is essential for satisfactory weed control. Accurate calibration of fertilizer application equipment is essential for uniform distribution to the soil surface. Apply half the labeled rate and overlap 50%, or to double, apply by splitting the middles to obtain the best distribution pattern.

If fertilizer materials are excessively dusty, use diesel oil or other suitable additive to reduce dust prior to impregnation as dusty fertilizer will result in poor distribution during application. Crop injury and/or poor weed control may occur where the impregnated fertilizer is not uniformly applied.

**INCORPORATION AND COMBINATION USES:** When LIBERTY METRIBUZIN 4L is to be used in combination with another herbicide, follow directions on this label for combinations, rates, crops, incorporation, and special precautions.

#### CHEMIGATION

LIBERTY METRIBUZIN 4L can be applied through sprinkler irrigation equipment to potatoes, tomatoes, soybeans and asparagus as directed on this label. Refer to the crop sections of this label for use rates, weeds controlled or suppressed, restrictions, and special precautions.

Apply this product only through sprinkler (including center pivot, lateral move, or solid set) irrigation systems. 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.

**Calibration: (Center Pivot and Self-Propelled Lateral Move Systems):** Sprinkler irrigation systems must be accurately calibrated for application of LIBERTY METRIBUZIN 4L. Greater accuracy in calibration (and distribution) will be achieved by injecting a larger volume of a more dilute mixture of product and water per hour. Follow the steps below to calibrate center pivot and lateral move systems:

- 1. Determine number of minutes required to make one complete revolution while applying 1/4 to 3/4 inch of water per acre.
- 2. With the system at operating pressure determine the exact number of minutes required to inject one gallon of water.
- 3. Divide the time required for one revolution (step 1) by the time required to inject one gallon (step 2). This gives total gallons of product water mixture to be added to nurse tank.
- 4. Add required amount of water to nurse tank and start the agitation system. Then add sufficient LIBERTY METRIBUZIN 4L at the listed rate (See "Broadcast Applications") to the nurse tank.

**EXAMPLE:** If 20 hours (1200 minutes) were required for one revolution and if 2 minutes were required to inject one gallon, then a total of 600 gallons of product water mixture are required (1200/2 = 600); to treat 135 acres at 1 pint per acre, 135 pints (16 gallons and 7 pints) of LIBERTY METRIBUZIN 4L are required.

If you have questions about calibration, you should contact State Extension Service 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.

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) 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.

Maintain continuous agitation in the injection nurse tanks during the herbicide application, sufficient to keep herbicide in suspension.

Apply specified dosage in 1/4 to 3/4 inch of water (1/4 to 1/2 inch of water on sandy soils) per acre as a continuous injection in center pivot and lateral move systems or in the last 15 to 30 minutes of set in permanent solid set sprinkler systems. Application of more than the quantity of irrigation water indicated on this label may result in decreased product performance by removing the chemical from the zone of effectiveness. Where sprinkler distribution patterns do not overlap sufficiently unacceptable weed control may result.

Where sprinkler distribution patterns overlap excessively crop injury may result. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. To insure that lines are flushed and free of remaining pesticide, an indicator dye may be injected into the lines to mark the end of the application period.

Use a minimum of 1-part water to 1-part herbicide for injection. The use of a larger volume of water will insure greater accuracy and more uniform distribution.

Consult State Agricultural Experiment stations or State Agricultural Extension Service for additional information as the time of applications needed will vary with the local conditions.

#### SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions regarding spraying. The following spray drift management requirements must be followed to avoid off target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

#### For aerial applications:

- The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or 90% of the rotor blade diameter.
- Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45°.

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 "Spray Drift Management" section.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap as crop injury may result.

#### 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" sections of this label).

#### **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 listed pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### Boom Length

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

#### Application Height

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

#### Swath Adjustment

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

#### Wind

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

#### **Temperature and Humidity**

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

#### **Temperature Inversions**

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated

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

#### **Sensitive Areas**

The pesticide should 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.)

#### MIXING PROCEDURES

Any tank mix containing LIBERTY METRIBUZIN 4L should be kept agitated and sprayed out immediately. Do not allow tank mixes to stand for prolonged periods of time.

The proper mixing procedure for LIBERTY METRIBUZIN 4L alone or in tank mix combinations with other herbicides is:

- 1. Be sure sprayer is clean and not contaminated with any other materials or crop injury or sprayer clogging may result. Examine strainers and screens to be sure the sprayer is clean from previously used pesticides.
- 2. Fill the spray tank 1/4 to 1/3 full with clean water.
- 3. Start agitation.
- 4. Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface.
- 5. Add listed rate of LIBERTY METRIBUZIN 4L while recirculating and with agitator running.
- 6. Mix thoroughly and add clean water to fill spray tank to desired level.
- 7. Add the tank herbicide(s) and agitate thoroughly.
- 8. Continue agitation during application and until sprayer tank is empty.

#### CLEANING

Do not use the same sprayer without thoroughly cleaning on sensitive crops, as even small residues of LIBERTY METRIBUZIN 4L in the tank may cause injury to these crops.

Wash sprayer and spray equipment thoroughly with clean water immediately after use. Drain any remaining spray solution of LIBERTY METRIBUZIN 4L from the spray tank and dispose of according to label disposal instructions. Rinse the spray tank and refill with water, adding a heavy duty detergent at the rate of 1 cup per 20 gallons of water. Recycle this mixture through the equipment for 5 minutes and spray out. Repeat this procedure twice. Fill the spray tank with clean water, recycle for 5 minutes, and spray out. Clean pump and nozzle screens thoroughly. Wash away any spray mixture from the outside of spray tank, nozzles or spray rig. All rinse water must be disposed of in compliance with local, state, and Federal guidelines.

#### **SOYBEANS (Except California)**

LIBERTY METRIBUZIN 4L tank mix combinations can be used for preplant incorporated applications, preemergence surface applications, split-shot application and extended split-shot application. LIBERTY METRIBUZIN 4L can also be used as an overlay application following a preplant incorporated application of a grass herbicide and alone as a preemergence surface application. All these applications can be applied with ground equipment, and some can be applied with aerial spray equipment. In addition, LIBERTY METRIBUZIN 4L can be applied as a postemergence directed spray to soybeans in certain states.

#### **Special Precautions:**

Injury to soybeans may occur when LIBERTY METRIBUZIN 4L is used under the following conditions: • When soils have a calcareous surface area or a pH of 7.5 or higher.

- Due to the sensitivity of certain soybean varieties, consult your LIBERTY representative or your seed supplier for information on the tolerance of newly released soybean varieties, prior to use of LIBERTY METRIBUZIN 4L.
- When applied in conjunction with soil applied organic phosphate pesticides.
- Over application or boom overlapping may result in stand loss and soil residues.
- Uneven application or improper incorporation can decrease the level of weed control and/or increase the level of injury.
- When applied to any soil with less than 1/2% organic matter.
- Soil incorporation deeper than indicated.
- When sprayers are not calibrated accurately.
- When heavy rains occur soon after application, especially in poorly drained areas where water may stand for several days
- When soybeans are planted less than 1 1/2 inches deep, particularly in preemergence application.

**Activation**: A minimum amount of soil moisture is required to activate LIBERTY METRIBUZIN 4L. In areas of low rainfall, preemergence applications to dry soil should be followed with light irrigation of ¼ acre inch of water. Do not apply heavy irrigation immediately after application. As with many surface applied herbicides, weed control and crop tolerance may vary with rainfall and/or soil texture.

**Grazing and Feeding Treated Vines:** Treated vines may be grazed or fed to livestock 40 days after application when LIBERTY METRIBUZIN 4L is applied alone or with Alachlor, Metolachlor, Pendimethalin or Trifluralin.

Do not use treated vines for feed or forage when LIBERTY METRIBUZIN 4L is applied with Ethafluralin, Linuron plus Alachlor or Linuron plus metolachlor

**Rate Ranges**: Where a rate range is shown, use a lower rate on soils that are coarse textured or low in organic matter. Use a higher rate on soils that are relatively fine textured or high in organic matter.

**Replanting:** If replanting is necessary in fields treated with LIBERTY METRIBUZIN 4L as directed on this label, the field may be replanted to soybeans. Minimize tillage to prevent crop injury. Do not apply a second treatment as injury to soybeans may occur.

WEEDS CONTROLLED BY LIBERTY METRIBUZIN 4L TANK MIX COMBINATIONS									
C = Control S = Suppression or Erratic Control									
P = Poor or No Control O = No informat	tion (Control n	nay range	e from po	oor to e	xcellent	)			
1 = LIBERTY METRIBUZIN 4L Alone 4 =	LIBERTY ME Metolachlor	TRIBUZII	N 4L plus	5.	7 = Exte	nded Sp	olit Shot		
2 = LIBERTY METRIBUZIN 4L Split- 5 = Shot	LIBERTY ME Pendimethali		N 4L plus	5	8 = LIBE Etha	RTY ME	TRIBUZ	<b>XIN 4L pl</b>	us
3 = LIBERTY METRIBUZIN 4L plus 6 = Trifluralin	LIBERTY ME Alachlor	TRIBUZII	N 4L plus	5			TRIBUZ Alachle		us
ANNUAL BROADLEAF WEEDS	1	2	3	4	5	6	7	8	9
Black Nightshade (Solanum nigrum)	Р	Р	Р	С	Р	С	С	Р	S
Bristly Starbur (Acanthospermum hispidum)	С	С	С	С	С	С	С	С	С
Buffalobur (Solanum rostratum)	С	С	Р	Р	Р	Р	С	Р	0
Carpetweed (Mollugo verticillata)	С	С	С	С	С	С	С	С	С
Cocklebur (Xanthium pensylvanicum)	S	С	S	S	S	S	С	S	S
Copperleaf, Hophornbeam (Acalypha ostryaefo	olia) C	С	С	С	С	С	С	С	С
Florida Beggarweed (Desmodium tortuosum)	С	С	С	С	С	С	С	С	С
Florida Pusley ( <i>Richardia scabra</i> )	С	С	С	С	С	С	С	С	С
Galinsoga ( <i>Galinsoga</i> spp.)	С	С	С	С	С	С	С	С	С
Horseweed/Marestail (Conyza canadensis)	0	0	0	0	0	0	С	0	0

Jimsonweed (Datura stramonium)	С	С	С	С	С	С	С	С	S
Knotweed ( <i>Polygonum</i> spp.)	С	С	С	С	С	С	С	С	С
Kochia ( <i>Kochia scoparia</i> )	С	С	С	С	С	С	С	С	С
Lambsquarters (Chenopodium spp.)	С	С	С	С	С	С	С	С	С
Morning, Ivyleaf (Ipomoea hederacea)	Р	Р	S	Р	Р	Р	Р	Р	Ρ
Morningglory, Pitted ( <i>Ipomoea lacunosa</i> )	Р	Р	S	Р	Р	Р	Р	Р	Ρ
Morningglory, Smallflower (Jacquemontia tamnifolia)	Р	Р	С	Р	Р	Ρ	Р	Р	Р
Morningglory, Tall (Ipomoeapurpurea)	Р	Р	S	Р	Р	Р	Р	Р	Ρ
Pigweeds (Amaranthus spp.)	С	С	С	С	С	С	С	С	С
Prickly Sidal Teaweed (Sida spinosa)	С	С	С	С	С	С	С	С	С
Purslane ( <i>Portulaca oleracea</i> )	С	С	С	С	С	С	С	С	С
Ragweed, Common (Ambrosia artemisiifolia)	С	С	С	С	С	С	С	С	С
Redweed (Melochia corchorifolia)	С	С	С	С	С	С	С	С	С
Russian Thistle (Salsola iberica)	С	С	С	С	С	С	С	С	С
Sesbania ( <i>Sesbania</i> spp.)	С	С	С	С	С	С	С	С	С
Shepherdspurse (Capsella bursa-pastoris)	С	С	С	С	С	С	С	С	С
Sicklepod (Cassia obtusifolia)	С	С	S	С	S	С	С	S	S
Smartweeds (Polygonum spp.)	С	С	С	С	С	С	С	С	S
Spotted Spurge (Euphorbia maculata)	С	С	Р	С	Р	С	С	Р	0
Spurred Anoda (Anoda cristata)	С	С	С	С	С	С	С	С	0
Sunflower (Helianthus spp.)	С	С	S	S	S	S	С	S	Ρ
Velvetleaf (Abutilon theophrastň)	С	С	С	С	С	С	С	С	С
Venice Mallow ( <i>Hibiscus trionum</i> )	С	С	С	С	С	С	С	С	С
Wild Mustards ( <i>Brassica</i> spp.)	С	С	С	С	С	С	С	С	С

WEEDS CONTROLLED	<b>BY LIBER</b>	TY ME	TRIBU	ZIN 4L <sup>·</sup>	TANK	MIX CC	MBIN/	TIONS	;	
C = Control S = Suppression or Erratic Control										
P = Poor or No Control O = No information (Control may range from poor to excellent)										
1 = LIBERTY METRIBUZIN 4L Alone	4 = LIBERT Metolac		RIBUZIN	l 4L plus		7 = Exte	nded Sp	olit Shot		
2 = LIBERTY METRIBUZIN 4L Split- Shot	5 = LIBERT Pendim		RIBUZIN	l 4L plus	; 1	8 = LIBE Etha	RTY ME fluralin	TRIBUZ	IN 4L p	us
3 = LIBERTY METRIBUZIN 4L plus Trifluralin								TRIBUZ Alachic		us
ANNUAL GRASSES		1	2	3	4	5	6	7	8	9
Barnyardgrass (Echinochloa crus-galil)		S	С	С	С	С	С	С	С	С
Bluegrass, Annual ( <i>Poa annua</i> )		С	С	С	С	С	С	С	С	С
Broadleaf Signalgrass (Brachiaria platyphyl	lla)	С	С	С	С	С	С	С	С	0
Browntop Millet (Panicum ramosum)		С	С	С	Ρ	С	S	С	0	0
Crabgrass ( <i>Diqitaria</i> spp.)		С	С	С	С	С	С	С	С	С
Crowfootgrass (Dactyloctenium aegyptium)		С	С	С	С	С	С	С	0	0
Cupgrass ( <i>Eriochloa gracilis)</i>		Ρ	С	Р	Ρ	Р	Ρ	С	0	0
Foxtails ( <i>Setaria</i> spp.)		S	С	С	С	С	С	С	С	С
Goosegrass ( <i>Eleusine indica</i> )		С	С	С	С	С	С	С	С	С
Johnsongrass, Seedling (Sorghum halepen	rse)	С	С	С	С	С	С	С	С	0
Junglerice ( <i>Echinochloa colonum)</i>		С	С	С	С	С	С	С	С	0
Nutsedge, Yellow (Cyperus esculentus)		Ρ	Р	Р	С	Р	С	С	Р	0
Panicum, Fall (Panicum dichotomiflorum)		Ρ	С	С	С	С	С	С	С	С
Panicum, Texas (Panicum texanum)		Ρ	С	С	Ρ	С	S	S	С	0
Red Rice (Oryza sativa)		Р	С	С	С	Р	С	С	0	0

Sandbur ( <i>Cenchrus</i> spp.)	Р	С	С	Ρ	С	S	S	0	0
Shattercane (Sorghum bicolor)	Р	С	С	Р	Р	Р	Р	С	0
Sorghum, Volunteer (Sorghum spp.)	Р	С	С	Р	Р	Р	Р	0	Ρ
Sprangletop (Leptochloa spp.)	Р	С	С	Р	Р	Р	Р	0	Ρ
Stinkgrass ( <i>Eragrostis</i> spp.)	Р	С	С	Р	Р	Р	Р	0	Р
Wheat, Volunteer (Triticum spp.)	Р	Р	Р	Р	Р	Р	Р	0	Ρ
Witchgrass (Panicum capillare)	Р	С	С	С	С	С	С	С	0

#### LIBERTY METRIBUZIN 4L ALONE

**LIBERTY METRIBUZIN 4L (Alone) Preemergence Application:** The following rates of LIBERTY METRIBUZIN 4L may be applied preemergence to soybeans through center pivot or lateral move sprinkler irrigation systems that apply water in a uniform manner. Refer to the "Chemigation" section of this label for directions.

LIBERTY METRIBUZIN 4L can be applied broadcast or banded. This application may be made during planting or as a separate operation after planting but before crop emergence. See the "Product Information" section in the front of this label.

Do not apply to sand soils, or to sandy loam or loamy sand soils containing less than 2% organic matter. Do not incorporate into soil or apply more than once per season.

PINTS OF LIBERTY METRIB	PINTS OF LIBERTY METRIBUZIN 4L Per Acre							
	OF	RGANIC MATT	ER					
SOIL TEXTURE	Less than 2%	2 to 4%	Over 4%					
COARSE SOILS (sandy loam, loamy sand)	Do Not Use <sup>3</sup>	3/4	1					
MEDIUM SOILS <sup>1</sup> (Loam, silt loam, silt, sandy clay,	3/4 to 1	1 to 1 1/4	1 1/4 to 1 1/2					
sandy clay loam)								
<b>FINE SOILS</b> <sup>1</sup> (Silty clay, silty clay loam <sup>2</sup> clay, clay loam)	1 to 1 1/4	1 1/4 to 1 1/2	1 1/2 to 1 3/4					
Mississippi Delta Only	1 1/2	1 3/4	2					
<sup>1</sup> For control of lambsquarters, redroot pigweed and wild r and giant foxtails on alkaline (calcareous) soils in Neb Dakota only, apply LIBERTY METRIBUZIN 4L at rates to 3/4 pint per acre on fine soils regardless of soil organ soil pH is less than 7.5 and weed pressure is heavy METRIBUZIN 4L alone can be applied regardless of soi label use LIBERTY METRIBUZIN 4L at full rates indicate may occur on soils having a calcareous surface area or	oraska, Minneso of 1/2 pint per a iic matter percer y). The 1/2 pint I pH. For control ed in the table at	ta, South Dake cre on medium ntage (use ¾ pi t per acre rate of other weeds bove, but note th	ota and North soils and 1/2 int only where of LIBERTY s listed on this					
<sup>2</sup> Silty clay loam soils are transitional soils and may be		0	soils in some					

- <sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.
- <sup>3</sup> Refer to the appropriate section of this label for use of LIBERTY METRIBUZIN 4L on soybeans in coarse soils with 0.5% or more organic matter in certain states.

#### USES OF LIBERTY METRIBUZIN 4L IN COMBINATION WITH OTHER HERBICIDES

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

#### SEQUENTIAL APPLICATION OF IMAZAQUIN FOLLOWING LIBERTY METRIBUZIN 4L

If needed, application of LIBERTY METRIBUZIN 4L alone or in a registered tank mix according to directions on this label, may be followed by an early postemergence application of Imazaquin at labeled rates for control of cocklebur. Apply labeled rates of Imazaquin in a minimum of 20 gallons of water per acre. Use the lower rate of Imazaquin if cockleburs are less than 3 inches tall or have fewer than 3 leaves and are actively growing. For cockleburs less than 6 inches tall and actively growing use the higher rate of Imazaquin per acre. Do not use Imazaquin when soybeans or cockleburs have been subjected to stress conditions such as temperature or moisture extremes. Do not exceed a total of 0.32 lbs a.i. per acre in one season. Wait at least 10 days after application of Imazaquin before cultivating.

When preparing the spray mixture with Imazaquin, add 2 pints of nonionic surfactant approved for use on growing crops and containing at least 80% active ingredient per 100 gallons of mixture. Apply crop oil concentrate (COC) at the rate specified on the COC label.

Use Imazaquin only in the states where it is registered as listed on the product label.

Apply Imazaquin at least 90 days before harvest of soybeans. Do not graze or feed soybean forage, hay, or straw to livestock.

#### **SPLIT-SHOT APPLICATION**

A preplant incorporated application of LIBERTY METRIBUZIN 4L tank mixed with either Alachlor, Ethafluralin, Metolachlor, Pendimethalin or Trifluralin and followed by a preemergence surface application of LIBERTY METRIBUZIN 4L alone after planting but prior to soybean emergence, will control more broadleaf and grass weeds in soybeans than when either herbicide is used alone.

Refer to product labels and to appropriate sections of this label for directions on soil preparation, herbicide application, incorporation techniques, herbicide rates, weed species controlled, and restrictions for using tank mix combinations of LIBERTY METRIBUZIN 4L. Carefully observe the "Special Precautions" section concerning the use of LIBERTY METRIBUZIN 4L in tank mix combinations on soybeans. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

When a Split-Shot application of LIBERTY METRIBUZIN 4L with Ethafluralin, Pendimethalin or Trifluralin is used, the preplant incorporated tank mix may be applied up to 21 days prior to planting soybeans; with Alachlor or Metolachlor the preplant incorporated tank mix may be applied up to 14 days prior to planting.

On medium and fine textured soils with greater than 2% organic matter, a rate range is available for the LIBERTY METRIBUZIN 4L preemergence overlay application. The higher rate should be used (a) in fields with a history of severe broad leaf weed pressure, (b) when the time between preplant incorporated tank mix and preemergence overlay applications approaches the maximum stated above, and/or (c) when the organic matter content of the soil is at the upper end of the indicated range.

For black nightshade control, refer to the appropriate sections of the Alachlor, Ethafluralin or Metolachlor labels for specific instructions.

	Rate of	DICATION	Rate of LIBERTY	mergence Overlay Application Rate of LIBERTY METRIBUZIN 4L Pt/Acree ORGANIC MATTER				
SOIL TEXTURE <sup>1</sup>	Combination Product/Acre	Plus	METRIBUZIN 4L Pt/Acre	Less than 2%	2 to 4%	Over 4%		
COARSE Light) Sand, loam sand, sandy	Trifluralin or Alachlor or Metolachlor or Pendimethalin	+	1/2 Followed by					
bam) <b>/EDIUM</b>	or Ethafluralin		2/4 Fallowed by	1/4	1/4	1/4 to 1/2		
Loam, silt oam, sandy clay loam, silt,	See product label of the herbicide being used for application rate.	+	3/4 Followed by or	1/4	1/4 to 1/2	1/2 to 3/4		
sandy clay)			1/2 <sup>2</sup> Followed by	1/2	1/2 to 3/4	(3/4 to 1)		
FINE (Heavy) Silty clay oam*, clay		+	1 Followed by or	1/4	1/4 to 1/2	1/2 to 3/4		
oam, silty clay, clay)			3/4 <sup>2</sup> Followed by	1/2	1/2 to 3/4	(3/4 to 1		

\* Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

- <sup>1</sup> On coarse textured soils, do not use on sand soils with less than 1% organic matter, or on loamy sand or sandy loam soils with less than 0.5% organic matter. However, on coarse textured soils with a calcareous surface area or a pH of 7.5 or higher, do not use on sand soils with less than 2% organic matter, or on loamy sand or sandy loam soils with less than 1% organic matter.
- <sup>2</sup> Use this lower rate of LIBERTY METRIBUZIN 4L in the preplant incorporated tank mix on soils having a calcareous surface area or a pH of 7.5 or higher, and in those situations where soils within a field vary extremely in texture or organic matter content.
- <sup>3</sup> Reduce this preemergence overlay rate of LIBERTY METRIBUZIN 4L by 1/4 pint per acre when using Split-Shot application on soils with over 4% organic matter and which have a calcareous surface area or a pH of 7.5 or higher.

#### EXTENDED SPLIT-SHOT APPLICATION

#### (Includes No-Till, Reduced-Till, Ridge-Till, Strip-Till, Mulch-Till)

An early preplant (surface applied or shallow incorporated) application of LIBERTY METRIBUZIN 4L tank mixed with either Dual or Lasso Alachlor or Metolachlor, followed by a preemergence surface application of LIBERTY METRIBUZIN 4L tank mixed with Dual or Lasso Alachlor or Metolachlor after planting but prior to soybean emergence, will control more broad leaf and grass weeds in soybeans than either herbicide used alone.

An Extended Split-Shot application will decrease the need for tillage and/or contact herbicides for the control of existing vegetation prior to planting, while providing residual control of weeds after planting.

When an Extended Split-Shot application of LIBERTY METRIBUZIN 4L with Alachlor or Metolachlor is used, the preplant tank mix combination may be applied 15 to 30 days prior to planting soybeans. Follow directions on the label accompanying the product for Split-Shot applications from 0 to 14 days before planting.

Where a rate range is listed, the higher rates should be used: (a) in fields with a history of severe weed pressure, (b) when the time between early preplant tank mix and preemergence overlay applications approaches the maximum 30 days, (c) when the organic matter content of the soil is at the upper end of the indicated range, (d) when heavy crop residues are present on the soil surface, and/or (e) when the early preplant tank mix application is shallow incorporated.

When weeds exceed 1 to 1 1/2 inches in height or diameter at application, use a contact herbicide, such as Glyphosate or Paraquat.

Refer to the Alachlor or Metolachlor label, and to appropriate sections of this label for additional information on soil preparation, herbicide application, weeds controlled, precautions, restrictions, limitations and sprayer clean up. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

		EXTEN	DED SPLIT-SH	OT APPLIC	CATION						
	Early Preplant Tank Mix Application (Surface Applied or Shallow Incorporated)				Preemergence Overlay Application						
SOIL TEXTURE <sup>1</sup>	Rate of Combination Product/Acre	Plus	Rate of LIBERTY METRIBUZIN 4L Pt/Acre	Followed By	Rate of Combination Product/Acre		METF F Ol	of LIB RIBUZ Pt/Acr RGAN IATTE	e IIC		
							1/2 to 2%	2 to 4%	Over 4%		
COARSE (Light) (Sand, loamy sand, sandy loam)	Alachlor or Metolachlor See product label	+	1/2 to 3/4	Alachlor or Metolachlor	See product label of the herbicide being used for application	+	1/4	1/4 to 1/2	1/2		
MEDIUM (Loam, silt loam, sandy clay loam, silt, sandy clay)	of the herbicide being used for application rate.	+	3/4 <sup>2</sup> to 1	Alachlor or Metolachlor	rate.	+	1/2	1/2 to 3/4	3/4 to 1		
FINE (Heavy) (Silty clay loam* clay loam, silty clay, clay)		+	1 <sup>2</sup> to 1 1/4	Alachlor or Metolachlor		+	1/2	1/2 to 3/4	3/4 to 1		

\* Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

<sup>1</sup> On coarse textured soils, do not use on sand soil with less than 1% organic matter. However, on coarse textured soils with a calcareous surface area or a pH of 7.5 or higher, do not use on sand soils with less than 2% organic matter, or on loamy sand or sandy loam soils with less than 1% organic matter.

<sup>2</sup> Use the lower rate of LIBERTY METRIBUZIN 4L in the early preplant tank mix on soils having a calcareous surface area or a pH of 7.5 or higher, and in those rare situations where soils within a field vary extremely in texture or organic matter content.

#### LIBERTY METRIBUZIN 4L plus ETHAFLURALIN

**LIBERTY METRIBUZIN 4L plus Ethafluralin Overlay Application:** LIBERTY METRIBUZIN 4L may be applied as a preemergence overlay application following a preplant incorporated application of Ethafluralin. Consult the Ethafluralin label for specific directions on use, recommendations, restrictions and any additional weeds not specified on this label.

**LIBERTY METRIBUZIN 4L plus Ethafluralin Tank Mix Application:** Incorporate the tank mixture into the top 1 to 2 inches of soil within 21 days before planting according to label directions for Ethafluralinn.

Apply LIBERTY METRIBUZIN 4L plus Ethafluralin preplant incorporated if furrow irrigation is used or when a period of dry weather after application is expected. If soybeans are planted on beds, apply and incorporate the tank mixture after bed formation.

**Mixing:** Refer to the "Product Information" section of this label.

**Application:** Ethafluralin should be uniformly applied and thoroughly mixed into the soil within 2 days after application. For specific application information, refer to the "Product Information" section in the front of this label.

BROADCAST RATES LIBERTY METRIBUZIN 4L plus Ethafluralin								
LIBERTY METRIBUZIN 4L         Ethafluralin           SOIL TEXTURE         Pt/Acre         Product/Acre								
<b>COARSE</b> <sup>1</sup> (Light) (Sandy loam, loamy sand)	1/2	See Ethafluralin label of product being used for application rates						
<b>MEDIUM <sup>3</sup></b> (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4							
<b>FINE</b> <sup>3</sup> (Silty clay, silty clay loam <sup>2</sup> , silty clay, clay loam)	1							

<sup>1</sup> Do not use on coarse soils with less than 1% organic matter.

- <sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.
- <sup>3</sup> For control of lambsquarters, redroot pigweed, wild mustard and green and yellow foxtails on alkaline (calcareous) soils in Minnesota Nebraska, South Dakota and North Dakota only, apply LIBERTY METRIBUZIN 4L at rates of 1/2 pint per acre on medium soils and 1/2 to 3/4 pint per acre on fine soil regardless of soil organic matter percentage (use 3/4 pint only where soil pH is less than 7.5 and weed pressure is heavy). The 1/2 pint rate of LIBERTY METRIBUZIN 4L in tank mix combination with Ethafluralin can be applied regardless of soil pH. For control of other weeds not listed on this label, use LIBERTY METRIBUZIN 4L at full rates listed in the table above, but note that crop injury may occur on soils having a calcareous surface area or a pH of 7.5 or higher.

#### Special Precautions (LIBERTY METRIBUZIN 4L plus Ethafluralin):

- For additional precautions, restrictions, limitations, incorporation, and sprayer cleanup information, refer to the appropriate sections of this label and the Ethafluralin label.
- For black nightshade control; refer to the Ethafluralin label for specific rates and application instructions.

#### LIBERTY METRIBUZIN 4L plus TRIFLURALIN

**LIBERTY METRIBUZIN 4L and Triffrualin Overlay Application**: LIBERTY METRIBUZIN 4L may be applied as a preemergence broadcast or band overlay application following a preplant incorporated treatment of Trifluralin. Consult the Trifluralin label for specific directions for use, recommendations restrictions and any additional weeds not specified on this label.

**LIBERTY METRIBUZIN 4L plus Trifluralin Tank Mix Application:** A single application of a tank mix combination of LIBERTY METRIBUZIN 4L and Trifluralin will control more broadleaf and grass weeds in soybeans than when either herbicide is used alone.

Prepare the soil surface by deep plowing, offset disking or tandem disking prior to the application of the herbicide combination. The soil surface should be well prepared and free of clods and trash.

This LIBERTY METRIBUZIN 4L plus Trifluralin tank mix combination may be applied and incorporated into the soil up to 10 days before planting.

**Mixing:** Refer to the "Product Information" section of this label.

**Application**: For specific application information refer to the "Product Information" section of this label. Apply LIBERTY METRIBUZIN 4L plus Trifluralin to the soil surface and incorporate in the same operation, if possible. Variable weed control may result from delayed incorporation if LIBERTY METRIBUZIN 4L plus Trifluralin are applied to a wet, warm soil surface or if the wind velocity is 10 miles per hour or higher. Use machinery that mixes LIBERTY METRIBUZIN 4L plus Trifluralin thoroughly with the soil. Incorporation may be delayed up to 24 hours after application. Shallow incorporation with implements set to cut less than 2 inches deep may result in erratic weed control. Do not use spike or spring tooth harrows alone for incorporation.

BROADCAST RATES LIBERTY METRIBUZIN 4L Plus TRIFLURALIN							
SOIL TEXTURE	LIBERTY METRIBUZIN 4L Pt/Acre	TRIFLURALIN Product/Acre					
<b>COARSE</b> <sup>1</sup> (Light) (Sand, loamy sand, sandy loam)	1/2	See Trfluralin label of product being used for application rates					
<b>MEDIUM</b> (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4						
<b>FINE</b> (Silty clay, silty clay loam <sup>2</sup> , silty clay, clay loam) <sup>3</sup>	1						

<sup>1</sup> Do not use on coarse soils with less than 1% organic matter.

- <sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.
- <sup>3</sup> For control of lambsquarters, redroot pigweed, wild mustard and green and yellow foxtails on alkaline (calcareous) soils in Minnesota Nebraska, South Dakota and North Dakota only, apply LIBERTY METRIBUZIN 4L at rates of 1/2 pint per acre on medium soils and 1/2 to 3/4 pint per acre on fine soil regardless of soil organic matter percentage (use 3/4 pint only where soil pH is less than 7.5 and weed pressure is heavy). The 1/2 pint rate of LIBERTY METRIBUZIN 4L in tank mix combination with Trifluralin can be applied regardless of soil pH. For control of other weeds not listed on this label, use LIBERTY METRIBUZIN 4L at full rates listed in the table above, but note that crop injury may occur on soils having a calcareous surface area or a pH of 7.5 or higher.

#### Incorporation Equipment:

Set PTO driven equipment (tillers, cultivators, hoes) to cut 2 to 3 inches deep and space rotors to provide a clean sweep of the soil.

PTO equipment should not be operated at a speed greater than 4 miles per hour. Set disk to cut 4 to 6 inches deep and operate twice in different directions at 4 to 6 miles per hour. Set mulch treader and other similar disk type implements to cut 3 to 4 inches deep and operate twice in different directions at 5 to 8 miles per hour.

#### For Coarse and Medium Textured Soils Only:

Set rolling cultivator to cut 2 to 4 inches deep and operate twice at 6 to 8 miles per hour. Set bed conditioner (DO-All) to cut 2 to 4 inches deep and operate at 4 to 6 miles per hour.

#### Special Precautions (LIBERTY METRIBUZIN 4L plus Trifluralin):

- Seedling disease, cold weather, excessive moisture, high salt concentration or drought may weaken soybean seedlings and increase possibility of damage from the tank mix. Do not plant soybeans deeper than 2 inches.
- Do not rotate any crop not listed on this label for 18 months after the tank mix application.
- For additional precautions, restrictions, limitations and sprayer cleanup information refer to the appropriate section of this label.
- Do not use this tank mix combination on soils containing charcoal in Arkansas, Louisiana and Mississippi.

#### LIBERTY METRIBUZIN 4L plus METOLACHLOR

**LIBERTY METRIBUZIN 4L plus Metolachlor Overlay Application:** Apply a preplant incorporated treatment of Metolachlor as directed on that product label for use on soybeans. Follow with a preemergence treatment of LIBERTY METRIBUZIN 4L as directed on this label for use on soybeans.

#### LIBERTY METRIBUZIN 4L plus Metolachlor Tank Mix Application:

**Preplant Incorporated Application:** Incorporate the tank mixture into the top 2 inches of soil within 14 days before planting using a disk, harrow, rolling cultivator, or similar implement.

Apply LIBERTY METRIBUZIN 4L plus Metolachlor preplant incorporated if furrow irrigation is used or when a period of dry weather after application is expected. If soybeans are planted on beds, apply and incorporate the tank mixture after bed formation.

**Preemergence Application**: Dry weather following preemergence application of LIBERTY METRIBUZIN 4L plus Metolachlor tank mixture may reduce effectiveness. If weeds develop, cultivate uniformly with shallow tillage equipment such as a rotary hoe that will not damage soybeans.

**Mixing:** Refer to the "Product Information" section of this label.

**Application:** For information on applying LIBERTY METRIBUZIN 4L in fluid or dry fertilizer refer to the "Application of LIBERTY METRIBUZIN 4L in Fluid Fertilizers" or "Commercial Impregnation and Application of LIBERTY METRIBUZIN 4L on Dry Bulk Fertilizer" under the "Product Information" section of this label.

Tank Mix Preemergence Applications (Broadcast Rates) 0.5% to 3% ORGANIC MATTER		
SOIL TEXTURE	LIBERTY METRIBUZIN 4L Pt/Acre	Metolachlor Product/Acre
<b>COARSE</b> <sup>1</sup> (Loamy sand, sandy loam)	1/2	See Metolachlor label of product being used for application rates
MEDIUM (Loam, silt loam, silt)	3/4	
<b>FINE</b> (Silty clay loam <sup>2</sup> , sandy clay loam, silty clay, sandy clay, clay loam, clay)	1	
MISSISSIPPI DELTA ONLY (Silty clay, clay)	1 1/2	_
	<b>Over 3% ORGANIC MATTER</b>	
<b>COARSE</b> <sup>1</sup> (Loamy sand, sandy loam)	3/4	See Metolachlor label of product being used for application rates
MEDIUM (Loam, silt loam, silt)	1 to 1 1/4	
<b>FINE</b> (Silty clay loam <sup>2</sup> , sandy clay loam, silty clay, sandy clay, clay loam, clay)	1 1/2	
MISSISSIPPI DELTA ONLY (Silty clay, clay)	1 1/2	

tank mix preemergence on loamy sand with less than 2% organic matter.

<sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

#### Special Precautions (LIBERTY METRIBUZIN 4L and Metolachlor):

• For additional precautions, restrictions, limitations, and sprayer clean up information refer to the appropriate sections of this label and the <u>Dual-Metolachlor</u> label.

#### LIBERTY METRIBUZIN 4L plus PENDIMETHALIN

**LIBERTY METRIBUZIN 4L Pendimethalin Overlay Application:** Apply a preplant incorporated treatment of Pendimethalin as directed on that product label for use on soybeans. Follow with a preemergence treatment of LIBERTY METRIBUZIN 4L as directed on this label for use on soybeans.

#### LIBERTY METRIBUZIN 4L plus Pendimethalin Tank Mix Application

**Preplant Incorporated Application**: Prepare the soil by plowing or disking to mix previous crop residues into the soil to a depth of 4 to 6 inches.

Incorporate the tank mixture into the top 1 or 2 inches of soil within 7 days after application according to label directions for <u>Prowl Pendimethalin</u>. Mechanical incorporation is not required if a rain of one-quarter inch or more occurs within 7 days after application. Soybeans must be planted no later than 7 days after application of the tank mixture.

**Preemergence Application:** Except for minimum and no tillage systems, the seed bed should be firm and free of trash and clods.

For specific application information refer to the "Product Information" section of this label. Do not apply Prowl Pendimethalin preemergence north of Interstate 80.

This application must be made after planting and before crop emergence. Do not incorporate.

If cultivation is necessary because of soil crusting, soil compaction or weed germination before rain or irrigation, use shallow tilling equipment such as a rotary hoe that does not damage soybeans.

**Mixing:** Refer to the "Product Information" section of this label.

**Application:** For information on applying LIBERTY METRIBUZIN 4L in fluid or dry fertilizer refer to the "Application of LIBERTY METRIBUZIN 4L in Fluid Fertilizers" or "Commercial Impregnation and Application of LIBERTY METRIBUZIN 4L on Dry Bulk Fertilizer" under the "Application Procedures" section of this label.

For use only in Alabama, Arkansas, Fl Missouri "Bootheel" Region a	I STATES AND EASTERN COAST orida, Georgia, Louisiana, Mississippi, No and Coastal Plains of Delaware*, Maryland APPLICATION RATES TY METRIBUZIN 4L Plus Pendimo (Broadcast Rates)	orth Carolina, Oklahoma, Southeastern d*, New Jersey* and Virginia*.
SOIL TEXTURE	LIBERTY METRIBUZIN 4L Pt/Acre	Pendimethalin Product/Acre
<b>COARSE</b> <sup>1</sup> (Sandy loam, loamy sand)	1/2	See Pendimethalin label of product being used for
<b>MEDIUM</b> (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4	application rates
<b>FINE</b> (Silty clay, silty clay loam <sup>2</sup> , clay, clay loam)	1	

<sup>1</sup> Do not use on sand soils. Do not use on loamy sand or sandy loam containing less than 1% organic matter.

<sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

Do not use on muck or peat soils.

\* Do not use LIBERTY METRIBUZIN 4L/Pendimethalin on soils with less than 2% organic matter in the coastal plain of New Jersey or the Delmarva Peninsula.

For use only in Illinois, Indiana, Pennsylvania, South I	EASTERN AND NORTH CENTRAL lowa, Kansas, Kentucky, Michigan, Minne Dakota, Wisconsin and Missouri (except the APPLICATION RATES TY METRIBUZIN 4L Plus Pendime (Broadcast Rates) 0.5% to 3% ORGANIC MATTER	osota, Nebraska, New York, Ohio, he "Bootheel" Region)
SOIL TEXTURE	LIBERTY METRIBUZIN 4L Pt/Acre	Pendimethalin Product/Acre
COARSE <sup>1</sup> (Sandy loam, loamy sand)	1/2	See Pendimethalin label of product being used for
<b>MEDIUM</b> (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4	application rates
<b>FINE</b> (Silty clay, silty clay loam <sup>2</sup> , clay, clay loam)	3/4 to 1	
	<b>Over 3% ORGANIC MATTER</b>	
<b>COARSE</b> <sup>1</sup> (Sandy loam, loamy sand)	3/4	See Pendimethalin label of product being used for
<b>MEDIUM</b> (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4 to 1	application rates
<b>FINE</b> (Silty clay, silty clay loam <sup>2</sup> , clay, clay loam)	1 to 1 1/4	
	not use on loamy sand or sandy loa s is shown for medium and fine soils	

infestations are anticipated.
 <sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in certain areas of the US.

Do not use on muck or peat soils.

#### Special Precautions (LIBERTY METRIBUZIN 4L plus Pendimethalin):

- Soil incorporation deeper than recommended will reduce weed control and can result in crop injury.
- For additional precautions, restrictions, limitations and sprayer clean-up information, refer to the appropriate sections of this label and the Pendimethalin label.

#### LIBERTY METRIBUZIN 4L plus ALACHLOR

**Preemergence:** LIBERTY METRIBUZIN 4L may be used in a tank mix combination with Alachlor as a preemergence band or broadcast application to soybeans in accordance with the specific soil types and dosages. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

	APPLICATION RATES ERTY METRIBUZIN 4L Plus Alac		
Tank Mix Preemergence Applications (Broadcast Rates) 0.5% to 3% ORGANIC MATTER			
SOIL TEXTURE	LIBERTY METRIBUZIN 4L Pt/Acre	Alachlor Product/Acre	
COARSE <sup>1</sup> (Sandy loam)	1/2	See Alachlor label of product	
<b>MEDIUM</b> <sup>2</sup> (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4	being used for application rates	
<b>FINE</b> <sup>2</sup> (Silty clay, silty clay loam <sup>3</sup> , clay, clay loam )	1		
MISSISSIPPI DELTA ONLY (Silty clay to heavy clay)	2		
	<b>Over 3% ORGANIC MATTER</b>		
COARSE <sup>1</sup> (Sandy loam)	3/4	See Alachlor label of product	
<b>MEDIUM</b> <sup>2</sup> (Loam, silt loam, silt, sandy clay, sandy clay loam)	1	being used for application rates	
<b>FINE</b> <sup>2</sup> (Silty clay, silty clay loam <sup>3</sup> , clay, clay loam )	1 to 1 1/4		
MISSISSIPPI DELTA ONLY (Silty clay to heavy clay)	2	_	
<ul> <li>organic matter.</li> <li><sup>2</sup> For control of lambsquarters, radical (calcareous) soils in Minnesot METRIBUZIN 4L at rates of 1/2 regardless of soil organic matter</li> </ul>	edroot pigweed, wild mustard and g ta, Nebraska, South Dakota and N 2 pint per acre on medium soils and ter percentage (use 3/4 pint only v	oamy sand soils with less than 2% reen and yellow foxtails on alkaline Jorth Dakota only, apply LIBERTY d 1/2 to 3/4 pint per acre on fine soil where soil pH is less than 7.5 and	
with Alachlor can be applied re use LIBERTY METRIBUZIN 4	gardless of soil pH. For control of c	BUZIN 4L in tank mix combination other weeds not listed on this label, pove, but note that crop injury may	

occur on soils having a calcareous surface area or a pH of 7.5 or higher.

<sup>3</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

**Preplant Incorporated:** For specific application information refer to the "Product Information" section of this label.

Apply LIBERTY METRIBUZIN 4L plus Alachlor preplant incorporated if furrow irrigation is used or when a period of dry weather after application is expected. If soybeans are planted on beds, apply and incorporate the tank mixture after bed formation. Apply within 7 days prior to planting and shallowly incorporate into the upper 1 to 2 inches of soil.

APPLICATION RATES LIBERTY METRIBUZIN 4L Plus Alachlor Tank Mix Preemergence Applications (Broadcast Rates)		
	LIBERTY METRIBUZIN 4L	Alachlor
SOIL TEXTURE	Pt/Acre	Product/Acre
<b>COARSE</b> <sup>1</sup> (Loamy sand (over	1/2	See Alachlor label of product
2% organic matter), sandy		being used for application rates
loam)		
MEDIUM (Loam, silt loam, silt)	3/4	
FINE (Silty clay loam <sup>2</sup> , sandy	1	
clay loam, silty clay, sandy		
clay, clay loam, clay)		
MISSISSIPPI DELTA ONLY	1 to 1 1/4	
(Silty clay, clay)		
<sup>1</sup> Do not use LIBERTY METRIBU	ZIN 4L plus Alachlor on sand or loa	amy sand with less than 2% organic

matter.
 <sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

Do not use on muck soils.

#### Special Precautions (LIBERTY METRIBUZIN 4L Plus Lasso Alachlor):

• For additional precautions, restrictions, limitations and sprayer clean up information, refer to the appropriate sections of this label and the Lasso Alachlor label.

#### LIBERTY METRIBUZIN 4L plus CLOMAZONE

LIBERTY METRIBUZIN 4L may be applied in combination with Clomazone as a preplant or shallow incorporated application for the control of certain weeds in soybeans. Consult the Clomazone label for specific directions on use, recommendations restrictions and any additional weeds not specified on this label.

**Mixing:** Refer to the "Product Information" section of this label.

**Application:** LIBERTY METRIBUZIN 4L plus Clomazone may only be applied with ground equipment as a preplant or shallow incorporated application. LIBERTY METRIBUZIN 4L plus Clomazone should be immediately incorporated into the top 1 to 3 inches after application unless surface is dry. On dry soils, incorporate into the top 1 to 3 inches within 3 hours of tank mix application.

Do not apply this tank mix within 1000 feet of towns and subdivisions, commercial vegetable, fruit, nurseries or greenhouse operations.

A minimum of 15 gallons spray volume per acre is required with appropriate nozzle types and sizes to produce a coarse spray droplet. Use an approved agricultural drift reducing additive for application volumes of 15 to 40 gallons per acre. The use of an approved agricultural drift reducing additive is required at spray volumes of 10 to 15 gallons per acre.

**Note:** Offsite movement of Clomazone spray drift or vapors can cause foliar whitening or yellowing of some vegetation. Prior to application of Clomazone, read and strictly follow all precautions and application instructions as set forth in that label.

**Application:** For additional information on application, refer to the "Product Information" section of this label and the Clomazone label.

**Weeds Controlled:** Bristly Starbur, Carpetweed, Copperleaf, Florida Beggarweed, Florida Pusley, Galinsoga, Jimsonweed, Knotweed, Lambsquarters, Pigweeds, Prickly Sida Teaweed, Purslane, Common Ragweed, Redweed, Sesbania, Smartweeds, Spurred Anoda, Velvetleaf, Venice Mallow, Wild Mustards,

Barnyardgrass\*, Bluegrass, Broadleaf Signalgrass, Crabgrass\*, Foxtails (Green, Giant, Yellow\*, Robust Purple), Goosegrass, Johnsongrass (seedling)\*, Fall Panicum\*, Texas Panicum, and Witchgrass.

\* Use 2 pints per acre Clomazone on coarse and medium textured soils with high populations of these weeds.

	TY METRIBUZIN 4L Plus CLOM reemergence Applications (Broa 0.5% to 3% ORGANIC MATTER	dcast Rates)
SOIL TEXTURE <sup>1</sup>	LIBERTY METRIBUZIN 4L Pt/Acre	Clomazone Product/Acre
<b>COARSE</b> <sup>2</sup> (Loamy sand, sandy loam)	1/2	See Clomazone label of product being used for application rates
MEDIUM (Loam, silt loam, silt)	3/4	
FINE (Silty clay loam <sup>3</sup> , sandy	1	
clay, loam, silty clay, sandy		
clay, clay loam, clay)		
MISSISSIPPI DELTA ONLY	1 to 1 1/4	
(Silty clay, clay)		
	<b>Over 3% ORGANIC MATTER</b>	
<b>COARSE</b> <sup>2</sup> (Loamy sand, sandy loam)	1/2	See Clomazone label of product being used for application rates
MEDIUM (Loam, silt loam, silt)	3/4	
FINE (Silty clay loam <sup>3</sup> , sandy	1	
clay, loam, silty clay, sandy		
clay, clay loam, clay)		
MISSISSIPPI DELTA ONLY (Silty clay, clay)	1 to 1 1/4	

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<sup>3</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

#### **Restrictions (LIBERTY METRIBUZIN 4L Plus Clomazone):**

- Do not rotate to wheat, barley, alfalfa or seed corn in the fall of the year of application or in the spring of the following year as crop injury may occur.
- Do not rotate any crop not listed on this label for 18 months following application of LIBERTY METRIBUZIN 4L.
- Do not apply when weather conditions favor drift. Do not use treated vines for feed or forage.
- Do not apply aerially or through irrigation equipment.

#### LIBERTY METRIBUZIN 4L plus CLOMAZONE + TRIFLURALIN

LIBERTY METRIBUZIN 4L Plus Clomazone + Trifluralin Tank Mix Early Preplant Incorporated Application: LIBERTY METRIBUZIN 4L in a tank mix with Clomazone + Trifluralin may be applied broadcast preplant incorporated up to 30 days before planting soybeans for the control of certain broadleaf weeds and grasses. Refer to the Clomazone + Trifluralin label for additional directions for use, weeds controlled, restrictions and limitations not specified on this label.

Mixing and Application: Refer to the "Product Information" section of this label.

APPLICATION RATES LIBERTY METRIBUZIN 4L Plus CLOMAZONE + TRIFLURALIN Tank Mix Early Preplant Incorporated Application <sup>1</sup>		
	0.5% to 3% ORGANIC MATTER	
	LIBERTY METRIBUZIN 4L	<b>CLOMAZONE + TRIFLURALIN</b>
SOIL TEXTURE	Pt/Acre	Product/Acre
COARSE <sup>2</sup>	3/4	See Clomazone + Trifluralin
MEDIUM	1	label of product being used for
FINE	1	application rates
	<b>Over 3% ORGANIC MATTER</b>	
COARSE <sup>2</sup>	3/4	See Clomazone + Trifluralin
MEDIUM	1	label of product being used for
FINE	1 1/2	application rates

<sup>2</sup> Do not use on coarse soils with less than 1% organic matter.

#### **Restrictions (LIBERTY METRIBUZIN 4L plus Clomazone + Trifluralin):**

- Do not apply aerially or through irrigation equipment.
- Do not apply when weather conditions favor drift. Do not allow sprays to drift on to adjacent desirable plants.
- Do not use treated vines for feed or forage.
- Do not rotate to wheat, barley, alfalfa or seed corn in the fall of the year of application or in the spring of the following year as crop injury may occur.
- Do not rotate any crop not listed on this label for 18 months following application of LIBERTY METRIBUZIN 4L.

**LIBERTY METRIBUZIN 4L plus Clomazone + Trifluralin Tank Mix Preplant Incorporated:** LIBERTY METRIBUZIN 4L may be tank mixed with Clomazone + Trifluralin for preplant incorporated application to control certain weeds in soybeans. Refer to the "Product Information" section of this label for information on mixing, application, restrictions, special precautions and weeds controlled by LIBERTY METRIBUZIN 4L. See appropriate sections of the Clomazone + Trifluralin label for additional precautionary statements, directions for use, and additional weeds controlled. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

	APPLICATION RATES RIBUZIN 4L Plus CLOMAZONE + lant Incorporated Application <sup>1</sup> (B 0.5% to 3% ORGANIC MATTER	
SOIL TEXTURE	LIBERTY METRIBUZIN 4L Pt/Acre	CLOMAZONE + TRIFLURALIN Product/Acre
<b>COARSE</b> <sup>2</sup> (Loamy sand, sandy loam)	1/2	See Clomazone + Trifluralin label of product being used for
<b>MEDIUM</b> (Loam, silt loam, silt, sandy clay, sandy clay loam)	1/2 to 3/4	application rates
<b>FINE</b> (Silty clay, silty clay loam <sup>3</sup> , clay, clay loam)	1/2 to 3/4	
,	<b>Over 3% ORGANIC MATTER</b>	-
<b>COARSE</b> <sup>2</sup> (Loamy sand, sandy loam)	1/2	See Clomazone + Trifluralin label of product being used for application rates
<b>MEDIUM</b> (Loam, silt loam, silt, sandy clay, sandy clay loam)	1/2 to 3/4	

FINE (Silty clay loam <sup>3</sup> , sandy	3/4 to 1	
clay loam, silty clay, sandy		
clay, clay loam, clay)		

- <sup>1</sup> Crop injury may occur on soils having a calcareous surface area or a pH of 7.1 or higher.
- <sup>2</sup> Do not use on coarse soils with less than 1% organic matter.
- <sup>3</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

#### **Restrictions (LIBERTY METRIBUZIN 4L plus Clomazone + Trifluralin):**

- Do not rotate to wheat, barley, alfalfa or seed corn in the fall of the year of application or in the spring of the following year as crop injury may occur.
- Do not rotate any crop not listed on this label for 18 months following application of LIBERTY METRIBUZIN 4L.
- Do not apply when weather conditions favor drift. Do not use treated vines for feed or forage. Do not apply aerially or through irrigation equipment.
- Do not allow sprays to drift on to adjacent desirable plants.

#### LIBERTY METRIBUZIN 4L plus ALACHLOR + TRIFLURALIN

LIBERTY METRIBUZIN 4L may be tank mixed with Alachlor + Trifluralin for preplant incorporated application to control weeds in soybeans. Refer to the "Product Information" section of this label for information on mixing, application, restrictions, special precautions and weeds controlled by LIBERTY METRIBUZIN 4L. See appropriate sections of the Alachlor + Trifluralin herbicide label for additional precautionary statements, directions for use, recommendations and additional weeds controlled. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

	APPLICATION RATES TRIBUZIN 4L Plus ALACHLOR + lant Incorporated Application (B 0.5% to 3% ORGANIC MATTER	
SOIL TEXTURE	LIBERTY METRIBUZIN 4L Pt/Acre	ALACHLOR + TRIFLURALIN Product/Acre
<b>COARSE</b> <sup>1</sup> (Sandy loam)	1/2	See Alachlor + Trifluralin label of
<b>MEDIUM</b> <sup>2</sup> (Loam, silt loam, silt, sandy clay, sandy clay loam)	3/4	product being used for application rates
<b>FINE</b> <sup>2</sup> (Silty clay, silty clay loam <sup>3</sup> , clay, clay loam)	1	
MISSISSIPPI DELTA ONLY (Silty clay to heavy clay)	2	_
	<b>OVER 3% ORGANIC MATTER</b>	
COARSE <sup>1</sup> (Sandy loam)	3/4	See Alachlor + Trifluralin label of
<b>MEDIUM</b> <sup>2</sup> (Loam, silt loam, silt, sandy clay, sandy clay loam)	1	product being used for application rates
<b>FINE</b> <sup>2</sup> (Silty clay, silty clay loam <sup>3</sup> , clay, clay loam)	1 to 1 1/4	
MISSISSIPPI DELTA ONLY (Silty clay to heavy clay)	2	

<sup>1</sup> Do not use on coarse sand or loamy sand soils with less than 2% organic matter.

- <sup>2</sup> For control of lambsquarters, redroot pigweed, wild mustard and green and yellow foxtails on alkaline (calcareous) soils in Minnesota, Nebraska, South Dakota and North Dakota only, apply LIBERTY METRIBUZIN 4L at rates of 1/2 pint per acre on medium soils and 1/2 to 3/4 pint per acre on fine soil regardless of soil organic matter percentage (use 3/4 pint only where soil pH is less than 7.5 and weed pressure is heavy). The 1/2 pint rate of LIBERTY METRIBUZIN 4L in tank mix combination with Alachlor + Trifluralin can be applied regardless of soil pH. For control of other weeds use LIBERTY METRIBUZIN 4L at full rates listed in the table above, but note that crop injury may occur on soils having a calcareous surface area or a pH of 7.5 or higher.
- <sup>3</sup> Silty clay loam soils ae transitional soils and may be classified as medium textured soils in some regions of the U.S.

#### Special Precautions (LIBERTY METRIBUZIN 4L plus Alachlor + Trifluralin):

- Do not use on muck soils.
- Do not allow sprays to drift on to adjacent desirable plants.

#### LIBERTY METRIBUZIN 4L plus CHLORIMURON + METRIBUZIN plus a GRASS HERBICIDE

A tank mix combination of LIBERTY METRIBUZIN 4L plus Chlorimuron + Metribuzin plus a registered and compatible grass herbicide (Alachlor, Ethafluralin, Metolachlor, Pendimethalin, or Trifluralin) is necessary for control of the following weeds in soybeans. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

#### WEEDS CONTROLLED

#### Annual Grasses

Barnyardgrass	Crabgrass	Johnsongrass (seedling)
Bluegrass	Crowfootgrass	Panicum, Fall
Broadleaf signalgrass	Foxtails	Witchgrass
Browntop Millet	Goosegrass	

#### Annual Broadleaves

Lambsquarters	Sicklepod
Pigweeds	Smartweeds
Prickly sida/Teaweed	Spotted spurge
Purslane	Spurred Anoda
Ragweed, Common	Velvetleaf
Ragweed	Venice mallow
Russian Thistle	Wild Mustards
Sesbania	
Shepherdspurse	
	Pigweeds         Prickly sida/Teaweed         Purslane         Ragweed, Common         Ragweed         Russian Thistle         Sesbania

LIBERTY METRIBUZIN 4L and Chlorimuron + Metribuzin plus Alachlor, Ethafluralin, Metolachlor, Pendimethalin, or Trifluralin will provide suppression (reduce the competition) of cocklebur and sunflower.

#### APPLICATION RATES LIBERTY METRIBUZIN 4L plus CHLORIMURON + METRIBUZIN plus A GRASS HERBICIDE (Broadcast Rates)

SOIL TEXTURE <sup>1</sup>		1	
PRODUCT	COARSE	MEDIUM	FINE
Liberty Metribuzin 4L (Pt/Acre)	1/2	1/2 to 3/4 <sup>2</sup>	3/4 to 1 <sup>2</sup>
Chlorimuron + Metribuzin (Product/Acre)	See product la	abel of the her	bicide(s) being
Trifluralin (Product/Acre)	used for applic	used for application rate.	
Metolachlor (Product/Acre)			
Pendimethlin (Product/Acre)			
Alachlor (Product/Acre)			
Ethafluralin (Product/Acre)			
<sup>1</sup> Refer to "Soil Texture" paragraph on this label for specific soil classification. On coarse textured soils			e textured soils
with a calcareous surface area or a pH of 7.5 or	higher do not use on	loamy sand or s	andy loam soils

with a calcareous surface area or a pH of 7.5 or higher, do not use on loamy sand or sandy loam soils with less than 1% organic matter.

- <sup>2</sup> The higher rate of LIBERTY METRIBUZIN 4L is required for the control of sicklepod and hemp sesbania. Use the lower rate of LIBERTY METRIBZIN 4L in the preplant incorporated tank mix on soils having a calcareous surface area or a pH of 7.5 or higher, and in those situations where soils within a field vary extremely in texture or organic matter content.
- <sup>3</sup> Higher rate is required under moderate to heavy weed infestations.

#### LIBERTY METRIBUZIN 4L plus IMAZAQUIN plus A GRASS HERBICIDE

LIBERTY METRIBUZIN 4L may be applied with Imazaquin herbicide and a grass herbicide (Alachlor, Ethafluralin, Metolachlor, Pendimethalin or Trifluralin) for the control of certain broadleaf weeds and grasses in soybeans. LIBERTY METRIBUZIN 4L and Imazaquin plus Ethafluralin or Trifluralin may be applied preplant incorporated broadcast. LIBERTY METRIBUZIN 4L and Imazaquin plus Alachlor, Metolachlor or Pendimethalin may be applied preplant incorporated, preemergence broadcast or in a band application.

**Mixing and Application:** Refer to the "Product Information" section of this label.

**Weeds Controlled:** LIBERTY METRIBUZIN 4L plus Imazaquin plus Alachlor, Ethafluralin, Metolachlor, Pendimethalin or Trifluralin will control the following broadleaf weeds and grasses:

### WEEDS CONTROLLED

Annual Glasses		
Barnyardgrass	Crabgrass	Johnsongrass (seedling)
Bluegrass	Crowfootgrass	Panicum, Fall
Broadleaf signalgrass	Foxtails	Witchgrass
Browntop Millet	Goosegrass	

#### Annual Broadleaves

Bristly Starbur	Lambsquarters Sicklepod	
Carpetweed	Pigweeds	Smartweeds
Cooperleaf, Hophornbeam	Prickly sida/Teaweed	Spotted spurge
Florida Beggarweed	Purslane	Spurred Anoda
Florida Pusley	Ragweed, Common	Velvetleaf
Galinsoga	Ragweed	Venice mallow
Jimsonweed	Russian Thistle	Wild Mustards
Knotweed	Sesbania	
Kochia	Shepherdspurse	

LIBERTY METRIBUZIN 4L and Imazaquin plus Alachlor, Ethafluralin, Metolachlor, Pendimethalin or Trifluralin will suppress (reduce the competition of) ivyleaf and tall morninggory and red rice.

#### APPLICATION RATES LIBERTY METRIBUZIN 4L plus IMAZAQUIN plus A GRASS HERBICIDE (Broadcast Rates)

		SOIL TEXTURE	1
PRODUCT	COARSE	MEDIUM	FINE
Liberty Metribuzin 4L (Pt/Acre)	1/2	1/2 to 3/4 <sup>2</sup>	3/4 to 1 <sup>2</sup>
Imazaquin <sup>3</sup> (Product/Acre)	See product I	abel of the her	bicide(s) being
Trifluralin (Product/Acre) used for application rate.			
Metolachlor (Product/Acre)			
Pendimethalin (Product/Acre)			
Alachlor (Product/Acre)			
Ethafluralin (Product/Acre)			
<sup>1</sup> Refer to "Soil Texture" paragraph on this la	ter for specific soil classifi	cation. On coars	e textured soils

Refer to "Soil Texture" paragraph on this later for specific soil classification. On coarse textured soils with a calcareous surface area or a pH of 7.5 or higher, do not use on loamy sand or sandy loam soils with less than 1% organic matter.

- <sup>2</sup> The higher rate of LIBERTY METRIBUZIN 4L is required for the control of sicklepod and hemp sesbania. Use the lower rate of LIBERTY METRIBZIN 4L in the preplant incorporated tank mix on soils having a calcareous surface area or a pH of 7.5 or higher, and in those situations where soils within a field vary extremely in texture or organic matter content.
- <sup>3</sup> Higher rate is required under moderate to heavy weed infestations.

#### LIBERTY METRIBUZIN 4L plus IMAZETHAPYR AND A GRASS HERBICIDE

LIBERTY METRIBUZIN 4L may be tank mixed with Imazethapyr herbicide and a registered and compatible grass herbicide (Alachlor, Ethafluralin, Metolachlor, Pendimethalin or Trifluralin) for control of certain broadleaf and grass weeds in soybeans.

Tank mix combinations of LIBERTY METRIBUZIN 4L, Imazethapyr and Alachlor, Metolachlor, Pendimethalin can be applied broadcast preemergence or preplant incorporated. When the grass herbicide used is Ethafluralin or Trifluralin, apply the tank mix broadcast preplant incorporated.

**Mixing and Application:** Refer to the "Product Information" section of this label.

APPLICATION RATES LIBERTY METRIBUZIN 4L Plus IMAZETHAPYR and A GRASS HERBICIDE*			
LIBERTY METRIBUZIN 4L Imazethapyr			
SOIL TEXTURE	Pt/Acre	(Product/Acre)	
COARSE	1/2	See Imazethapyr label of	
MEDIUM	3/5 to 3/4	product being used for	
FINE	3/4 to 1	application rates	

\*For control of grass weeds, include Alachlor, Ethafluralin, Metolachlor, Pendimethalin or Trifluralin at label rates in the tank mix with LIBERTY METRIBUZIN 4L and Pursuit Imazethapyr herbicides.

#### Special Precautions:

 Refer to appropriate sections of the Imazethapyr herbicide label for restrictions on use area and rotational crops.

#### **Restrictions:**

- Do not apply this tank mix with aerial or irrigation equipment.
- Do not apply when weather conditions favor drift, or allow sprays to drift onto adjacent desirable plants.
- Do not use treated vines for feed or forage.

#### LIBERTY METRIBUZIN 4L plus IMAZETHAPYR + PENDIMETHALIN

LIBERTY METRIBUZIN 4L may be tank mixed with Imazethapyr + Pendimethalin for broadcast preemergence or preplant incorporated application to soybeans for control of certain broadleaf and grass

weeds. Refer to the Imazethapyr + Pendimethalin label for additional directions for use, recommendations restrictions and limitations not included on this label.

**Mixing and Application:** Refer to the "Product Information" section of this label

APPLICATION RATES LIBERTY METRIBUZIN 4L Plus IMAZETHAPYR + PENDIMETHALIN (Broadcast Rates)		
SOIL TEXTURE LIBERTY METRIBUZIN 4L IMAZETHAPYR + Pt/Acre PENDIMETHALIN (Product/Acre)		PENDIMETHALIN
COARSE	1/2	See Imazethapyr +
MEDIUM	3/5 to 3/4	Pendimethalin label of product
FINE	3/4 to 1	being used for application rates

#### **Special Precautions:**

• Refer to appropriate sections of the Imazethapyr + Pendimethalin label for restrictions on use area and rotational crops.

#### **Restrictions:**

- Do not apply this tank mix with aerial or irrigation equipment.
- Do not apply when weather conditions favor drift, or allow sprays to drift on to desirable plants.
- Do not use treated vines for feed or forage.

#### LIBERTY METRIBUZIN 4L plus LINURON plus (Alachlor or Metolachlor)

**LIBERTY METRIBUZIN 4L plus Linuron plus (Alachlor or Metolachlor) Tank Mix Application:** LIBERTY METRIBUZIN 4L may be applied in combination with Linuron and Alachlor or Metolachlor as a preemergence application for the control of certain weeds in soybeans. Consult the Linuron, Alachlor or Metolachlor labels for specific directions for use, recommendations restrictions and any additional weeds not specified on this label.

**Mixing:** Refer to the "Product Information" section of this label.

**Application:** Applications can be made only with ground spray equipment in accordance with specified soil types and dosage rates. For specific application information, refer to the "Product Information" section in the front of this label.

LIBERTY METRIBUZIN 4L plus LINURON BROADCAST RATES (0.5% TO			HLOR)
	SOIL TEXTURE		
PRODUCT	COARSE <sup>1</sup> (Sandy, Ioam sand, sandy Ioam)	MEDIUM (Loam, silt loam, silt, sandy clay, sandy clay loam)	FINE (Silty clay, silty clay loam <sup>2</sup> , clay, clay loam)
Liberty Metribuzin 4L (Pt/Acre)	1/4 to 3/8	3/8 to 1/2	1/2 to 3/4
Linuron (Product/Acre) Alachlor (Product/Acre) or	See product label of each herbicide(s) being used for application rate.		
Metolachlor (Product/Acre)			
<ol> <li>Do not use LIBERTY METRIBUZIN 4L plus Linur less than 1% organic matter.</li> <li>Silty clay loam soils are transitional soils and m</li> </ol>		,	

<sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.

#### Special Precautions (LIBERTY METRIBUZIN 4L plus LINURON plus (Alachlor or Metolachlor):

• For additional precautions, restrictions, limitations, and sprayer cleanup information; refer to the appropriate sections of this label and the Linuron label and the Alachlor or Metolachlor labels.

## FOR USE IN COARSE (LIGHT) SOILS IN Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

LIBERTY METRIBUZIN 4L can be used alone or in combination with Trifluralin, Alachlor or Metolachlor for use in coarse textured, low organic matter soils in the states listed above for the control of certain weeds in soybeans. Refer to the appropriate sections of this label and the Trifluralin, Alachlor or Metolachlor labels for specific directions for use, restrictions and any additional weeds not specified on this label.

**Mixing and Application:** Refer to the "Product Information" section of this label.

LIBERTY METRIBUZIN 4L (Alone) Preemergence Application (Broadcast Rates)		
ORGANICLIBERTY METRIBUZIN 4LSOIL TEXTUREMATTERPt/Acre		
COARSE (LIGHT) SOIL (Sand <sup>1</sup> , loamy, sand, sandy loam)	0.5% or Above	1/2 to 3/4 <sup>2</sup>
<ul> <li><sup>1</sup> Do not use on sand with less than 1 % organic matter.</li> <li><sup>2</sup> Use the higher rate under heavy weed pressures and/or on soils higher in organic matter.</li> </ul>		

**LIBERTY METRIBUZIN 4L in Combination with Other Herbicides**: LIBERTY METRIBUZIN 4L can be used in a tank mix combination with Trifluralin as a preplant incorporated application or as a preemergence overlay application following a preplant incorporated application of Trifluralin. LIBERTY METRIBUZIN 4L can also be used as a preemergence application in combination with Lasso or Dual Alachlor or Metolachlor.

FOR USE IN COARSE (LIGHT SOILS) 0.5% or Above ORGANIC MATTER (Broadcast Rates)			
SOIL TEXTURE	COMBINATION PRODUCT/ACRE	PLUS	LIBERTY METRIBUZIN 4L Pt/Acre
<b>COARSE (LIGHT) SOIL</b> (Sand <sup>1,</sup> loamy sand, sandy loam)	Preplant Incorporated Trifluralin <sup>3</sup>	+	1/2 to 3/4 <sup>2</sup>
Preemergence Alachlor³ or Metolachlor ³1/2 to 3/4 2			

<sup>1</sup> Do not use on sand with less than 1 % organic matter.

<sup>2</sup> Use the higher rate under heavy weed pressures and/or on soils higher in organic matter.

<sup>3</sup> See the product label for each herbicide being used for the application rates.

#### Special Precautions:

• For additional precautions, restrictions, limitations and sprayer cleanup information, refer to the appropriate sections of this label and the Trifluralin, Alachlor or Metolachlor labels.

#### **Restrictions:**

• Do not use on sand soils with less than 1% organic matter, or on sandy loam or loamy sand soils with less than 0.5% organic matter.

#### **BURN DOWN WEED CONTROL - FIELD CORN AND SOYBEANS**

LIBERTY METRIBUZIN 4L can be used as part of a herbicide program for burndown of existing vegetation prior to crop emergence in conservation tillage systems. LIBERTY METRIBUZIN 4L may be tank mixed

with 2,4-D low volatile ester (LVE), Paraquat, or Glyphosate for control of emerged weeds prior to field corn or soybean emergence.

LIBERTY METRIBUZIN 4L tank mixes with 2,4-D, Clethodim, Fluazifop-p-butyl + Fenoxaprop-P-ethyl, or Sethoxydim may also be used in soybeans for control of emerged weeds prior to crop emergence. LIBERTY METRIBUZIN 4L burndown tank mixes can be applied before planting or prior to crop emergence in the following areas:

#### Field Corn:

Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin

#### Soybeans:

All areas for all products except Fluazifop-p-butyl + Fenoxaprop-P-ethyl tank mixes see Fluazifop-p-butyl + Fenoxaprop-P-ethyl section of this label for applicable states.

**Application:** LIBERTY METRIBUZIN 4L may be applied up to 30 days prior to planting or preemergence. Apply only by ground equipment when LIBERTY METRIBUZIN 4L is used for burndown of existing vegetation in conservation tillage systems. LIBERTY METRIBUZIN 4L and tank mix partner burndown rates are listed in the following three tables.

LIBERTY METRIBUZIN 4L BURN DOWN RATES – FIELD CORN AND SOYBEANS			
CROPS	APPLICATION TIMING	LIBERTY METRIBUZIN 4L Pt/Acre	
Field Corn Iowa Kansas	Preplant (0 to 30 days)	3 to 8	
Missouri Nebraska South Dakota	Preemergence		
<b>Field Corn</b> Illinois Indiana	Preplant (10 to 30 days)	3 to 8	
Kentucky Michigan Minnesota	Preplant (0 to 9 days)	3 to 6	
Ohio Wisconsin	Preemergence		
Soybeans	Preplant (0 to 30 days) Preemergence	3 to 8	

**Mixing:** Refer to the "Product Information" section of this label.

LIBERTY METRIBUZIN 4L plus TANK MIX PARTNER BURN DOWN RATES FIELD CORN OR SOYBEANS			
PRODUCT	RATE	DIRECTIONS AND REMARKS	
LIBERTY METRIBUZIN 4L + 2,4-D LVE	3 to 8 fl oz/A* + 1/4 to 1 lb ai/A	In soybeans, apply at least 7 days preplant when using 2,4-D LVE at 1/4 to 1/2 lb ai/A and at least 30 days preplant with rates greater than 1/2 lb ai/A. Include crop oil concentrate (COC) at the rate of 1 gal/100 gal of spray solution (1% v/v). In corn, apply at least 7 days preplant or at least 3 days after planting but before corn emergence.	
LIBERTY METRIBUZIN 4L + Paraquat	3 to 8 fl oz/A* + See Paraquat label of product being used for application rates	Must be applied prior to crop emergence. Use low rate of Paraquat for weeds less than 4 inches in height and higher rate when weeds are 4 to 6 inches in height. Apply in 20 to 60 gallons of water per acre. Include either nonionic surfactant at 1 quart per 100 gallons (0.25% v/v) or crop oil concentrate at 1 gallon per 100 gallons (1% v/v) of spray solution.	
LIBERTY METRIBUZIN 4L + 2,4-D LVE + Paraquat	3 to 8 fl oz/A* + 1/4 to 1 lb ai/A + See Paraquat label of product being used for application rates	For this tank mix follow the Directions and Remarks Sections above for LIBERTY METRIBUZIN 4L + 2,4-D LVE and LIBERTY METRIBUZIN 4L+ Paraquat, paying special attention to crop planting restrictions with 2,4-D LVE. Include either nonionic surfactant or crop oil concentrate in this tank mix.	
LIBERTY METRIBUZIN 4L + Glyphosate	3 to 8 fl oz/A* + See Glyphosate label of product being used for application rates	Must be applied prior to crop emergence. Use the higher rates as weeds approach the maximum weed heights listed in the "Weeds Controlled" section below. Apply in 10 to 20 gallons of water per acre. With Glyphosate minus surfactant product, include nonionic surfactant at 2 quarts per 100 gallons (0.5% v/v) and ammonium sulfate (spray grade) at 17 pounds per 100 gallons of spray solution. With Glyphosate plus surfactant product, include ammonium sulfate (spray grade) at 17 pounds per 100 gallons of spray solution. Any glyphosate formulation registered and labeled for use in field corn or soybeans may be tank mixed with LIBERTY METRIBUZIN 4L.	
LIBERTY METRIBUZIN 4L + 2,4-D LVE + Glyphoaste	3 to 8 fl oz/A* + 1/4 to 1 lb ai/A + See Glyphosate label of product being used for application rates	For this tank mix follow the Directions and Remarks Section above for LIBERTY METRIBUZIN 4L + 2,4-D LVE and LIBERTY METRIBUZIN 4L + Glyphosate, paying special attention to planting restrictions with 2,4-D LVE. Use the adjuvant recommendations under the LIBERTY METRIBUZIN 4L + Glyphosate tank mix. Do not use crop oil concentrate.	
* If applied to field corn grown in Illinois, Indiana, Kentucky, Michigan, Minnesota, Ohio and Wisconsin, refer to Table 1 for correct LIBERTY METRIBUZIN 4L rate based on application timing.			

LIBERTY METRIBUZIN 4L plus TANK MIX PARTNER BURNDOWN RATES SOYBEANS ONLY		
PRODUCT	RATE	DIRECTIONS AND REMARKS
LIBERTY METRIBUZIN 4L + 2,4-DB	3 to 8 fl oz/A + 1/8 to 7/32 lb ai/A	Apply preplant or before soybean emergence. Include nonionic surfactant at 2 quarts per 100 gallons (0.5% v/v) of spray solution.
LIBERTY METRIBUZIN 4L + 2,4-D LVE + Fluazifop-p-butyl + Fenoxaprop-P- ethyl	3 to 8 fl oz/A + 1/4 to 1 lb ai/A • See Fluazifop-p- butyl + Fenoxaprop-P- ethyl label of product being used for application rates	For use only in Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Pennsylvania, South Dakota, Virginia, West Virginia, and Wisconsin. For this tank mix follow the planting restrictions under the Directions and Remarks Section above for LIBERTY METRIBUZIN 4L + 2,4-D LVE. Low, medium and high rates of Fluazifop-p-butyl + Fenoxaprop-P-ethyl will control certain grasses up to 2, 4 and 6 inches in height, respectively. Include either crop oil concentrate at 1 gallon per 100 gallons $(1.0\% v/v)$ or nonionic surfactant at 1 to 2 quarts per 100 gallons $(0.25 - 0.5\% v/v)$ of spray solution. Refer to the Fluazifop-p-butyl + Fenoxaprop-P-ethyl label for additional information.
LIBERTY METRIBUZIN 4L + 2,4-D LVE + Sethoxydim	3 to 8 fl oz/A + 1/4 to 1 lb ai/A + See Sethoxydim label of product being used for application rates	For this tank mix follow the planting restrictions under the Directions and Remarks Section above for LIBERTY METRIBUZIN 4L + 2,4-D LVE. Low and high rates of Sethoxydim will control certain grasses up to 2 and 3 inches in height, respectively. Include either crop oil concentrate at the rate of 1 gallon per 100 gallons of spray solution (1% v/v) or Dash HC at 1 pint per acre. Refer to the Sethoxydim label for additional information.
LIBERTY METRIBUZIN 4L + 2,4-D LVE + Clethodim	3 to 8 fl oz/A + 1/4 to 1 lb ai/A See Clethodim label of product being used for application rates	For this tank mix follow the planting restrictions under the Directions and Remarks Section above for LIBERTY METRIBUZIN 4L + 2,4-D LVE. Low and high rates of Clethodim will control certain grasses up to 3 and 4 inches in height, respectively. Include crop oil concentrate at the rate of 1 quart per acre and 28% UAN (urea ammonium nitrate) at a rate of 1-2 quarts per acre. Refer to the <u>Select Clethodim</u> label for additional information.

#### **Special Precautions:**

• Do not apply these treatments after crop emergence. Observe all precautions and limitations on the labeling of all products used in tank mixtures. Refer to the "Product Information" section of this label for additional information, precautions and limitations.

#### Field Corn Restrictions:

- Do not apply on coarse textured soils with less than 1.5% organic matter.
- Do not apply more than 6 fluid ounces of LIBERTY METRIBUZIN 4L per acre on soils with less than 2% organic matter.
- Do not apply on soils having pH 7.0 or greater.
- Do not apply more than 8 fluid ounces LIBERTY METRIBUZIN 4L (0.25 pound active ingredient) per acre per growing season.
- Corn seed should be planted a minimum of 1 1/2 inches deep.
- LIBERTY METRIBUZIN 4L may only be used in hybrid seed corn production fields if both inbred parents are known to be tolerant to LIBERTY METRIBUZIN 4L.

#### Soybean Restrictions:

- Apply only 2,4-D low volatile ester formulations which are registered for preplant or burndown use in soybeans.
- Do not apply tank mixtures containing 2,4-D LVE if wind is blowing toward desired susceptible plants (i.e. cotton, tobacco, tomato, etc.) or when wind speeds exceed 6 miles per hour.

**Feeding restrictions:** Corn treated with LIBERTY METRIBUZIN 4L may be harvested for silage or grain 60 days after treatment. Soybean vines or hay treated with LIBERTY METRIBUZIN 4L may be grazed or fed to livestock 40 days after application. Do not feed hay, forage, fodder or graze 2,4-D, <u>Select, or Fusion</u> <u>Clethodim or Fenoxaprop-p-ethyl + Fluazifop-P-butyl</u> treated vegetation. Follow the most restrictive preharvest interval of all products used in a tank mixture.

**Weeds controlled:** LIBERTY METRIBUZIN 4L in tank mixtures with the above herbicides will provide burndown control of the weeds listed below.

WEEDS CON	ITROLL	ED BY	BUR	NDOW	N RATES	OF LIBER		<b>BUZIN 4L</b>		
		LIE	BERTY	METR	<b>IBUZIN 4</b> L	_ plus				
WEEDS CONTROLLED	2,4-D LVE	Seth- oxydim + 2,4-D LVE	Cletho			Glyphosate + 2,4-D LVE	Paraquat	Paraquat + 2,4-D LVE	2,4-DB	
BROADLEAVES		MAXIMUM BRUNDOWN HEIGTH (INCHES)								
Buffalobur		-				6	4 to 6	4 to 6	-	
Chickweed, common		6				8	4 to 6	4 to 6	2	
Cocklebur, common		6				8	4 to 6	4 to 6	6	
Dandelion, common		6 diaa				6 diaa	4 diad	6 diaa	2 dia	
Henbit		4				4	4 to 6	4 to 6	-	
Horseweed/marestail		6ac				6	3	6a	2c	
Jimsonweed		6				6	4 to 6	4 to 6	2	
Kochia*		4ac				4	4	4	-	
Ladysthumb		6				8	4 to 6	4 to 6	3	
Lambsquarters, common		6			6	8	4 to 6	4 to 6	2	
Lettuce, prickly		6			4	6	4 to 6	4 to 6	2	
Mallow, Venice		6			6	6	4 to 6	4 to 6	-	
Morningglory spp.		6				4	2	4	4	
Mustard spp.		6				8	4 to 6	4 to 6	2	
Pennycress, field		6				6	4 to 6	4 to 6	2	
Pigweed, spp. (annual)		6				8	4 to 6	4 to 6	3	
Ragweed, common		6				8	4 to 6	4 to 6	2	
Ragweed, giant		6ac				6	4	6	2	
Shepherds purse		6				6	4 to 6	4 to 6	-	
Sida, prickly		6				4	4	4	1	
Smartweed, Pennsylvania		6				8	4 to 6	4 to 6	3	
Sunflower, common		6				6	4 to 6	4 to 6	4	
Thistle, Russian		4ac				6	4	4 to 6	3c	
Velvetleaf		6				8	4 to 6	4 to 6	3	
Waterhemp spp.		6				8	4 to 6	4 to 6	3	

- a Use 2,4-D LVE at 0.5 pound active ingredient per acre.
- <sup>b</sup> Use a minimum Glyphosate 3 lb a.i. product rate of 16 fluid ounces per acre.
- c Use LIBERTY METRIBUZIN 4L at 6 fluid ounces per acre for optimum control.
- d Suppression only
- \* Does not control triazine-resistant biotypes.

WEEDS CONTROLLED BY BURNDOWN RATES OF LIBERTY METRIBUZIN 4L									
	LIBERTY METRIBUZIN 4L plus								
WEEDS CONTROLLED	2,4-D LVE	Seth- oxydim + 2,4-D LVE	dim +	Fluazif op-p- butyl + Fenoxa prop-P- ethyl + 2,4-D LVE	l	Glyphosate + 2,4-D LVE	Gramoxone Extra Paraquat	Gramoxone Extra Paraquat + 2,4-D LVE	2,4-DB
ANNUAL GRASSES		MAXIMUM BRUNDOWN HEIGTH (INCHES)							
Barley		-	-	-	8	3	4 t	0 6	
Barnyardgrass		2 to 3	3 to 4	-	6	6	4 t	0 6	
Crabgrass spp.		2 to 3	-	-	6	6	4 t	0 6	
Foxtail spp.	Does	2 to 3	3 to 4	2 to 6	8	3	4 t	0 6	Does
Johnsongrass, seedling	not	2 to 3	-	-	8	3	4 t	0 6	not
Panicum, fall	control these	2 to 3	3	2 to 6	6	6	4 t	0 6	control these
Sandbur, field	species	-	-	-	8	3	4 t	0 6	species
Shattercane		2 to 3	-	-	8	3	4 t	0 6	
Wheat, volunteer		-	-	-	6	6	4 t	0 6	
Witchgrass		2 to 3	-	-	6	6	4 t	0 6	

# **RESIDUAL WEED CONTROL**

LIBERTY METRIBUZIN 4L burndown programs can be used as part of a full season weed control program in both field corn and soybeans when, 1) applied as a tank mixture with residual herbicides, or 2) followed with a postemergence weed control program, which is registered for use on that crop.

For residual control, LIBERTY METRIBUZIN 4L burndown programs may include tank mixes with the following herbicides or combination of herbicides. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

Dicamba + Atrazine	Metolachlor + Atrazine
Dimethenamid-P	Metolachlor + Cyanazine
Flumetsulam	Pendimethalin
Flumetsulam + S-metolachlor	Propachlor
Imazethapyr <sup>1</sup>	Propachlor + Atrazine
Imazethapyr + Pendimethalin	Simazine
Linuron	S-metolachlor
Metolachlor	S-metholachlor + Atrazine
	Flumetsulam Flumetsulam + S-metolachlor Imazethapyr <sup>1</sup> Imazethapyr + Pendimethalin Linuron

#### Soybeans

Alachlor	Imazaquin + Dimethenamid-P	Metribuzin <sup>2</sup>
Clomazone	Imazethapyr	Metribuzin + Chlorimuron ethyl
Dimethenamid-P	Imazethapyr + Pendimethalin	Pendimethalin
Flumetsulam + S-metolachlor	Linuron	S-metolachlor
Imazaquin	Linuron + Chlorimuron ethyl	
2 LIDEDTV METDIDUZIN 4L used (class and in tank mines) an and been at high an labeled actes then these		

<sup>2</sup> LIBERTY METRIBUZIN 4L used (alone and in tank mixes) on soybeans at higher labeled rates than those listed for burndown weed control will also provide residual control of those weeds listed in the "Weeds Controlled" by LIBERTY METRIBUZIN 4L" and "LIBERTY METRIBUZIN 4L Tank Mix Combinations" section of this label.

# SOUTHERN AND SOUTHEASTERN STATES ONLY POSTEMERGENCE DIRECTED SPRAY APPLICATIONS

LIBERTY METRIBUZIN 4L can be applied in postemergence directed sprays to soybeans for control of certain weeds which escape preplant or preemergence herbicide applications and for control of additional flushes of weeds that may occur after soybeans have emerged.

Postemergence directed sprays of LIBERTY METRIBUZIN 4L can be applied to soybeans in addition to a preemergence or preplant application of LIBERTY METRIBUZIN 4L according to label directions.

**Weeds Controlled:** LIBERTY METRIBUZIN 4L, applied postemergence to soybeans as a directed spray according to directions on this label, will control the following at rates shown (broadcast basis) when grasses and common ragweed are less than 1-inch tall and other broadleaves are less than 3-inches tall:

RATE	WEEDS CONTROLLED		
1/2	Florida beggarweed (Desmodium tortuosum)	Mexicanweed (Caperonia castaniifolia)	
Pt/Acre	Pigweeds (Amaranthus spp.)	Purslane (Portulaca oleracea)	
	Carpetweed (Mollugo verticillata)	Sicklepod (Cassia obtusifolia)	
	Cocklebur (Xanthium strumarium)	Velvetleaf (Abutilon theophrasti)	
	Dayflower (Commelina spp.)	Crabgrass ( <i>Digitaria</i> spp.)	
1/2 to 1	Sesbania ( <i>Sesbania</i> spp.)	Prickly sida, Teaweed (Sida spinosa)	
Pt/Acre			
1	Ragweed, Common (Ambrosia artemisiifolia)		
Pt/Acre			

At the rate of 1/2 pint per acre morningglory species, (*Ipomoea* spp.) horsenettle, (*Solanum* spp.) Florida pusley, (*Richardia scabra*) spotted spurge (*Euphorbia maculata*) and wild poinsettia (*Euphorbia heterophylla*) are suppressed when LIBERTY METRIBUZIN 4L is applied before these weeds are 3 inches tall. The 1 pint per acre rate will suppress broadleaf signalgrass (*Brachiaria platyphylla*) up to 1 inch tall.

# LIBERTY METRIBUZIN 4L POSTEMERGENCE DIRECTED SPRAY

CROP APPLICATIONS	LIBERTY METRIBUZIN 4L Pt/Acre	
CROP		
Soybeans	1/2 to 1	
(Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee and Texas)	(Broadcast Basis)	

Apply proper dosage using 10 to 40 gallons of water per acre as a directed spray in a 6 to 8 inch band on each side of the row after soybeans are 8 inches tall and before broadleaf weeds are 3 inches tall and before grasses and common ragweed are 1 inch tall. For best results the spray must cover weed foliage with minimum or no contact with soybean foliage. Add a nonionic surfactant to the spray mixture to obtain better wetting of weed leaf surfaces. To determine the correct dosage of LIBERTY METRIBUZIN 4L for a band application see "Banded Application" under the "Product Information" section in the front of this label.

If necessary, a second postemergence directed spray application can be made after 7 days.

# **Special Precautions (Directed Postemergence):**

- Do not apply directly to soybeans or serious crop injury will occur.
- Do not allow spray to contact more than the lower 1/4 to 1/3 of soybean plants. Soybean leaves contacted by the spray will be killed.
- Do not apply LIBERTY METRIBUZIN 4L postemergence to sensitive soybean varieties. See "Special Precautions" in the front of this label.
- To avoid injury to other crops or desirable plants from spray drift, sprayer pressure must not exceed 30 psi and the sprayer must be fitted with nozzles no smaller than 8002 T-Jet (or equivalent). Do not apply under weather conditions which favor drift.

#### **Restrictions:**

- Do not feed or graze green soybean vines.
- Do not harvest soybeans or use dry soybean vines for feed or forage within 70 days of last application.

# POTATOES

LIBERTY METRIBUZIN 4L can be used in ground, aircraft or specified chemigation equipment as a preemergence and/or postemergence application to potatoes. Early maturing smooth skinned white and all red skinned varieties may be injured with postemergence applications. The varieties Atlantic, Bellchip, Centennial, Chipbelle and Shepody are sensitive to LIBERTY METRIBUZIN 4L. Avoid postemergence applications on these varieties. Preemergence applications on these varieties may cause crop injury under adverse weather conditions, on coarse soils, under high soil pH, with higher rates per acre and with mechanical incorporation.

**Ground Application:** LIBERTY METRIBUZIN 4L can be used with ground spray equipment applied as a preemergence and/or postemergence application for control of the listed grass and broadleaf weeds in potatoes. Apply as a uniform broadcast spray at 20 or more gallons per acre.

**Aerial Application:** LIBERTY METRIBUZIN 4L may be applied in aerial spray equipment as a preemergence and/or postemergence application at 5 or more gallons per acre.

**Chemigation:** LIBERTY METRIBUZIN 4L may be applied preemergence and/or early postemergence to potatoes using center pivot, solid set and lateral roll systems. Apply specified dosage in 1/4 to 3/4 inch of water per acre (1/4 to 1/2 inch on sandy soil) as a continuous injection in self-propelled systems or apply in the last 15 to 30 minutes of the set in other systems. Be sure all the LIBERTY METRIBUZIN 4L has been flushed from the lines before shutting down the system.

#### WEEDS CONTROLLED

LIBERTY METRIBUZIN 4L applied to potatoes according to directions, will provide economic control of the following weeds. For optimum control, applications should be made before weeds are 1 inch tall. (See "Note" below)

#### **Broadleaves**

Carpetweed, common <sup>1</sup>	Mustard, tansy <sup>1</sup>	Ragweed,common <sup>1,2</sup>
Cocklebur, common <sup>1,2</sup>	Mustard, tumble <sup>1</sup>	Shepherdspurse <sup>1</sup>
Jimsonweed <sup>1</sup>	Mustard, wild <sup>1</sup>	Sicklepod <sup>1</sup>
Kochia <sup>3</sup>	Pennycress,field <sup>1,2</sup>	Smartweed, Pennsylvania <sup>1,2</sup>
Lambsquarters, common <sup>1,2</sup>	Pigweed, redroot <sup>1,2</sup>	Sunflower, common <sup>3</sup>

Mustard, Indian <sup>1</sup>	Pigweed, smooth <sup>1,2</sup>	Thistle, Russian <sup>2</sup>
<sup>1</sup> Weeds controlled with preemergence applications.		
<sup>2</sup> Weeds controlled with postemergence applications.		
3 Weada requiring two applications for control		

<sup>3</sup> Weeds requiring two applications for control.

#### Grasses

Barnyardgrass <sup>2</sup>	Foxtail, giant <sup>1</sup>	Johnsongrass, seedling <sup>1</sup>		
Crabgrass, large <sup>1</sup>	Foxtail, green <sup>1</sup>	Panicum, fall <sup>1</sup>		
Crabgrass, smooth <sup>1</sup>	Foxtail, yellow <sup>1</sup>	Signalgrass, broadleaf <sup>1</sup>		
<sup>1</sup> Weeds controlled with preemergence applications.				
<sup>2</sup> Weeds requiring two applications for control.				

#### Hard to Control Weeds

Although LIBERTY METRIBUZIN 4L may not provide commercially acceptable control in every instance, it will suppress growth of the following weeds and reduce their competition with potato plants.

#### Broadleaves

Dioduicaves			
Kochia	Nightshade, hairy	Purslane, common	Sunflower, common

#### Grasses

0.0000		1	
Barnyardgrass	Nutsedge, Yellow		
		·	

**Note:** Where triazine-resistant weeds are present, LIBERTY METRIBUZIN 4L alone may not provide adequate coverage.

BROADCAST APPLICATIONS			
CROP	LIBERTY METRIBUZIN 4L Pt/Acre		
Potatoes	1/2 to 2		
<b>PREEMERGENCE</b> : Apply specified dosage as a broadcast spray. Do not mechanically incorporate into soil. Use the 1/2 to 1 pint per acre rate for control of wild mustard ( <i>Brassica</i> spp.) only. On sand soils or sensitive varieties, do not exceed 1 pint per acre.			
Potatoes1/2 to 1(Except early maturing smooth skinned, red skinned, and other specified varieties.)1/2 to 1			
Note: Where triazine-resistant weeds are present, LIBERTY METRIBUZIN 4L alone may not provide adequate control.			

**Postemergence:** Apply specified dosage as a broadcast spray over the tops of potato plants.\* Use rates of 1/2 to 1 pint per acre for control of redroot pigweed and common lambsquarters only. Apply the 1 pint per acre rate for control of other weeds listed on this label.

**Split Applications:** This product may be applied once preemergence and once postemergence as directed above.\* Do not exceed 2 pints total per acre per season.

**Idaho, Oregon and Washington Only:** Two postemergence applications can be made as broadcast sprays over the tops of potato plants if LIBERTY METRIBUZIN 4L is not applied preemergence. Use 1/2 to 1 pint per acre for control of redroot pigweed and lambsquarters only. On coarse (sandy) soils with low organic matter do not exceed 3/4 pint per acre per application. On medium and heavy soils only, use 1 pint per acre per application for control of other weeds listed on this label and for suppression of hairy nightshade. Make the first application early in the season while weeds are still small. Allow at least 14 days before the second application. Do not apply after June 30 if treated land is to be planted to crops other than potatoes.

\* Refer to Restrictions and Special Precautions below.

**TANK MIXES:** LIBERTY METRIBUZIN 4L may be tank mixed with the following herbicides: EPTC, Metolachlor, Pendimethalin and Rimsulfuron. In addition, three-way tank mix combinations may be used for LIBERTY METRIBUZIN 4L plus Metolachlor, EPTC or Pendimethalin plus Rimsulfuron when applied preemergence. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

**Metolachlor:** LIBERTY METRIBUZIN 4L may be applied in a tank mix combination with Metolachlor as a preemergence broadcast application. Apply LIBERTY METRIBUZIN 4L at 3/4 to 2 pints per acre and the Metolachlor at the labeled rate per acre according to the respective labels for use of each product alone on potatoes.

**EPTC:** LIBERTY METRIBUZIN 4L may be tank mixed with EPTC at rates and uses permitted on each product's label.

**Pendimethalin:** LIBERTY METRIBUZIN 4L may be applied in tank mix combination with Pendimethalin as a preemergence or early postemergence broadcast application. As a preemergence mix, apply LIBERTY METRIBUZIN 4L at 1 to 2 pints per acre and Pendimethalin at the labeled rate per acre. As an early postemergence spray, apply LIBERTY METRIBUZIN 4L at 1/2 to 1 pint per acre and Pendimethalin at 1.2 to 3.6 pints per acre before the crop is in the 6-inch growth stage.

**Rimsulfuron (except the following counties in Colorado: Alamosa, Conejos, Costilla, Rio Grande and Saguache):** LIBERTY METRIBUZIN 4L may be applied in tank mix combination with Rimsulfuron as a preemergence and/or early postemergence application for improved control on weeds such as Russian thistle, kochia and common lambsquarters. As a preemergence mix, apply LIBERTY METRIBUZIN 4L at 0.5 to 1.125 pint per acre and Rimsulfuron at labeled rates per acre. As an early postemergence spray, apply LIBERTY METRIBUZIN 4L at 1/2 to 1 pint per acre and Rimsulfuron at labeled rates per acre. Use a nonionic surfactant at a rate of 0.125% v/v (1 pint per 100 gallon of water). Apply before the crop exceeds 14 inches in height. Postemergence applications of Rimsulfuron treatments should be made prior to June 30.

# **Special Precautions:**

- Postemergence applications may cause some chlorosis or minor necrosis. These symptoms may be more severe if seed piece decay is occurring or if growing conditions favor crop stress.
- Postemergence applications may be made only on russet or white skinned varieties that are not early maturing.
- Potato varieties may vary in their response to herbicide application. When using LIBERTY METRIBUZIN 4L for the first time on a particular variety, always determine crop tolerance before using on a field scale.
- Certain cereal varieties are sensitive to LIBERTY METRIBUZIN 4L (see cereal section of this label for sensitive varieties) and should not be planted during the next growing season unless the following cultural practices occur.
- Potato vines left in rows as a result of harvest must be uniformly distributed over the soil surface prior to plowing.
- Plow with a moldboard plow to a depth sufficient to mix the upper 8 inches of soil.

# **Restrictions:**

- Do not use LIBERTY METRIBUZIN 4L on potatoes in Kern County, California.
- Do not apply more than a total of 2 pints LIBERTY METRIBUZIN 4L per acre in a single crop season regardless of the method of application.
- Do not apply LIBERTY METRIBUZIN 4L within 60 days of harvest.
- Do not make postemergence applications prior to rainfall or irrigation on recently cultivated potatoes, nor within 3 days after periods of cool, wet cloudy weather or injury may occur.
- Do not use air blast sprayers.
- Do not apply to sweet potatoes or yams.
- Do not plant sensitive crops such as onions, lettuce, cole crops and cucurbits during the next growing season following LIBERTY METRIBUZIN 4L applications.

# **ALFALFA AND SAINFOIN**

LIBERTY METRIBUZIN 4L can be used in alfalfa and sainfoin in the following areas:

- 1. Alfalfa and sainfoin (Including mixed stands with grasses) (all areas except California).
- 2. Alfalfa and sainfoin (Including mixed stands with grasses) (California only).
- 3. Alfalfa Tank Mix Combination with Gramoxone Paraquat (Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming, and the following California counties: Del Norte, Lassen, Modoc, Nevada, Plumas, Shasta, Sierra, and Siskiyou).
- 4. Alfalfa Post Dormant Application of LIBERTY METRIBUZIN 4L Impregnated on Dry Fertilizer Only (Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas and Wisconsin).

LIBERTY METRIBUZIN 4L can be used in aerial or ground spray equipment as a broadcast surface application to established crops of alfalfa and sainfoin for the control of certain grass and broadleaf weeds.

**Application:** Refer to "Product Information" in the front of this label for detailed information on the application of LIBERTY METRIBUZIN 4L. For information on applying LIBERTY METRIBUZIN 4L in fluid or on dry fertilizer refer to the "Application of LIBERTY METRIBUZIN 4L in Fluid Fertilizers" or "Commercial Impregnation and Application of LIBERTY METRIBUZIN 4L on Dry Bulk Fertilizer" under the "Product Information" section of this label.

#### **Special Precautions:**

• Use LIBERTY METRIBUZIN 4L only on established alfalfa and sainfoin. Do not apply LIBERTY METRIBUZIN 4L after growth begins in the spring or before growth ceases in the fall, except as specified on this label.

#### **Restrictions:**

• Do not graze or harvest within 28 days after application.

For best weed control, apply LIBERTY METRIBUZIN 4L when weeds are less than 2 inches tall or before weed foliage is 2 inches in diameter. Reduced weed control may occur when extended dry conditions follow application of LIBERTY METRIBUZIN 4L.

Crop injury may occur when:

- 1. Crop is under stress conditions such as diseases, insect infestations, poorly drained soils, drought or winter injury at time application;
- 2. Crop is treated within 12 months after seeding;
- 3. There is excessive irrigation or rainfall immediately after application. Do not apply more than 1/2 inch of water in the first irrigation after LIBERTY METRIBUZIN 4L is applied.

ALFALFA and SAINFOIN (All Areas Except California) BROADCAST APPLICATION RATES		
CROP LIBERTY METRIBUZIN 4L Pt/Acre		
Alfalfa and Sainfoin (Except California)1/2 to 2		
Select the proper dosage according to weeds known to be and present in field to be treated. On loamy		

sand soils in Oregon and Washington, do not apply more than 1 pint of LIBERTY METRIBUZIN 4L per acre.

# For Use On Mixed Stands of Alfalfa and Grasses:

Rates of 1 to 1 1/2 pints of LIBERTY METRIBUZIN 4L per acre will provide partial reduction of forage grass stands. These rates may be used to reduce forage grass stands to prevent crowding out of alfalfa. Higher rates will severely reduce forage grass stands. LIBERTY METRIBUZIN 4L should not be used on sand soils. In areas west of the Rocky Mountains, avoid using LIBERTY METRIBUZIN 4L on soils with calcareous surface area, high levels of lime or sodium, or a pH greater than 8.2.

ALFALFA and SAINFOIN			
Weeds Controlled (Except California) 1/2 to 3/4 Pt LIBERTY METRIBUZIN 4L Per Acre			
Chickweed, Common (Stellaria media)			
3/4 to 1 Pt LIBERTY METRIBUZIN 4L Per Acre			
Cheatgrass (Bromus secalinus)	Pennycress ( <i>Thlaspi arvense</i> )		
Deadnettle, Purple (Lamium purpureum)	Rescuegrass (Bromus catharticus)		
Downy brome ( <i>Bromus tectorum</i> )	Shepherdspurse (Capsella bursa-pastoris)		
Japanese brome ( <i>Bromus japonicas</i> )			
	ETRIBUZIN 4L Per Acre		
Broadleaves			
Fleabane, Rough <i>(Erigeron strigosus)</i>	Mustard, Tansy (Descurainia pinnata)		
Flixweed (Descurainia sophia)	Pepperweed (Lepidium virginicum)		
Henbit (Lamium amplexicaule)	Pigweed, Redroot (Amaranthus retroflexus)		
Kochia <i>(Kochia scoparia)</i>	Prickly Lettuce (Lactuca serriola)		
Lambsquarters, Common (Chenopodium album)	White Cockle (Melandrium album)		
Marestail (Horseweed) (Hippuris vulgaris)	Wild Buckwheat (Polygonum convolvulus)		
Meadow Salsify (Tragopogon pratensis)	Yellow Rocket (Barbarea vulgaris)		
Mustard, Jim Hill (tumble) <i>(Sisymbrium altissimum)</i>			
Grasses			
Foxtail, Green (Setaria virdis)	Smooth Brome (Bromus inermis)		
Little Barley (Hordeum pusillum)	Wild Oats (Avena fatua)		
2 Pt LIBERTY MET	RIBUZIN 4L Per Acre		
Broadleaves			
Chickweed, Mousear (Cerastium vulgatum)	Ragweed, Common (Ambrosia artemisiifolia)		
Dandelion (Taraxacum officinale)			
Grasses			
Barnyardqrass (Echinochloa crus-galli)	Foxtail Barley (Hordeum iubatum)		
Bluegrass (Poa annua)			

**Weeds Partially Controlled:** At the rate of 2 pints per acre LIBERTY METRIBUZIN 4L may be used to reduce the competition from curly dock (*Rumex crispus*). At the 1 to 2 pints per acre, LIBERTY METRIBUZIN 4L may be used to reduce the competition of German Moss or knawel (*Scleanthus annus*).

# ALFALFA AND SAINFOIN (California Only) (Including Mixed Stands with Grasses)

LIBERTY METRIBUZIN 4L can be used in aerial or ground spray equipment as a broadcast surface application to dormant established crops of alfalfa and sainfoin.

**Application:** LIBERTY METRIBUZIN 4L can be used in aerial or ground spray equipment as a broadcast surface application to dormant established crops of alfalfa and sainfoin for control of certain grass and broadleaf weeds. Do not apply LIBERTY METRIBUZIN 4L after growth begins in the spring or before growth ceases in the fall. Do not apply to either alfalfa or sainfoin during the first growing season after seeding.

For information on applying LIBERTY METRIBUZIN 4L in fluid fertilizer solutions to alfalfa, refer to the appropriate section of this label.

For information on commercial impregnation and application of LIBERTY METRIBUZIN 4L on dry bulk fertilizer, refer to the appropriate section of this label.

	FA and SAINFOIN rolled (Only California)
	TY METRIBUZIN 4L Per Acre
Cheatgrass (downy brome) (Bromus secalinus	
	Y METRIBUZIN 4L Per Acre
Broadleaves	
Chickweed, Common (Stellaria media)	Mustard, Tansy (Descurainia pinnata)
Flixweed (Descurainia sophia)	Pepperweed, Virginia (Lepidium virginicum)
Henbit (Lamium amplexicaule)	Shepherdspurse (Capsella bursa-pastoris)
Kochia (Kochia scoparia)	White Cockle (Melandrium album)
Meadow Salsify (Tragopogon pratensis)	Wild Buckwheat (Polygonum convolvulus)
Mustard, Blue (Chlorispora tenella)	Yellow Rocket (Barbarea vulgaris)
Grasses	
Smooth Brome (Stellaria media)	Wild Oats (Avena fatua)
2 Pt LIBERTY	METRIBUZIN 4L Per Acre
Broadleaves	
Dandelion (Taraxacum officinale)	
Grasses	
Barnyardqrass (Echinochloa crus-galli)	Foxtail Barley (Hordeum iubatum)
Bluegrass (Poa annua)	

# BROADCAST APPLICATION RATES CROP LIBERTY METRIBUZN 4L Pt/Acre Alfalfa and Sainfoin (California Only) 3/4 to 2 Select the proper dosage according to weeds known to be present in the field to be treated. Apply specified dosage in 20 to 40 gallons of water per acre with ground spray equipment or 3 to 10 gallons of water per acre with aerial spray equipment fitted with nozzles suitable for broadcast applications of herbicides. Treat only dormant established crops of alfalfa and sainfoin. Injury may occur to alfalfa if LIBERTY METRIBUZIN 4L is applied earlier than 12 months after seeding. Do not apply after Spring growth begins or before growth ceases in the Fall.

**For Use On Mixed Stands of Alfalfa and Grasses:** Rates of 1 to 1 1/2 pints of LIBERTY METRIBUZIN 4L per acre will provide partial reduction of forage grass stands. These rates may be used to reduce forage grass stands to prevent crowding out of alfalfa. Higher rates will severely reduce forage grass stands.

# **Special Precautions:**

• Do not apply when weather conditions favor spray drift and/or when sensitive cool season crops, such as cole crops, onions, peas, or strawberries, are present in adjacent fields. Applications should not be made when weather conditions favor spray drift, especially in areas where wheat is growing on coarse textured soils in adjacent fields, or injury may occur.

#### **Restrictions:**

- Do not graze or harvest within 28 days after application.
- Do not apply with aerial spray equipment when wind speed is greater than 10 mph.

# ALFALFA

#### LIBERTY METRIBUZIN 4L plus Paraquat Tank Mix

# Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming and the following California counties: Del Norte, Lassen, Modoc, Nevada, Plumas, Shasta, Sierra, and Siskiyou.

**Application**: LIBERTY METRIBUZIN 4L plus Paraquat tank mix application can be used, during the dormant season, in aerial or ground spray equipment as a broadcast surface application to established alfalfa for the control of certain grass and broadleaf weeds. Do not apply LIBERTY METRIBUZIN 4L/Paraquat tank mix to growth that is more than 2 inches tall. Apply once per season. Do not apply following cuttings during growing season. Use a minimum of 10 gallons of water per acre with aerial spray equipment and a minimum of 20 gallons of water per acre with ground spray equipment. Add a non-ionic spreader at label rates to the spray solution.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

**Weeds Controlled:** LIBERTY METRIBUZIN 4L plus Paraquat tank mix application will control established weeds. Paraquat controls weeds by contact activity.

#### 1/2 to 3/4 pt of LIBERTY METRIBUZIN 4L Per Acre

Common Chickweed

#### 3/4 to 1 1/2 pt of LIBERTY METRIBUZIN 4L Per Acre

Bluegrass	Downy brome	Henbit	Rescuegrass
Cheat	Field pennycress	Japanese brome	Shepherdspurse

#### 1 to 1 1/2 pt of LIBERTY METRIBUZIN 4L Per Acre

Blue mustard	Kochia	Redroot pigweed	Tansy mustard
Common lambsquarters	Little barley	Rough fleabane	White cockle
Flixweed	Marestail (Horseweed)	Ryegrass	Wild oats
Green foxtail	Meadow salsify	Smooth brome	Wild buckwheat
Groundsel	Pepperweed	Sow thistle	Yellow rocket
Jim Hill mustard	Prickly lettuce		

Application Rates	
Dosage/Acre	
LIBERTY	Apply specified dosages of LIBERTY METRIBUZIN 4L and Paraquat in at
METRIBUZINE 4L	least 10 gallons of water per acre with aerial equipment or at least 20 gallons
1/2 to 1 1/2 Pt	of water per acre with ground equipment. Do not apply this tank mix to
+	alfalfa growth if more than 2 inches tall. For best weed control, apply when
Paraquat	broadleaf weeds and grasses are 1-6 inches tall and are actively growing.
	Care should be taken to avoid overlaps. Do not apply more than 1 pint of
See Paraquat label of	LIBERTY METRIBUZIN 4L per acre on loamy sand soils. Reduced weed
product being used for	control may occur when extended dry conditions follow application of
application rates	LIBERTY METRIBUZIN 4L. Crop injury may occur if alfalfa is under stress
	conditions such as diseases, insect infestations, drought or winter injury or if
	LIBERTY METRIBUZIN 4L is applied to alfalfa earlier than 12 months after
	seeding.

**For Use On Mixed Stands of Alfalfa and Grasses**: Rates of 1 to 1 1/2 pints of LIBERTY METRIBUZIN 4L per acre will provide partial reduction of forage grass stands. These rates may be used to reduce forage grass stands to prevent crowding out of alfalfa.

#### **Special Precautions:**

- In areas west of the Rockies, avoid the use of LIBERTY METRIBUZIN 4L on soils with calcareous surface soils with high levels of lime or sodium, and with a pH greater than 8.2.
- Do not apply when weather conditions favor spray drift. Aerial application should not be made when wind speed is greater than 10 mph. Do not use on sand soil.

#### **Restrictions:**

• Do not graze or harvest within 42 days after application.

#### Post Dormant Application of LIBERTY METRIBUZIN 4L Impregnated on Dry Fertilizer Only

LIBERTY METRIBUZIN 4L may be applied after dormancy has broken, but prior to three inches of new alfalfa shoot growth, only when impregnated on dry fertilizer in Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas and Wisconsin.

Apply at rates of 1 1/2 to 2 pints per acre as directed on this label for application during dormancy. Apply only when alfalfa foliage is dry or crop injury may occur. When using this application method, do not harvest or graze treated alfalfa for 60 days after application.

# ASPARAGUS (Established)

LIBERTY METRIBUZIN 4L can be used in ground spray equipment or sprinkler irrigation (center pivot, lateral move, or solid set) systems as a single preemergence broadcast application or as a split application consisting of a preemergence broadcast application followed by a postharvest broadcast application. Refer to the "Product Information" section of this label for directions.

**Weeds Controlled:** LIBERTY METRIBUZIN 4L, applied to established asparagus according to directions, will effectively control:

Broadleaves	
Chickweed, Common (Stellaria media)	Ragweed, common (Ambrosia artemisiifolia)
Jimsonweed (Datura stramonium)	Smartweed, Pennsylvania (Polygonum
	pensylvanicum)
Lambsquarters (Chenopodium album)	Sorrel, Red (Rumex acetosella)
Pigweed, Redroot (Amaranthus retroflexus) Velvetleaf (Abutilon theophrasti)	
Grasses	
Crabgrass <i>(Digitaria</i> spp.)	Sandbur, Field (Cenchrus pauciflorus)
Foxtails (Setaria spp.)	

BROADCAST	APPLICATION RATES
CROP	LIBERTY METRIBUZIN 4L Pt/Acre
Asparagus	2 to 4
	<b>Preemergence Application Only:</b> Make a single surface application in early Spring before asparagus spears or ferns emerge. If the field is to be disked, apply LIBERTY METRIBUZIN 4L after disking but before the crop emerges. Use the lower rate for control of the broadleaf weeds listed above. Use the higher rate in fields with a history of severe infestations of grasses and for maximum residual control. Do not apply within 14 days of harvest.
	<ul> <li>to 2 preemergence</li> <li>plus</li> <li>2 to 3 postharvest</li> <li>Split Application Preemergence and Postharvest</li> <li>Preemergence Application: Apply before asparagus spears or ferns emerge. If the field is to be disked, apply after disking but prior to crop emergence. Do not apply within</li> </ul>
	14 days of harvest.

Postharvest Application: Apply after last harvest of the season but prior to
emergence. The lower combination rates may be used for control of common ragweed,
lambsquarters, redroot pigweed and red sorrel. Use the higher rates for other weeds
listed or in fields with severe grass infestations or for maximum postharvest control of
emerged weeds.

# **Restrictions:**

- Do not apply more than 4 pints per acre of LIBERTY METRIBUZIN 4L in one crop season.
- Aerial application is prohibited
- Do not use on newly seeded asparagus or on young plants during the first growing season after setting crowns.
- Do not apply postharvest applications until after the last harvest of spears.

# CARROTS

Apply LIBERTY METRIBUZIN 4L with ground equipment as specified below under "Application Rates". For effective control of broadleaf weeds with postemergence applications, apply LIBERTY METRIBUZIN 4L before weeds are 1 inch in height or diameter. Thorough spray coverage is essential for adequate weed control.

Do not use air blast or other high pressure spray equipment to make postemergence applications of LIBERTY METRIBUZIN 4L. Refer to the appropriate section of this label for additional information regarding spray equipment, dilution rates, mixing, sprayer cleanup, restrictions, container disposal and cautions.

**Mixing:** Refer to "the "Product Information" section of this label.

Application: For specific information see the "Product Information" and "Application" sections of this label.

#### Weeds Controlled:

LIBERTY METRIBUZIN 4L applied to carrots according to directions will effectively control:

Carpetweed (Mollugo verticillata)	Pigweed, Redroot (Amaranthus retroflexus)
Galinsoga ( <i>Galinsoga parviflora</i> )	Pigweed, Smooth (Amaranthus hybridus)
Horseweed/Marestail (Conyza canadensis)	Prickly Lettuce (Lactuca serriola)
Lambsquarters (Chenopodium album)	Shepherdspurse (Capsella bursa-pastoris)
Mustard, Wild (Sinapis arvensis)	Pineappleweed (Matricaria matricarioides)

# **APPLICATION RATES**

CROP	LIBERTY METRIBUZIN 4L Pt/Acre
Carrots	1/2
	Apply specified dosage per acre as a broadcast spray over the tops of carrot plants. Applications should be made after carrots have formed 5-6 true leaves but before weeds are 1 inch in height or diameter. If needed, a second application may be made after an
	interval of at least 3 weeks. Applications may be made up to 60 days of harvest.

#### **Special Precautions:**

- Do not apply within 3 days after periods of cool, wet or cloudy weather or crop injury will occur. Do not apply this product with 3 days of any other chemical unless specified on this label. Do not apply on very hot days or excessive crop injury will result. Do not apply until carrots have at least 5-6 true leaves. Earlier applications will result in excessive crop damage.
- Crop injury or delayed maturity may result from applications of LIBERTY METRIBUZIN 4L if carrots are growing under stress conditions such as periods of drought or cool, wet and cloudy weather preceding application.
- Following an application of LIBERTY METRIBUZIN 4L, chlorosis (yellowing) and burning of the leaf tissue may occur.
- For newly introduced varieties of carrots with unknown tolerance to LIBERTY METRIBUZIN 4L, treat only a small area to determine if LIBERTY METRIBUZIN 4L can be used without injury to the crop.

# **Restrictions:**

- The total amount of LIBERTY METRIBUZIN 4L applied in one crop season must not exceed 1 pint per acre.
- Do not apply to carrots grown for seed.

# FIELD CORN

# POSTEMERGENCE APPLICATION

LIBERTY METRIBUZIN 4L can be used for control of selected broadleaf weeds when applied as a tank mix combination with certain broadleaf herbicides presently registered for postemergence use in field corn. Herbicides which may be tank mixed with this product are listed below. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

2,4-D	Clorpyralid + Flumetsulam + 2,4-D	
Atrazine	Dicamba	
Bentazon	Dicamba + Atrazine	
Bentazon + Atrazine	Flumiclorac	
Bromoxynil	Imazethapyr <sup>1</sup>	
Bromoxynil + Atrazine (premix)	Pyridate	
<sup>1</sup> Use only on Pursuit Imazethapyr resistant/tolerant corn hybrids (IMI (CLEARFIELD) Corn).		

**Application:** LIBERTY METRIBUZIN 4L may be applied to field corn after crop emergence until just prior to tasseling. Broadcast applications may be made with ground or aerial equipment. For optimum weed control, apply treatments when weeds are small and actively growing, but before reaching the maximum heights listed in the Weeds Controlled table.

# POSTEMERGENCE BROADCAST APPLICATION

**Ground Application:** Adjust nozzle height above crop and weed canopy to ensure uniform spray coverage. Gallonage should be increased with increasing weed size and population density.

For tank mixes of LIBERTY METRIBUZIN 4L plus 2,4-D amine formulations, Atrazine, Bentazon, Bentazon + Atrazine, Bromoxynil, Bromoxynil + Atrazine, Flumiclorac, Imazethapyr or Pyridate use flat fan nozzles spaced a maximum of 20 inches apart. Best results are achieved using a minimum spray volume of 10 gallons per acre and spray pressure from 20 to 40 psi.

For LIBERTY METRIBUZIN 4L tank mixes with Dicamba, Dicamba + Atrazine or 2,4-D low volatile ester formulations, use drift reducing nozzles which are specifically designed to produce coarse sprays and reduce the amount of driftable fines. Additional measures which will help avoid potential drift to sensitive crops and plants include using a minimum spray volume of 20 gallons per acre and keeping spray pressures at or below 20 psi unless otherwise specified by the nozzle manufacturer.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

**Aerial Application:** Apply in a minimum spray volume of 3 gallons per acre. For optimum spray coverage and distribution, use a minimum of 5 gallons per acre and a maximum pressure of 40 psi. Use a boom and nozzle configuration which will provide a uniform deposition pattern and coverage with low drift potential. Avoid overlaps to prevent potential crop injury. Do not apply near sensitive crops or sensitive plants growing near the treated area. Do not apply when wind speed is greater than 10 mph or when winds are moving toward sensitive crops or plants. To avoid drift hazards, applicator must follow the most restrictive labeling of the products used in a tank mix. Refer to the appropriate tank mix partner's label for further precautions and instructions.

# **POST DIRECTED APPLICATION**

LIBERTY METRIBUZIN 4L in tank mix combinations with 2,4-D, Bromoxynil, Clorpyralid + Flumetsulam + 2,4-D or Dicamba may be applied post directed to field corn. Use drop nozzles and appropriate spacing to direct spray below the corn whorl and upper leaves. The top of the target weed canopy must be sufficiently below the whorl and upper leaves of the crop to permit this application and provide adequate spray coverage. The height differential required between the crop and weed canopy will depend on the specific equipment used. Apply before tassel emergence. Refer to the appropriate tank mix partner's label for further precautions and instructions.

#### **ADJUVANTS**

The adjuvant types listed below may be utilized with certain LIBERTY METRIBUZIN 4L tank mix combinations. Consult the tank mix section for the appropriate adjuvant and rate. Use of non-listed adjuvants or rates may result in severe leaf burn, crop stunting, and/or stand reduction. Use only adjuvants which are EPA exempt from tolerance requirements.

**UAN** (urea ammonium nitrate) is commonly referred to as 28, 30, or 32% N.

**Ammonium sulfate** (spray grade) may be used as an alternative to UAN with certain tank mix combinations.

**Non-ionic surfactants** should contain at least 80% active ingredient.

#### **Restrictions:**

 Do not use crop oil concentrate (COC) or any adjuvant containing vegetable or petroleum oils with any LIBERTY METRIBUZIN 4L tank mixtures as severe leaf burn, crop stunting, and/or stand reduction may occur.

#### RAINFASTNESS

LIBERTY METRIBUZIN 4L will not reduce rainfastness of the listed tank mix partners. Refer to the individual product labels for indications of rainfastness.

#### SPRAYER CLEANUP

Refer to each tank mix partner's label and the Sprayer Cleanup section of the LIBERTY METRIBUZIN 4L label for specific instructions on cleaning spray equipment. Special attention should be given to the required cleanup procedures for 2,4-D, Dicamba and Dicamba + Atrazine.

#### **Restrictions:**

- Do not apply more than 0.25 pounds a.i. metribuzin (8 fluid ounces LIBERTY METRIBUZIN 4L) per acre per use season
- Do not use on corn grown for seed, sweet corn, popcorn, or white corn.
- Do not apply when field corn is under stress (see Stress statement below).
- Do not use aerial applications if sensitive crops or plants are growing in the vicinity of the area to be treated.
- Do not allow spray drift onto sensitive crops or plants.
- Do not use on sand, loamy sand or sandy loam soils that have less than 0.5% organic matter.
- Do not use on sand or loamy sand soils in Washington, Oregon or Idaho or crop injury may occur.
- Observe all precautions and limitations on labeling of all products used in the tank mixtures.

Stress is any condition or combination of conditions which impairs normal crop growth. Weather, disease, insect damage, fertility or other factors may cause stress. Applications made before or after the corn is under stress from these factors or from periods of prolonged cool, wet and cloudy weather or widely fluctuating day and nighttime temperatures, may result in temporary leaf burn, yellowing and/or stunting of the crop. Recovery from damage is generally rapid with no lasting effects on new growth. Under extreme stress, stand reductions may occur.

**Feeding Restrictions:** Field corn treated with LIBERTY METRIBUZIN 4L may be grazed or harvested for silage or grain 60 days after treatment. Follow the most restrictive preharvest interval on the labels of the products used in the tank mixtures.

# TANK MIX COMBINATIONS

The LIBERTY METRIBUZIN 4L tank mixtures listed below can be utilized for control of certain annual broadleaf weeds. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

	LIBERTY METRIBUZIN 4L POST DIRECTED INSTRUCTIONS		
PRODUCT	RATE	DIRECTIONS AND REMARKS*	
LIBERTY METRIBUZIN 4L + 2,4-D Amine or 2,4-D LVE	3 to 4 1/2 fl oz/A + See 2,4-D label of product being used for application rates	For corn greater than 8 inches tall, apply as a directed spray with drop nozzles before tassel emergence. Apply only to varieties known to be tolerant to 2,4-D. <b>Do not use adjuvants.</b> 2,4-D may cause injury to nearby sensitive crops. 2,4-D applications may result in brittle corn stalks, and winds or cultivation may cause stalk breakage. To reduce damage, delay cultivation 8 to 10 days after application.	
LIBERTY METRIBUZIN 4L + Dicamba	3 to 4 1/2 fl oz/A + See Dicamba label of product being used for application rates	For corn 8 to 36 inches tall, apply as a directed spray with drop nozzles. Applications may be made up to 15 days prior to corn tasseling. If growing conditions are dry and plants are stressed, addition of a non-ionic surfactant (1 quart per 100 gallons of spray solution) may improve weed control. For corn grown on coarse textured soils, apply Dicamba at 1/4 lb ai per acre, regardless of application method. Application may cause injury to nearby sensitive crops or plants. Application may result in temporary leaning of corn plants. Delay cultivation until plants return to normal growth patterns to avoid stalk breakage.	
LIBERTY METRIBUZIN 4L + Bromoxynil	3 to 4 1/2 fl oz/A + See Bromoxynil label of product being used for application rates	Apply as directed spray with drop nozzles before tassel emergence. <b>Do not use adjuvants.</b> Occasional temporary corn leaf burn may occur and is similar to that observed from liquid fertilizers. Recovery is generally rapid with no lasting effect. To reduce potential for crop damage, application should be made to dry corn foliage when weather conditions are not extreme.	
LIBERTY METRIBUZIN 4L + Clorpyralid + Flumetsulam + 2,4-D	3 to 4 1/2 fl oz/A + See Clorpyralid + Flumetsulam + 2,4-D label of products being used for application rates	For corn 8 to 24 inches tall, apply as a directed spray with drop nozzles. Include nonionic surfactant (1 quart per 100 gallons) plus UAN (2.5 gallons per 100 gallons) for optimum weed control.	
* It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of			

\* It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

LIBERTY METRIBUZIN 4L POST EMERGENCE BROADCAST INSTRUCTIONS				
PRODUCT	RATE	DIRECTIONS AND REMARKS*		
LIBERTY METRIBUZIN 4L + 2,4-D Amine or 2,4-D LVE	3 fl oz/A + See 2,4-D label of product being used for application rates	Apply as a broadcast spray during the interval from corn emergence until corn is 8 inches tall. Apply only to varieties known to be tolerant to 2,4-D. <b>Do not use adjuvants</b> . 2,4-D may cause injury to nearby sensitive crops. 2,4-D applications may result in brittle corn stalks, and winds or cultivation may cause stalk breakage. To reduce damage, delay cultivation 8 to 10 days after application.		
LIBERTY METRIBUZIN 4L + Atrazine	3 fl oz/A + See Atrazine label of product being used for application rates	Apply as a broadcast spray during the interval from corn emergence until corn is 12 inches tall. A non-ionic surfactant (1 qt/100 gal of spray solution) may be added to improve weed control. Atrazine is a restricted use herbicide. Follow all state and federal label and restrictions pertaining to atrazine applications.		
LIBERTY METRIBUZIN 4L + Dicamba	3 fl oz/A + See Dicamba label of product being used for application rates	Apply as a broadcast spray during the interval from corn emergence through the five leaf stage or when corn is 8 inches tall, whichever occurs first. For Dicamba applications to corn greater than 8 inches in height, consult the Dicamba label for use rates and restrictions. If growing conditions are dry and plants are stressed, addition of a non- ionic surfactant (1 quart per 100 gallons of spray solution) may improve weed control. For corn grown on coarse textured soils, apply Dicamba at 1/4 lb ai per acre, regardless of application method. Application may cause injury to nearby sensitive crops or plants. Application may result in temporary leaning of corn plants. Delay cultivation until plants return to normal growth patterns to avoid stalk breakage.		
LIBERTY METRIBUZIN 4L + Bentazon	3 fl oz/A + See Bentazon label of product being used for application rates	Apply as a broadcast spray after corn emergence but before corn exceeds 30 inches in height and the crop canopy closes the row. Adjuvants such as UAN (0.5 to 1 gal/A), ammonium sulfate (17 pounds per 100 gallons of spray solution), or non-ionic surfactant (1 quart per 100 gallons of spray solution) may improve weed control.		
LIBERTY METRIBUZIN 4L + Bromoxynil	1.4 to 3 fl oz/A + See Bromoxynil label of product being used for application rates	Apply as a broadcast spray when corn is in the fourth true leaf stage or later but before the crop canopy closes the row. <b>Do not use adjuvants</b> . Occasional temporary corn leaf burn may occur and is similar to that observed from liquid fertilizers. Recovery is generally rapid with no lasting effect. To reduce potential for crop damage, application should be made to dry corn foliage when weather conditions are not extreme.		
LIBERTY METRIBUZIN 4L + Buctril Bromoxynil + Atrazine (Premix)	2.4 to 3 fl oz/A + See Buctril Bromoxynil + Atrazine label of product being used for application rates	Apply as a broadcast spray during the interval from corn emergence until corn is 12 inches tall. <b>Do not use adjuvants</b> . Occasional temporary corn leaf burn may occur and is similar to that observed from liquid fertilizers. Recovery is generally rapid with no lasting effect. To reduce potential for crop damage, application should be made to dry corn foliage when weather conditions are not extreme.		

LIBERTY METRIBUZIN 4L + Dicamba + Atrazine	3 fl oz/A + See Dicamba + Atrazine label of product being used for application rates	Apply as a broadcast spray during the interval from corn emergence through the five-leaf stage or when corn is 8 inches tall, whichever occurs first. <b>Do not use adjuvants.</b> Application may cause injury to nearby sensitive crops or plants. Application may result in temporary leaning of corn plants. Delay cultivation until plants return to normal growth patterns to avoid stalk breakage. <u>Marksman contains atrazine</u> , and <u>Atrazine</u> is a restricted use product. Follow all state and federal label recommendations and restrictions pertaining to atrazine.			
LIBERTY METRIBUZIN 4L + Imazethapyr	3 fl oz/A + See Imazethapyr label of product being used for application rates	Use only on designated IMI-Corn hybrids (hybrids which are resistant/ tolerant to Imazethapyr. Apply the label rate of imazethapyr if grasses are present or broadleaf weeds are near the maximum heights shown. Apply in combination with a non-ionic surfactant (1 quart per 100 gallons of spray solution) and UAN (1 to 2 quarts per acre).			
LIBERTY METRIBUZIN 4L + Flumiclorac	3 fl oz/A + See Flumiclorac label of product being used for application rates	Apply as a broadcast spray to field corn from 2-leaf through 10-leaf (visible leaf collars) stage. Adjuvants such as nonionic surfactant (0.25% v/v), UAN (2% v/v) or ammonium sulfate (2.5 pounds per acre) may improve weed control.			
LIBERTY METRIBUZIN 4L + Pyridate	3 fl oz/A + See Pyridate label of product being used for application rates	Apply as a broadcast spray after corn emergence but before corn height exceeds 30 inches and the crop canopy closes the row. A non-ionic surfactant (1 quart per 100 gallons of spray solution) may be added to improve weed control. Use the higher label rates of Pyridate as weeds approach the maximum height listed or are found in high density. Pyridate may improve control on triazine/ALS resistant weeds.			
* It is the pesticion	* It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the				

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

#### WEEDS CONTROLLED – POSTEMERGENCE BROADCAST APPLICATION These tank mixtures with LIBERTY METRIBUZIN 4L will control the following annual weeds up to the maximum weed heights listed:

	indui moot								
COMMON WEED	LIBERTY METRIBUZIN 4L +								
NAMES	Atrazine	Dicamba	Bentazon	Bromoxynil/ Bromoxyni + atrazine	2,4-D	Dicamba + Atrazine	lmaze- thapyr	Flumiclorac	Pyridate
			MAXIN	<b>IUM WEE</b>	ED HEIG	HT IN IN	CHES*		
Amaranth, Palmer	4a	4	2a	4a	4	4	8b	4	4
Buckwheat, wild	3	3	3	3	2	3	2	4	
Buffalobur	4	4		4		4	1		
Burcucumber		4		4	2	4			4
Carpetweed	2	2	2	2	2	2	2	3	4
Cocklebur, common	8	8	8	8	8	8	8b	3	6
Eclipta	3	3	3	3	3	3			3
Henbit	3	3	2	2	2	4	3		4
Horseweed/marestail	3	4	1	1	3	6		3	
Jimsonweed	5	5	6	5	5	5	5	3	5
Knotweed	6	6	6	4	2	6	4		4
Kochia	2a	2	1a	2a	2a	2	2		4
Ladysthumb	6	6	6	6	4	6	4	4	6

Lambsquarters, common	6a	6	1	6	6	6	4	4	4
Lettuce, prickly	4	4		3	4	5			
Mallow, Venice	2	2	2	2	2	2	2		
Norningglory, entireleaf	3	3	1	3	3	3	2		
Morningglory, ivyleaf	3	3	1	3	3	3	2		
Norningglory, pitted	3	3	1	3	3	3	2		
Morningglory, tall	3	3	1	3	3	3	2		
Mustard, tansy	4	4	4	4	4	4	4		
Mustard, wild	4	4	4	4	4	4	4		4
Nightshade, black	6	6		6	1	6	3		4
Nightshade, eastern black	6	6		6	1	6	3		4
Pigweed, redroot	6a	6	2a	6a	6	6	8b	4	6
Pigweed, smooth	6a	6	2a	6a	6	6	8b	4	6
Poorjoe	3	3	3	3	3	3	3		
Purslane, common	1	3					1		3
Pusley, Florida	3	3	3	3	3	3		3	
Ragweed, common	5	5	3	5	5	5	3	3	
Ragweed, giant	4	5	2	4	3	3	4		
Sicklepod	3	3	3	3	3	3	3		2
Sida, prickly	1	1	3	1	1	1	1	2	1
SmartWeed, Pennsylvania	6	6	6	6	4	4	4	4	
Sunflower, common	6	6	6	6	6	6	5		5
Thistle, Russian	1	3		3	1	1	1		3
/elvetleaf	6a	6	6	6	4	4	5	6	
Waterhemp, spp.	5a	5	2a	5a	5	5	4b	4	5

and the selected tank mix partners. a These treatments will not control triazine resistant biotypes. b These treatments will not control ALS resistant biotypes.

WEEDS CONTROLLED – POST DIRECTED APPLICATION							
	LIBERTY METRIBUZIN 4L +						
	2,4-D	Dicamba	Bromoxynil	Clorpyralid + Flumetsulam + 2,4-D			
COMMON WEED NAME		MAXIMUM WEED I	HEIGHT IN INCHE	S*			
Amaranth, Palmer	12	12	6	8			
Cocklebur, common	12	12	12	15			
Jimsonweed	12	10	10	8			
Ladysthumb	6	8	6	6			
Lambsquarters, common	12	12	10	12			
Morningglory, entire leaf	18	18	6	12			
Morningglory, ivyleaf	18	18	6	12			
Morningglory, pitted	18	18	6	12			
Morningglory, tall	18	18	6	12			
Nightshade, black	10	8	8	6			
Nightshade, eastern black	10	8	8	6			
Pigweed, redroot	12	12	6	8			
Pigweed, smooth	12	12	6	8			
Ragweed, common	8	8	8	10			
Ragweed, giant	12	12	8	15			
Smartweed, Pennsylvania	6	8	6	6			
Sunflower, common	12	12	12	12			
Velvetleaf	10	8	8	8			

Waterhemp, tall	12	12	6	8			
* When weeds are approaching the maximum height listed or found in high densities, use the higher rate							
of LIBERTY METRIBLIZIN 41 and	of LIBERTY METRIBLIZIN 4L and the selected tank mix partners						

#### PERENNIAL WEED SUPPRESSION

The following LIBERTY METRIBUZIN 4L tank mixtures will provide top growth burndown and in season suppression of the following perennial weeds; however, regrowth may occur. For the best performance of these weeds, use the maximum rates of LIBERTY METRIBUZIN 4L, Dicamba, Bromoxynil, Bromoxynil + Atrazine, Dicamba + Atrazine, 2,4-D LVE or Imazethapyr specified for these tank mixes. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

#### LIBERTY METRIBUZIN 4L + Dicamba

Bindweed, field	Dock, curly
Dandelion, common	Smartweed, swamp

Thistle, Canada

Thistle, Canada

#### LIBERTY METRIBUZIN 4L + Bromoxynil, Bromoxynil + Atrazine

Thistle, Canada

#### LIBERTY METRIBUZIN 4L + 2,4-D LVE

Bindweed, field	Dock, curly	Thistle, Canada
Dandelion, common	Smartweed, swamp	

#### LIBERTY METRIBUZIN 4L + Dicamba + Atrazine

Bindweed, field	Dock, curly
Dandelion, common	Smartweed, swamp

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# LIBERTY METRIBUZIN 4L + Imazethapyr

Thistle, Canada

#### PREPLANT AND PREEMERGENCE APPLICATIONS (Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Ohio, South Dakota and Wisconsin

LIBERTY METRIBUZIN 4L can be used for additional residual control of certain broadleaf weed species in corn when applied as a tank mix combination with both grass and broadleaf herbicides registered for use in field corn. LIBERTY METRIBUZIN 4L can be tank mixed with the following herbicides. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

Acetochlor	Imazethapyr <sup>1</sup>	
Acetochlor + Atrazine	Imazethapyr + Pendimethalin	
Alachlor	Linuron	
Alachlor + Atrazine	Metolachlor	
Atrazine	Metolachlor + Atrazine	
Cyanazine	Metolachlor + Cyanazine	
Cyanazine +Atrazine	Pendimethalin	
Dicamba	Propachlor	
Dicamba + Atrazine	Propachlor + Atrazine	
Dimethenamid-P	Simazine	
Flumetsulam	S-metolachlor	
Flumetsulam + S-metolachlor	S-metolachlor + Atrazine	
<sup>1</sup> Use only on Imazethapyr resistant/tolerant corn hybrids (IMI (CLEARFIELD) Corn).		

**Application:** LIBERTY METRIBUZIN 4L may be applied to field corn preplant without incorporation up to 30 days prior to planting or preemergence. Applications may be made by either ground or aerial equipment.

# **Special Precautions:**

- Corn seed should be planted a minimum of 1 1/2 inches deep.
- LIBERTY METRIBUZIN 4L may only be used in hybrid seed corn production fields if both inbred parents are known to be tolerant to LIBERTY METRIBUZIN 4L.
- Do not use on muck soils as reduced weed control may result.
- Observe all precautions and limitations on labeling of all products used in tank mixes.

#### **Restrictions:**

- Do not apply on soils having pH 7.0 or greater.
- Do not apply more than 8 fluid ounces LIBERTY METRIBUZIN 4L (0.25 pound active ingredient) per acre per growing season.
- Corn treated with LIBERTY METRIBUZIN 4L may be harvested for silage or grain 60 days after treatment. For tank mixes, follow the most restrictive preharvest interval of all products used.

**Weeds Controlled-:** LIBERTY METRIBUZIN 4L will aid in the residual preemergence control of the following weed species when tank mixed with other registered grass and/or broad leaf corn herbicides:

Horseweed/marestail	Smartweed, Pennsylvania		
Ladysthumb	Sunflower		
Lambsquarters, common	Velvetleaf		
Pigweeds spp.	Waterhemp, Tall		
Ragweed, common			
* For control of emerged weeds refer to the "B METRIBUZIN 4L label	urndown Weed Control" section of the LIBERTY		

#### GARBANZO BEANS (Chickpeas) California, Idaho, Oregon and Washington

**Special Conditions for Sale for Use on Garbanzo Beans (Chickpeas):** The following directions for use were developed under the direction if IR-4 (government minor use program). As such the testing was done independently from the testing program of Liberty Crop Protection LLC. Buyer is advised that Liberty Crop Protection LLC makes no assurance regarding satisfaction with the product and that all risk of crop injury or product performance are assumed by the Buyer.

LIBERTY METRIBUZIN 4L is recommended as a preemergence application for the suppression of certain broadleaf weeds in garbanzo beans.

#### Weeds Suppressed\*:

Chickweed, Common	Henbit	Pigweed			
Dog Fennel (Mayweed)	Lambsquarters, Common	Shepherdspurse			
Field Pennycress	Mustard, Wild				
* Suppression is a reduction in weed size and growth compared to a non-treated area in the same field.					
LIBERTY METRIBUZIN 4L used alone will not control triazine-resistant tweed species.					

A	PPLICATION RATES FOR CARBANZO BEANS (Chickpeas)
LIBERTY METRIBUZIN 4L Pt/Acre	APPLICATION INTRUCTIONS
1/2 to 3/4	Apply specified dosage in a single preemergence application using 10 to 40 gallons of water per acre with ground spray equipment. Apply before or after planting but before crop emergence. Thorough incorporation, either by rainfall or by mechanical means, is essential for weed suppression. Under dry conditions, incorporate LIBERTY METRIBUZIN 4L into the top 1 to 2 inches of soil with spike harrows, or similar shallow incorporation equipment, then cross harrow to insure uniform soil incorporation. Where soil surface is moist at the time of application and rain follows weed emergence, a broadcast application should provide adequate weed suppression. Use on coarse-textured soils, sandy soils or any soil with less than 1.5% organic matter will likely cause crop injury. Use the higher rate on fine textured soils (high in clay or organic matter) and in fields with history of high weed populations.

# **Special Precautions:**

- Crop injury may result if crop is under stress conditions caused by cold weather, poor soil fertility, disease or insect damage.
- Crop injury may result if application is followed by heavy rain. Avoid application of more than 1/2 inch of irrigation within one month after application of this product or crop injury may occur.
- Maintain continuous spray tank agitation to keep material in suspension. Avoid overlapping of spray swaths and shut off spray booms while turning, slowing or stopping, or crop injury will occur.

#### **Restrictions:**

- Do not use on clay knobs or poorly covered subsoils.
- Do not apply preemergence on shallow seedlings less than 2 inches deep.
- Do not graze or feed treated vines to livestock within 40 days after application.

**Note:** This treatment may cause some chlorosis or minor necrosis. Because garbanzo bean varieties may vary in their susceptibility to LIBERTY METRIBUZIN 4L, determine crop tolerance prior to adoption as a field scale practice to prevent possible injury.

# LENTILS AND PEAS

# Idaho, Oregon, and Washington

LIBERTY METRIBUZIN 4L can be used as a preemergence and postemergence application for the suppression of certain broadleaf weeds in lentils and peas.

Common Chickweed**	Pennsylvania Smartweed
Corn Spurry	Pineapple Weed
Dog Fennel	Prostrate Knotweed
Field Pennycress	Redroot Pigweed
Henbit**	Shepherdspurse**
Lambsquarters	Wild Mustard
* Suppression is a reduction in weed size and growth compared to a non-treated area in the same field. **Preemergence application only.	

**Preemergence Application:** Make a single preemergence application of LIBERTY METRIBUZIN 4L at 3/8 to 3/4 pint per acre per crop year. Apply in 10 or more gallons of water per acre with ground spray equipment or 5 or more gallons of water per acre with aerial spray equipment. Apply LIBERTY METRIBUZIN 4L before or after planting. Thorough incorporation, either by rainfall or by mechanical means, is essential for weed suppression. Under dry conditions, incorporate LIBERTY METRIBUZIN 4L into the top 1 to 2 inches of soil with spike harrows, or similar shallow incorporation equipment, then cross harrow to ensure uniform soil incorporation. Where soil surface is moist at the time of application and rain follows before weed emergence, a broadcast application should provide adequate weed suppression.

Use the higher rate on fine textured soils (high in clay or organic matter) and in fields with a history of high weed populations.

LIBERTY METRIBUZIN 4L may be applied pre- or post- plant incorporated as a tank mix combination with Triallate. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

**Postemergence Application:** One postemergence application may be made per season. Use 1/4 to 1/2 pint of LIBERTY METRIBUZIN 4L per acre on lentils and spring peas. On winter peas, use 3/8 to 1/2 pint of LIBERTY METRIBUZIN 4L per acre. For suppression of dog fennel, use 1/2 pint LIBERTY METRIBUZIN 4L per acre. For suppression of water per acre with ground spray equipment or 5 or more gallons of water per acre with aerial spray equipment. Do not exceed 40 psi with ground spray equipment. Apply as a broadcast spray when weeds are small (less than 2 inches in height or diameter) and before crop is 6 inches tall.

Temporary chlorosis of the crop may occur. There is an added risk of crop injury if a postemergence application is made following a previous preemergence or post plant incorporated LIBERTY METRIBUZIN 4L application.

Do not apply over very moist soils or wet crop foliage. Do not apply postemergence within 3 days after periods of cool, wet or cloudy weather or crop injury may occur.

Do not apply within 24 hours of treatment of other pesticides.

#### **Special Precautions:**

- Crop injury may result if crop is under stress conditions caused by cold weather, low fertility, disease or insect damage.
- Crop injury may also result if application is followed by heavy rain.

#### **Restrictions:**

- Do not apply more than 1 pint of LIBERTY METRIBUZIN 4L per acre per year.
- Do not apply within 50 days of harvest of peas, or within 75 days of harvest of lentils.
- Do not graze or feed treated vines to livestock within 40 days after application.
- Do not use on coarse textured soils, sandy soils or soils with less than 1.5% organic matter.
- Do not apply to "Estin" lentils.
- Do not use on clay knobs or poorly covered subsoils.
- Do not apply on shallow seedlings less than 2 inches deep (preemergence only).

**Note:** This treatment may cause some chlorosis or minor necrosis. Because lentil and pea varieties may vary in their susceptibility to this product, determining crop tolerance prior to adoption as a field scale practice is suggested to prevent possible injury.

#### **Special Precautions:**

# SUGARCANE

- For aerial and chemigation application methods on sugarcane the maximum application rate is 4 pints LIBERTY METRIBUZIN 4L per acre.
- To assure that spray will not adversely affect adjacent sensitive non-target plants, apply this product by aircraft at a minimum upwind distance of 400 feet from sensitive plants.
- Do not rotate any crop not listed on this label for 18 months following application of LIBERTY METRIBUZIN 4L. Refer to the "Crop Rotation Restrictions" section of this label for more information.

#### SUGARCANE (Hawaii Only)

LIBERTY METRIBUZIN 4L, a selective herbicide, is effective as a preemergence and an early postemergence broadcast application for control of certain grass and broadleaf weeds. When applied as a spot treatment it also provides excellent control of perennial grasses and broadleaves.

**Ground Application:** LIBERTY METRIBUZIN 4L should be mixed by filling the spray tank half full of clean water. Then add the specified amount LIBERTY METRIBUZIN 4L to suit the total tank capacity and the rate of application per acre (preferably 25 to 35 gallons per acre). Complete filling the tank and maintain sufficient agitation during mixing and spraying to insure a uniform spray mixture.

**Aerial Application:** LIBERTY METRIBUZIN 4L is recommended for use in aerial spray equipment as a preemergence or postemergence application to irrigated sugarcane. Aerial spray equipment should be calibrated to apply the proper amount of LIBERTY METRIBUZIN 4L in 7 to 10 gallons of spray mixture per acre.

LIBERTY METRIBUZIN 4L applied preemergence or postemergence to the sugarcane as a broadcast spray or spot treatment will effectively control the following when weeds are less than 3 inches in height.

Weeds Controlled in Irrig	ated and Non-Irrigated Sugarcane
Broadleaves	• •
Amaranth, Spiny (Amaranthus spinosus)	Floras paintbrush (Emilia sonochifolia)
Euphorbia, Wild (Euphorbia spp.)	Spurge, Garden (Euphorbia hirta)
Fireweed (Erechtites hieracifolius)	Spurge, Graceful (Euphorbia glomerifera)
Grasses	
Crabgrass ( <i>Oigitaria</i> spp.)	Ricegrass (Emilia sonochifolia)
Guineagrass (Panicum maximum)	Wiregrass (Eleusine indica)
Plushgrass (Chloris radiata)	
Weeds Controlled	in Irrigated Sugarcane Only
Broadleaves	
Amaranth, Spleen (Amaranthus dubius)	Hilahila (Mimosa pudica)
Haole Koa (Leucaena leucocephala)	Purslane, Common (Portulaca oleracea)
Hialoa (Waltheria americana)	Rattlepod (Crotalaria spectabilis)
Grasses	
Alexandergrass (Brachiaria plantaginea)	Bristly foxtail (Setaria verticillata)
Weeds Controlled in	Non-Irrigated Sugarcane Only
Broadleaves	
Ageratum (Ageratum conyzoides)	Tarweed (Cuphea carthagenesis
Richardia (Richardia brasiliensis)	

SUGARCANE (HAWAII ONLY) BROADCAST APPLICATION INSTRUCTIONS	
LIBERTY METRIBUZIN 4L Pt/Acre	REMARKS
4 to 8 (non-irrigated or 8 to 12 (irrigated)	<ul> <li>PREEMERGENCE (irrigated and non-irrigated sugarcane): Apply specified dosage per acre as a broadcast spray to the soil surface. Application should be made within two weeks after planting prior to can emergence or shortly after emergence (spike stage)</li> <li>Or</li> <li>EARLY POSTEMERGENCE (irrigated and non-irrigated sugarcane): Apply specified dosage per acre as a broadcast spray over the cane. Application may be delayed as long as 4 to 6 weeks after planting provided weeds are less than 3 inches in height.</li> </ul>
4 to 8	Or <b>POSTEMERGENCE:</b> Apply specified dosage per acre as a broadcast spray to control weeds prior to "close in" time when cane shades out the weed growth.
5 to 10	<b>SPOT TREATMENT:</b> Apply specified dosage in 30 to 50 gallons of finished spray per acre. Spot treatments may be used to control weeds in missed areas, corners of field, or areas of hard to control weeds.

# **Restrictions:**

• Do not apply more than 16 pints (2 gallons) of LIBERTY METRIBUZIN 4L (8 lb ai/acre) per crop cycle regardless of the method of application.

- The last application may be made within up to 17 months of harvest.
- Do not use treated foliage for feed or forage.

# SUGARCANE (Louisiana and Texas Only)

Preemergence and postemergence application of LIBERTY METRIBUZIN 4L with aerial or ground spray equipment are recommended for control of the following weeds in sugarcane in Louisiana and Texas.

Broadleaves	
Amaranth, Spiny (Amaranthus spinosus)	Marestail (Conzya Canadensis)
Bindweed, Field (Convolvulus arvensis)	Mustard, Wild ( <i>Brassica kaber</i> )
Chickweed (Cerastium vulgatum)	Pigweeds (Amaranthus spp.)
Henbit (Lamium amplexicaule)	Purslane ( <i>Portulaca oleracea</i> )
Lambsquarters (Chenopodium album)	Sowthistle (Sonchus spp.)
London Rocket (Sisymbrium irio)	
Grasses	
Broadleaf Signalgrass (Brachiaria platyphylla)	Johnsongrass, Seedling (Sorghum halepense)
Crabgrass ( <i>Digitaria</i> spp.)	Oats, Winter (Avena spp.)
Foxtails ( <i>Setaria</i> spp.)	

SUGARCANE (LOUISIANA AND TEXAS ONLY) BROADCAST APPLICATION INSTRUCTIONS	
LIBERTY METRIBUZIN 4L Pt/Acre	REMARKS
3 to 6	<b>BROADCAST:</b> Apply specified dosage per acre using 20 to 30 gallons of water with ground equipment or 5 gallons of water with aircraft spray equipment. Apply as a broadcast spray during the Fall after planting or to the stubble after harvest. Make a second application early in the Spring.
1 1/2 to 3	<b>BAND:</b> Apply specified dosage in 10 to 20 gallons of water per acre in 30 to 36 inch band over the row during the Fall after planting or to the stubble after harvest. Make a second application in the Spring.

# **Special Precautions (Louisiana and Texas only):**

- Use the higher rate on heavy clay soil and soil with a high percentage of organic matter. If necessary, a third application may be made in late Spring at layby.
- To assure that spray will not adversely affect adjacent sensitive non-target plants, apply this product by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

# **Restrictions (Louisiana and Texas only):**

- Do not use treated foliage for feed or forage.
- Do not apply within 60 days of harvest.
- For aerial and chemigation application methods on sugarcane the maximum application rate is 4 pints of LIBERTY METRIBUZIN 4L per acre.

# SUGARANE (Florida Only)

Postemergence over-the-top or directed spray applications of LIBERTY METRIBUZIN 4L are recommended for the control of the following weeds in sugarcane in Florida.

Broadleaves		
Amaranth, Spiny (seedling) (Amaranthus spinosus)	Purslane ( <i>Portulaca oleracea</i> )	
Butterweed (Cressleaf grounsel) (Senecio glabellus)		
Grasses		
*Crabgrass, large ( <i>Digitaria sanguinalis</i> )	Panicum, broadleaf (Panicum adspersum)	
Foxtail, bristlegrass (Setaria magna)	Signalgrass, broadleaf (Brachiaria platyphylla)	
Goosegrass ( <i>Eleusine indica</i> )		
* Best control is achieved when applications are n diameter	nade when this weed is less than 4 inches in	

SUGARCANE (FLORIDA ONLY) APPLICATION INSTRUCTIONS	
LIBERTY METRIBUZIN 4L Pt/Acre	REMARKS
2 to 4	<ul> <li>GROUND APPLICATION: LIBERTY METRIBUZIN 4L may be used in one or two applications with a minimum of 14 days between each application. Apply when weeds are less than 6 inches tall in 10 to 40 gallons of spray mixture per acre.</li> <li>POSTEMERGENCE BROADCAST OR BAND: Apply over the top of stubble or plant cane while sugarcane is less than 14 inches tall.</li> <li>POSTEMERGENCE DIRECTED SPRAY: apply to sugarcane that is a minimum of 14 inches tall or before row closing.</li> </ul>
2 to 3	<b>AERIAL APPLICATION:</b> Apply when weeds are less than 4 inches tall in 5 to 10 gallons of spray mixture per acre. Apply to stubble or plant cane while the sugarcane is less than 14 inches tall.

**LIBERTY METRIBUZIN 4L plus Atrazine Tank Mix:** LIBERTY METRIBUZIN 4L may be used with atrazine as a preemergence or postemergence (before row closing) application to sugarcane. Rates for LIBERTY METRIBUZIN 4L are 1 1/2 to 4 pints per acre and Atrazine at labeled rates per acre. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

# **Special Precautions (Florida only):**

- Spray contact with sugarcane foliage may result in minor leaf margin chlorosis and/or necrosis.
- Avoid spray overlaps or variations in application speed that may result in insufficient or excessive rates of application.
- To assure that spray will not adversely affect adjacent sensitive non-target plants, apply this product by aircraft at a minimum upwind distance of 400 feet from sensitive plants.

# **Restrictions (Florida only):**

- Do not use more than 4 pints per acre in a single growing season.
- Do not use on sand soils.
- Do not apply within 60 days of harvest.
- Do not use treated crop for feed or forage.

# **TOMATOES**

Apply LIBERTY METRIBUZIN 4L herbicide with ground equipment to seeded and transplanted tomatoes as specified below under "Application Rates".

For effective control of grasses and broadleaf weeds with postemergence applications, apply LIBERTY METRIBUZIN 4L before weeds are 1-inch tall. Thorough spray coverage on weed foliage is essential for adequate control with postemergence applications.

Do not use air blast or other high pressure spray equipment to make postemergence applications of LIBERTY METRIBUZIN 4L. Refer to the appropriate section of this label for additional information regarding spray equipment, dilution rates, mixing, sprayer cleanup, restrictions, container disposal and cautions. For specific application information see the "Product Information" section of this label.

# WEEDS CONTROLLED

# PREPLANT INCORPORATED APPLICATIONS FOR TRANSPLANT TOMATOES ONLY Broadcast Sprays - 1/2 to 1 Pt LIBERTY METRIBUZIN 4L Per Acre

Broadleaves	
Galinsoga ( <i>Galinsoga</i> spp.)	*Pigweed, Redroot (Amaranthus retroflexus)
Lambsquarters (Chenopodium album)	*Purslane, Common ( <i>Portulaca oleracea</i> )
Grasses	
*Goosegrass ( <i>Eleusine indica</i> )	

Preplant incorporated applications applied as directed will suppress foxtails, panicums and barnyardgrass.

**LIBERTY METRIBUZIN 4L/Trifluralin Tank Mix**: This tank mix combination applied preplant incorporated as directed on this label will control the weeds listed above plus those weeds listed on the Trifluralin label.

\* For optimum control of these weeds, use the highest rate indicated on the label for the type of application to be made. Repeat postemergence applications may be needed for best control.

WEEDS CONTROLLED		
POSTEMERGENCE APPLICATON RATES FOR ESTABLISHED TOMATOES		
For effective control of weeds with postemergence applications, apply LIBERTY METRIBUZIN 4L before		
weeds are 1 inch tall.		
Broadcast Sprays – 1/2 to 1 Pt LIBERTY METRIBUZIN 4L Per Acre		
Broadleaves		
Carpetweed (Mollugo verticillata)	Pigweeds (Amaranthus spp.)	
Fumitory (Fumaria officinalis	Purslane (Portulaca oleracea)	
Galinsoga (Galinsoga spp.)	*Ragweed, Common (Ambrosia artemisiifolia	
*Jimsonweed (Datura stramonium)	*Smartweed, Pennsylvania (Polygonum	
	pensylvanicum)	
*Ladysthumb (Polygonum persicaria)	Toadflax <i>(Linaria</i> spp.)	
Lambsquarters (Chenopodium album)	*Velvetleaf (Abutilon theophrastl)	
Mustard, Wild (Brassica kaber)		

# Directed Sprays – 1 to 2 PT LIBERTY METRIBUZIN 4L Per Acre

*Foxtail, Yellow (Setaria glauca)	Plus Weeds Listed Under Broadcast
Goosegrass (Eleusine indica)	Sprays

 \* For optimum control of these weeds, use the higher rate listed on the label for the type of application to be made. Repeat postemergence applications may be needed for best control.
 Postemergence applications as directed on this label will suppress barnyardgrass and crabgrass when these weeds are less than 1 inch tall.

BROADCAST APPLICATIONS RATES FOR TOMATOES	
LIBERTY METRIBUZIN 4L *Pt/Acre	REMARKS
1/2 to 1	<b>Preplant Incorporated—Transplant Tomatoes Only:</b> Apply specified dosage in 10 or more gallons of water per acre as a broadcast spray to the soil surface immediately before transplanting. Incorporate to a depth of 2 to 4 inches with equipment capable of uniformly mixing the chemical into the soil. This application may be made alone or in a tank mix combination with Trifluralin. When transplanting tomatoes, place the root system of the plants below the herbicide incorporation zone or injury may occur. Refer to the Trifluralin label for specific rate of application and for additional precautions and restrictions for tomatoes.
1/2 to 1	<b>Postemergence Broadcast Spray—Established Tomatoes:</b> Apply specified dosage in 20 or more gallons of water per acre as a broadcast spray, or apply in 1/4 to 3/4 inch of water (use 1/4 to 1/2 inch of water on sandy soils) per acre as a continuous injection in center pivot and lateral move systems or apply in the last 15 to 30 minutes of set in permanent solid set sprinkler systems. One or more applications may be applied per use season. Allow at least 14 days between applications or severe crop injury may occur. For transplanted tomatoes, do not apply until transplants have recovered from transplant shock and new growth is evident. Do not apply to tomatoes within 24 hours of application of other pesticides. Do not tank mix with other pesticides. (See "Special Precautions" below.)
1 to 2	<b>Postemergence Directed Spray—Established Tomatoes:</b> Apply specified dosage in 20 or more gallons of water per acre as a directed spray. One or more applications may be applied per use season. Allow at least 14 days between applications or severe crop injury may occur. Avoid contacting tomato foliage with spray. This method of treatment is preferred for use in fields with a history of severe weed pressure or in fields infested with hard-to-control weeds. For transplanted tomatoes, do not apply until transplants have recovered from transplant shock and new growth is evident. Do not apply to tomatoes within 24 hours of application of other pesticides. (See "Special Precautions" below.) When banding see the appropriate section in the front of this label.

\* Use the higher rate in fields with a history of severe weed pressure and for maximum residual weed control.

#### **Special Precautions:**

- Crop injury or delayed maturity may result from broadcast or directed spray applications if tomatoes are growing under stress conditions such as periods of drought or cool, wet and cloudy weather preceding application.
- For newly introduced tomato varieties with unknown tolerance to LIBERTY METRIBUZIN 4L, treat only a small area to determine if LIBERTY METRIBUZIN 4L can be used without injury to the crop.

# **Restrictions:**

- Aerial application is prohibited
- Do not apply within 7 days of harvest.

- Do not apply more than a total of 2 pints LIBERTY METRIBUZIN 4L per crop season
- Do not use LIBERTY METRIBUZIN 4L on tomatoes in Kern County, California.
- Do not apply the total amount of 2 pints LIBERTY METRIBUZIN 4L within a time span of less than 35 days, except in the case of directed sprays. Allow at least 14 days between applications, regardless of dosage or method of application or severe crop injury may occur.
- Do not apply within 3 days after periods of cool, wet or cloudy weather, or crop injury will occur.
- Do not use hot caps on tomatoes within 7 days before or at any time after application of LIBERTY METRIBUZIN 4L. Do not treat seeded tomatoes until plants have reached the 5 to 6 leaf stage or severe crop injury may occur.

#### CEREALS (Spring and Winter Barley and Winter Wheat)

LIBERTY METRIBUZIN 4L can be used for control or suppression of certain grasses and broadleaf weeds when applied postemergence to spring and winter barley or winter wheat. LIBERTY METRIBUZIN 4L alone and several tank mixture treatments can be used in the following states: AR, GA, ID, IL, IN, KS, KY, LA, MS, MO, MT, NV, OH, OK, OR, TN, TX, UT, WA.

**Mixing:** Refer to the "Product Information" section of this label.

**Application**: LIBERTY METRIBUZIN 4L may be applied by aerial or ground application equipment. Use a minimum spray volume of 2 gpa by air and 10 gpa by ground. Uniform spray coverage is necessary to obtain optimum weed control and to minimize potential for crop injury. Do not exceed rates specified on this label. Do not apply LIBERTY METRIBUZIN 4L through any type of irrigation equipment. Apply LIBERTY METRIBUZIN 4L through any type of irrigation equipment. Apply LIBERTY METRIBUZIN 4L when the crop is healthy and actively growing. LIBERTY METRIBUZIN 4L may be applied more than once per crop season. Allow a minimum of 21 days between applications if wheat is actively growing or allow 45 days between applications if wheat is growing in adverse conditions, has entered dormancy or is stressed due to frost damage, disease, drought or excessive moisture. Do not use on soils containing less than 0.75% organic matter. Do not apply more than a total of 16 fluid ounces LIBERTY METRIBUZIN 4L (8 ounces active ingredient) per acre per year. On irrigated cereals, do not apply more than 0.5 inch of water for the first irrigation, the maximum amount for each additional irrigation should not exceed 1 inch. Allow a minimum of 14 days between the first irrigation and subsequent irrigations.

**Performance Factors**: Weed control may not be observed for 2 to 4 weeks under normal growth conditions and for 4 to 6 weeks under very dry conditions. Moisture (at least 1/2 inch) is required within 2 to 3 weeks after application to move LIBERTY METRIBUZIN 4L into the weed root zone. Lack of adequate moisture after application may result in poor or erratic weed control. Control or suppression of listed weeds is dependent on weed size at time of application. Control or suppression may be reduced if broadleaf weeds are taller than 1 inch or grasses have more than 2 leaves.

**Tank Mixtures**: LIBERTY METRIBUZIN 4L may be tank mixed with 2,4-D, Bromoxynil, Chlorsulfuron, Dicamba, MCPA, Metsulfuron methyl, Terbutryn, Thifensulfuron, Tribenuron methyl, or Triasulfuron herbicides. A nonionic surfactant containing at least 80% active ingredient may be used in LIBERTY METRIBUZIN 4L tank mixes with sulfonylurea herbicides (Chlorsulfuron, Metsulfuron methyl, Triasulfuron, Thifensulfuron and Tribenuron methyl). Do not use a crop oil concentrate or any adjuvant containing vegetable or petroleum oils with any LIBERTY METRIBUZIN 4L mix as crop injury may result. Additional pesticides may also be tank mixed with LIBERTY METRIBUZIN 4L unless specifically prohibited on the mix products' label. In some instances, combinations with organophosphate insecticides may cause temporary leaf yellowing and/or crop injury, especially when widely fluctuating day/night temperatures occur near application. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

**Special Precautions:** Crop injury may occur if LIBERTY METRIBUZIN 4L is applied:

• When the crop is under stress such as winter kill, frost damage, disease, drought or excessive moisture, severe grazing, or when these conditions follow the application.

- In combination with fluid fertilizer especially with the addition of surfactant.
- Prior to the growth stage specified on this label.
- To soils high in lime or sodium, a pH greater than 7.7, calcareous, gravelly, thinly covered or exposed subsoil areas.
- To fields where cereal seeds have been planted less than 1 inch deep.
- To a non-winter hardy wheat or barley variety.
- To a sensitive wheat or barley variety as listed below.
- To frozen soil or crop still in winter dormancy.

#### **Restrictions:**

- Do not graze wheat within 14 days of LIBERTY METRIBUZIN 4L application or harvest grain within 21 days after last application.
- Do not graze or harvest barley before crop maturity.
- For tank mix combinations, follow the most restrictive label.

**Cereal Rotations Following Potatoes Treated with LIBERTY METRIBUZIN 4L**: If planting a sensitive cereal variety (listed under the wheat and barley variety tolerance portion of this label), following potatoes treated with LIBERTY METRIBUZIN 4L or metribuzin containing products, refer to the potato section of the LIBERTY METRIBUZIN 4L label for special cultural practices to follow.

#### **APPLICATION RATES**

LIBERTY METRIBUZIN 4L alone or in a tank mix with labeled broadleaf herbicides may be applied by aerial or ground spray equipment as a broadcast postemergence spray.

POSTEMERGENCE BROADCAST APPLICATION OF LIBERTY METRIBUZIN 4L			
CROP		LIBERTY METRIBUZIN 4L RATE (FL OZ /A)	
GROWTH		% ORGANIC MATTER	
STAGE	SOIL TEXTURE	0.75 TO 2.0	OVER 2.0
2 Leaf	Coarse	1.5 to 3	1.5 to 4.5
То	Medium	1.5 to 4.5	3 to 4.5
2 Tiller	Fine	3 to 4.5	3 to 6
	Use these rates on crops with secondary roots smaller than 1 inch.		
	For dryland winter wheat (non-irrigated), apply the highest listed rate to achieve maximum weed suppression/control.		
3 Tiller	Coarse	4.5 to 6	6 to 7.5
То	Medium	6 to 7.5	7.5 to 9
4 Tiller	Fine	7.5 to 9	7.5 to 9
	<ul> <li>should be developed and larger than 1-inch long. Do not apply before 75 days after planting.</li> <li>For dryland winter wheat (non-irrigated), apply the highest listed rate to achieve maximum weed suppression/control.</li> <li>Georgia Only: Wheat must be planted before November 15 in the Piedmont area and Northern part of the state, and before December 1 in the coastal Plain area.</li> </ul>		
Over	Coarse	6 to 9	7.5 to 12
4 Tillers	Medium	6 to 12	7.5 to 12
	Fine	7.5 to 12	12 to 16
	<ul> <li>Do not apply within 2 weeks after grazing or breaking of winter dormancy. Apply a the crop is at or beyond the 3 tiller growth stage but before jointing. Secondary reshould be developed and larger than 1-inch long. Do not apply before 75 days a planting.</li> <li>For dryland winter wheat (non-irrigated), apply the highest listed rate to achi maximum weed suppression/control.</li> <li>Georgia Only: Wheat must be planted before November 15 in the Piedmont area.</li> </ul>		

#### WHEAT AND BARLEY VARIETAL TOLERANCE\*

Wheat and barley varieties vary in their tolerance to LIBERTY METRIBUZIN 4L. Varieties below are <u>toleran</u>t to and are compatible for use with LIBERTY METRIBUZIN 4L:

**Winter Wheat**: Abe, AgriPro Mason, AgriPro Shiloh, Arthur, AS 7846, AS 7853, Baker Seed 32, Barbie VI, Basin, Batum, Bayles, Becker, Bintee V, Buchshot DS 2368, Caldwell, Cardinal, Cashup, Centurk, Cherokee, Cheyenne, Clark, Coker 747, Coker 762, Coker 797, Coker 68-15, Coker 9134, Coker 9543, Coker 9904, Coker 9907, Daws, DB 533W, DB 562W, DB 580W, Delta King 502, Delta King 9027, Dixie 952, Doublecrop, Dusty, Dyna-gro 426, Dynasty, Excel, Faro, FFR 525W, Florida 302, FS 432, FS 433, FS 435, Gains, Garst 64, Georgia 100, Genie V, Hatton, Hawk, Hill 81, Howell, Hunter, Hyak, Hyslop, Katie VI, KY 16-2, Larned, Lewis 833, Lewjain, Lisa, Longhorn, Luke, Madison, Magnum, Malcom, McDermid, McNair 1003, McNair 1813, Molly, Moro, Neely, Nelson, Newton, Norstar, Norwin, Nugaines, Oasis, Omega 78, Paha, Peck, Pike, Pioneer 2157, Pioneer 2180, Pioneer 2510, Pioneer 2545, Pioneer 2548, Pioneer 2550, Pioneer 2552, Pioneer 2555, Pioneer 2566, Pioneer 2571, Pioneer 2580, Pioneer 2684, Quantum 577, Redwin, Rocky, Saluda, Sawyer, SC 104, Siouxland, Sprague, Southern Belle, Stacy, Stallion, Stephens, TAM W101, TAM 105, TE877, TE 2548, TE SR204, TR 8555, TR 8557, TR 8768, Tiber, Tomahawk, Traveler, Tres, Tyee, Tyler, Verne, Victory, Wakefield, Wanser, Weston, Winalta, Wrangler.

**Barley**: Advance, Boyer, Clark, Compana, Hannchen, Hector, Hesk, Hudson, Lud, Luther, Kamiak, Klages, Olympic, Piroline, Steptoe and Triumph.

The following cereal varieties are <u>sensitive</u> to LIBERTY METRIBUZIN 4L:

Winter Wheat: AgriPro Clemens, AT 90W, AT 91W, Arapaho, Baker Seed 33, Century, Cimarron, Coker 833, Coker 916, Coker 983, Coker 9024, Coker 9105, Coker 9323, Coker 9663, Choker 9474, Choker 9835, Choker 9766, Choker 9877, EK 102, EK 114, FAR 555, Florida 304, Freedom, FS 417, FS 423, FS 425, FS 430, Gore, Hazen, Hickory, Jackson, Julie III, KY-49-25, Linden, Madison, Mesa, Mustang, Pacer, Pioneer 2551, Pioneer 2163, Pioneer 2643, Pioneer 2691, Princeton 733, PER W71, PER 226, PER 278, Rosen, Savannah, Sierra, TAM 107, TR 101, TR 1011, TR 8822, Triumph 64, Vona, Wings, Winridge, Yamhill.

**Spring/Durum Wheat**: Avoid use on Spring wheat and Durum wheat varieties.

**Barley**: Glenn, Morex, Moravian 3, Larker, Summit, Bracken, Anheuser Busch B2601 and varieties with Morex parentage.

**Varieties Not Listed**: To avoid possible crop injury on any variety not mentioned in this label, contact a LIBERTY representative or herbicide expert for a variety recommendation prior to treatment or treat a small strip of the unlisted variety with the listed LIBERTY METRIBUZIN 4L rate to ascertain crop tolerance before treating an entire field.

Abbreviated names of vendors: AS (Agseco), AT (Agratech), DB (Diener Bros.), FS (Growmark FS), PI (Pioneer), PER (Hybritech), SC (J.M. Schultz), TE (Terra), and TR (Terral).

#### Weeds Controlled

Used at listed rates, LIBERTY METRIBUZIN 4L will control many annual broadleaf weeds. Control is best when applied to young, actively growing weeds. Weeds controlled by LIBERTY METRIBUZIN 4L include:

Bittercress	Knotweed, Prostrate
Catchfly, Conical (Sand)	Lambsquarter, Common
Catchweed (Madwort)	Lettuce, Miners
Chickweed, Common	Mustard, Blue
Chickweed, Mousear	Mustard, Wild
Corncockle	Pennycress, Field
Dogfennel (Mayweed)	Pepperweed, Virginia

Evening Primrose, Cutleaf	Pigweed, spp.
Falseflax, Smallseed	Pineappleweed
Fiddleneck, Tarweed	Polemonium, Annual (Jacob's Ladder)
Filaree, Redstem	Radish, Wild
Geranium, Carolina	Shepardspurse
Gromwell, spp.	Speedwell, Ivyleaf
Henbit	Turnip, Wild

# Weeds Suppressed

LIBERTY METRIBUZIN 4L's control of the following weeds varies from poor to excellent depending on time of application, stage of growth at application, temperatures and soil moisture conditions following treatment. For maximum effect on these weeds, apply the highest listed rate at the earliest growth stage timing for each particular soil type and organic matter. Suppression is a reduction in weed size and growth as compared to a non-treated area in the same field.

BROADLEAVES				
Buckwheat, Wild*	Kochia*	Tansy mustard		
Buttercup, spp.	Lettuce, Prickly	Thistle, Russian		
Cowcockle	Cowcockle Mustard, Tumble (Jim Hill)* Vetch, V			
GRASSES				
Barley, Hare (Wild)	Brome, Downy*	Oat, Wild*		
Barley, Little	Brome, Japanese*	Rescuegrass*		
Blackgrass	Brome, Ripgut*	Whitlowgrass, Spring (Vernal)		
Bluegrass, Annual	Cheat*	Windgrass		
Bluegrass, Bulbous	Foxtail, spp.*			
* Use the highest listed LIBERTY METRIBUZIN 4L rate for maximum weed suppression.				

#### FOR WEED CONTROL IN A WHEAT/FALLOW/WHEAT ROTATION Idaho, Oregon, Utah and Washington Only

LIBERTY METRIBUZIN 4L may be applied to provide weed control during the fallow period after wheat harvest or in the Spring before Winter wheat is planted. Winter wheat can be seeded 4 months (120 days) after Spring application. Mechanical tillage or the application of a contact herbicide may be required to control weeds germinating prior to seeding of Winter wheat. Best results will be obtained where straw and chaff are evenly distributed across the field.

**Application:** For specific application information see the "Product Information" section of this label.

Where weed growth is present at application time, LIBERTY METRIBUZIN 4L should be applied with Paraquat or other contact herbicide. Refer to the other product label registered for additional directions, rates, and weed species controlled. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

WEEDS CONTROLLED	
Broadleaves	
Chickweed, Common (Stellaria media)	Mustard, Treacle (Eyrsimum repandum)
Henbit (Lamium amplexicaule)	Mustard, Wild (Brassica kaber)
*Kochia ( <i>Kochia scoparia</i> )	Pennycress, Field (Fanweed) (Thlaspi arvense)
Lambsquarters (Chenopodium album)	Pigweeds (Amaranthus spp.)
Mustard, Blue or Purple (Chorispora tenella)	*Russian thistle (Salsola iberica)
Mustard, Jim Hill (Sisymbrium altissimum)	*Wild Sunflower ( <i>Helianthus</i> spp.)
Mustard, Tansy ( <i>Descurainia pinnata</i> )	
Grasses	
Cheatgrass ( <i>Bromus secalinus</i> )	*Wheat, Volunteer (Triticum spp.)
<b>o</b>	, , , , , , , , , , , , , , , , , , , ,

Downy Brome (*Bromus tectorum*)

\* Since control of these weeds may vary depending on moisture following an application, use the higher labeled rate.

**After Harvest Application (Fall Fallow):** LIBERTY METRIBUZIN 4L may be applied to wheat stubble after harvest in the Fall. Apply 1 to 1 1/4 pint per acre broadcast before weeds emerge. Use higher rate for longer weed control or for weeds designated as requiring the higher rate for control. Rainfall (1/2 inch or more) is necessary for herbicide activation.

Do not plant crops in treated areas for at least 10 months following fall applications.

LIBERTY METRIBUZIN 4L may be applied at 1 to 1 1/4 pint per acre as directed above for a Fall application. If other vegetation is present at the time of application use a contact herbicide.

**Spring Application (Summer Fallow):** LIBERTY METRIBUZIN 4L may be applied to wheat stubble in the Spring. Apply 3/4 to 1 pint per acre broadcast before weeds emerge in the Spring. Use higher rate for longer weed control or weeds designated as requiring higher rate for control. Rainfall (1/2 inch or more) is necessary for herbicide activation.

#### **Restrictions:**

- Do not graze treated fields.
- Do not plant Spring seeded cereals following Fall fallow applications of LIBERTY METRIBUZIN 4L. Where LIBERTY METRIBUZIN 4L was applied in the Fall, do not apply LIBERTY METRIBUZIN 4L in the Spring.

#### FOR WEED CONTROL IN A FALLOW ROTATION WITH BARLEY AND WHEAT Colorado, Kansas, Montana, Nebraska and Wyoming Only

LIBERTY METRIBUZIN 4L may be applied to provide weed control during the fallow period after wheat or barley harvest or in the Spring before planting of Winter wheat or barley. Mechanical tillage or the application of a contact herbicide may be required to control weeds germinating prior to seeding of Winter wheat or barley.

**Application:** For specific application information see the "Product Information" section of this label.

Where weed growth is present at application time, LIBERTY METRIBUZIN 4L should be applied with Paraquat, Glyphosate or other contact herbicide. Refer to the other product label registered for additional directions, rates, and weed species controlled. Do not plant crops in treated areas earlier than 10 months following Fall applications. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

# WEEDS CONTROLLED

Broadleaves		
Chickweed, Common (Stellaria media)	Mustard, Tansy ( <i>Descurainia pinnata</i> )	
Cowcockle (Vaccaria pyramidata)	Mustard, Treacle ( <i>Eyrsimum repandum</i> )	
Henbit (Lamium amplexicaule)	Mustard, Wild ( <i>Brassica kaber</i> )	
*Kochia ( <i>Kochia scoparia</i> )	Pennycress, Field (Fanweed) (Thlaspi arvense)	
Lambsquarters (Chenopodium album)	Pigweeds (Amaranthus spp.)	
Mustard, Blue or Purple (Chorispora tenella)	*Russian thistle (Salsola iberica)	
Mustard, Jim Hill (Sisymbrium altissimum)	Sunflower (Helianthus spp.)	
Grasses		
Cheatgrass (Bromus secalinus)	*Wheat, Volunteer (Triticum spp.)	
Downy Brome (Bromus tectorum)	*Wild Oats (Avena fatua)	
*Foxtail, Green (Setaria virdis)		

\*Since control of these weeds may vary depending on moisture following an application, use the higher labeled rate.

**After Harvest Application (Fall Fallow):** LIBERTY METRIBUZIN 4L may be applied to wheat stubble after harvest in the Fall. Apply 1 to 1 1/4 pint per acre broadcast before weeds emerge. Use higher rate for longer weed control or for weeds designated as requiring the higher rate for control. Rainfall (1/2 inch or more) is necessary for herbicide activation.

**Spring Application (Summer Fallow):** LIBERTY METRIBUZIN 4L may be applied to wheat stubble in the Spring. Apply 3/4 to 1 pint per acre broadcast before weeds emerge in the Spring. Use higher rate for longer weed control or weeds designated as requiring higher rate for control. Rainfall (1/2 inch or more) is necessary for herbicide activation. Wheat or barley can be seeded 120 days after Spring application.

#### **Restrictions:**

- Do not graze treated fields.
- Do not plant Spring seeded barley following Fall applications for fallow.
- Where LIBERTY METRIBUZIN 4L was applied in the Fall, do not apply LIBERTY METRIBUZIN 4L in the Spring.

# **CROP ROTATION INTERVALS**

Waiting Period after LIBERTY METRIBUZIN 4L Application<sup>1</sup>

4 Months	Alfalfa	Forage Grasses	Sugarcane	
	Asparagus	Sainfoin	Tomatoes	
	Barley <sup>2</sup>	Soybeans	Wheat <sup>2</sup>	
	Corn			
8 Months	Barley	Peas	Wheat	
	Lentils			
12 Months	Potatoes	Rice <sup>3</sup>		
18 Months		Sugar Beets, Onions and other root crops not listed on this label, and all other crops not listed on this label.		
for food or feed. <sup>2</sup> Following peas, I	Stand reductions may occ entils or soybeans	ur in some areas.	e, but do not graze or harvest	
<sup>3</sup> Do not rotate rise	after any application to a p	primary crop greater than 1.0 a	ai/A of LIBERTY METRIBUZIN	

<sup>3</sup> Do not rotate rise after any application to a primary crop greater than 1.0 ai/A of LIBERTY METRIBUZIN 4L per season.

Do not rotate any crop not listed on this label after application of Metribuzin on sugarcane.

# **STORAGE AND DISPOSAL**

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

#### **Pesticide Storage:**

Store in original containers only. Keep container closed when not in use. Do not store near food or feed. Do not store above 100°F for extended periods of time. Storage below 20°F can result in formation of crystals. If product crystallizes, store at 50°F to 70°F and agitate to redissolve crystals. 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. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. 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**

**NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS):** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty

the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS):** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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

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

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of LIBERTY CROP PROTECTION LLC or Seller. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW all such risks shall be assumed by Buyer and User and Buyer and User agree to hold LIBERTY CROP PROTECTION LLC and Seller harmless for any claims relating to such factors.

LIBERTY CROP PROTECTION LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or LIBERTY CROP PROTECTION LLC, and TO THE EXTENT CONSISTENT WITH APPLICABLE LAW Buyer and User assume the risk of any such use. To the extent consistent with applicable law LIBERTY CROP PROTECTION LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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