

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

November 10, 2021

Mary Beth Endres Regulatory Manager Liberty Crop Protection, LLC 1880 Fall River Drive, Suite 100 Loveland, CO 80538

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from

the Atrazine and Metolachlor Interim Decisions; the Technical Registrants' Commitments for the Endangered Species Act (ESA) Biological Evaluation for

Atrazine; and the Biological Opinion for Metolachlor

Product Name: LIBERTY RMOC-AM EPA Registration Number: 89168-94

*Application Dates*: 11/23/2020 and 4/16/2021 *Decision Numbers*: 578453 and 578454

Dear Ms. Endres:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the atrazine and metolachlor Interim Decisions, the atrazine technical registrants' commitments for the ESA Biological Evaluation, and the Biological Opinion for metolachlor. The Agency has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only

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distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Quinn Gavin by email at <a href="mailto:gavin.quinn@epa.gov">gavin.quinn@epa.gov</a>.

Sincerely,

Linda Arrington, Branch Chief

Risk Management and Implementation Branch 4

Pesticide Re-Evaluation Division

Office of Pesticide Programs

Enclosure

### RESTRICTED USE PESTICIDE

(GROUND AND SURFACE WATER CONCERNS)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION. THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

METOLACHLOR	GROUP	15	HERBICIDE
ATRAZINE	GROUP	5	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE

OR

METOLACHLOR GROUP 15 HERBICIDE ATRAZINE GROUP 5 HERBICIDE MESOTRIONE GROUP 27 HERBICIDE

[Optional: Icon]



# LIBERTY RMOC-AM

A PREEMERGENCE AND POSTEMERGENCE HERBICIDE FOR CONTROL OF ANNUAL GRASS AND BROADLEAF WEEDS IN FIELD CORN, FIELD SEED CORN, FIELD SILAGE CORN, SWEET CORN, YELLOW POPCORN AND GRAIN SORGHUM

ACTIVE INGREDIENTS*:	% BY W1
Metolachlor	
Atrazine	
Atrazine Related Compounds	0.48%
Mesotrione	
OTHER INGREDIENTS:	59.48%
TOTAL:	100.00%
*Equivalent to 1.70 pounds of Metolachlor, 1.66 pounds of atrazine and 0.218 pound	

### **KEEP OUT OF REACH OF CHILDREN CAUTION / PRECAUCION**

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

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

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS.

Not for Sale, Sale into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.

EPA Reg. No.: 89168-94 EPA Est. No.:

Net Contents: Gal ( L)

Manufactured for:

LIBERTY CROP PROTECTION, LLC 1880 Fall River Drive, Suite 100 Loveland, CO 80538

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11/10/2021

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

89168-94

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

#### **HOTLINE 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**. For Chemical Spill, Leak, Fire or Exposure, call CHEMTREC **800-424-9300**.

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Mixers, Loaders, Applicators, Flaggers, and other handlers must wear:

- · Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, Viton ≥14 mils
- · Chemical-resistant footwear plus socks
- Chemical-resistant apron, when mixing/loading, cleaning up spills, or cleaning equipment, or otherwise exposed to the concentrate.
- · Chemical-resistant headgear for overhead exposure.

See Engineering Controls for additional requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

#### **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)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

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

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to aquatic invertebrates. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean water mark. **DO NOT** apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. **DO NOT** contaminate water when disposing of equipment washwater.

#### **Groundwater Advisory**

Atrazine can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

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

#### **Surface Water Advisory**

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks or months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of metolachlor/S-metolachlor from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

#### **Non-Target Organism Advisory**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

#### Reporting Ecological Incidents:

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 844-425-8488.

#### **MIXING/LOADING INSTRUCTIONS**

Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates. Check-valves or antisiphoning devices must be used on all mixing equipment.

This product must not be mixed/loaded or used within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of

sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities **DO NOT** apply to vehicles when delivering pesticide shipments to the mixing/loading site.

This product must not be mixed or loaded within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 feet buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

#### **Tile-Outletted Terraced Fields Containing Standpipes**

One of the following restrictions must be used in applying atrazine to tile-outletted terraced fields containing standpipes.

- 1. **DO NOT** apply this product within 66 feet of standpipes in tile-outletted terraced fields.
- 2. Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2 to 3 inches in the entire tile-outletted terraced field.
- 3. Apply this product to the entire tile-outletted terraced field under a no-till practice only when a high crop residue management practice is practiced. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

#### PHYSICAL AND CHEMICAL HAZARDS

**DO NOT** use or store near heat or open flame.

#### **DIRECTIONS FOR USE**

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

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through www.atrazine-watershed.info or 1-866-365-3014. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Liberty Crop Protection, LLC for a refund.

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

#### **AGRICULTURAL USE REQUIREMENTS**

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

DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

**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 over short-sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, Viton ≥14 mils
- · Chemical-resistant footwear plus socks
- · Chemical-resistant headgear for overhead exposure

FAILURE TO FOLLOW THE DIRECTIONS FOR USE, RESTRICTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN REDUCED WEED CONTROL, ADVERSE CROP RESPONSE, OR ILLEGAL CROP RESIDUES.

Not for Sale, Sale into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.

#### **WEED RESISTANCE MANAGEMENT**

For resistance management, this product contains Group 5 (atrazine), Group 15 (metolachlor) and Group 27 (mesotrione) herbicides. Any weed population may contain plants naturally resistant to Group 5, Group 15 and/or Group 27 herbicides. The resistant individual may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

#### **Weed Management**

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

- Rotate the use of this product or other Group 5, Group 15 and Group 27 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in the field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information
  on resistance in target weed species is available, use the less resistance-prone partner at a rate that
  will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local
  extension service or certified crop advisor if you are unsure as to which active ingredient is currently
  less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses
  historical information related to herbicide use and crop rotation, and that considers tillage (or other
  mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application
  method and timing to favor the crop and not the weeds), biological (weed-competitive crops or
  varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistancemanagement and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact LIBERTY CROP PROTECTION, LLC at 855-425-8488.

#### **Management of Resistant Biotypes**

Since the occurrence of resistant weeds cannot be determined until after product use and scientific confirmation, manufacturer is not responsible for any losses that may result from the failure of this product to control resistant weed biotypes.

The following good agronomic practices are recommended to reduce the spread of resistant biotypes:

- If a naturally occurring resistant biotype is present in your application site, this product should be tankmixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices (e.g. crop rotation or tillage) may also be used as appropriate.
- Scout treated application site after herbicide applications and control escaping weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.
- Contact your local sales representative, crop advisor, or extension agent to find out if suspected
  resistant weeds to these Mode of Actions have been found in your region. **DO NOT** assume that each
  listed weed is being controlled by multiple mechanisms of action. Co-formulated active ingredients are
  intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only
  one of the active ingredients in this product.

### **Integrated Pest (Weed) Management**

This product may be integrated into an overall weed pest management strategy whenever the use of an herbicide is required. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

#### **Soil Organic Matter**

The organic matter of the soil on which the application is to be made must be known or determined prior to application. The use rate of this product is based on percent soil organic matter.

#### **Reduced and No-Till Systems**

LIBERTY RMOC-AM may be used in reduced and no-till systems. To obtain optimum control, make applications as close to planting as possible. In reduced or no-till systems where weeds are present at application and the corn has not yet emerged, this product can be tank mixed with a burndown herbicide such as glyphosate, paraquat or 2,4-D. 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 for use and precautionary statements of each product in the tank mixture.

#### PRODUCT INFORMATION

LIBERTY RMOC-AM may be used preemergence and postemergence in field corn, field seed corn and field corn silage. This product may also be applied to sweet corn, yellow popcorn and grain sorghum, but application must be made prior to crop emergence (preemergence) or severe crop injury may occur.

LIBERTY RMOC-AM may be used for preemergence control of most annual grasses and broadleaf weeds in the crops described above. This product may also be applied early postemergence for the control of broadleaf weeds in field corn and preemergence only in sweet corn, yellow popcorn and grain sorghum. See **Tables 1** and **2** for a list of the weeds controlled. This product will not consistently control grasses that are merged at the time of application.

LIBERTY RMOC-AM is a combination of three herbicides, Metolachlor, atrazine and mesotrione with a safener added. This product controls weeds by interfering with normal germination and seedling development. It is intended for management of the weed species listed in **Tables 1** and **2**.

#### **Endangered Species**

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species

Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult **http://www.epa.gov/espp/**, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

#### **LIBERTY RMOC-AM USE RATES**

Before making applications of this product, determine the soil organic matter content of the field.

- For soils with <3% organic matter content, use 3.0 quarts (1.28 lbs ai Metolachlor, 1.28 lbs ai Atrazine and 0.166 b ai Mesotrione) of this product per acre.
- For soils with >3% organic matter content, use 3.5 quarts (1.49 lbs ai Metolachlor, 1.50 lbs ai Atrazine and 0.193 lb ai Mesotrione) of this product per acre.

Use of this product on soils with greater than 10% organic matter is not recommended and may result in poor weed control.

#### **Precautions**

- Where reference is made to weeds partially controlled or suppressed, this can be defined as inconsistent control from good to poor or consistent control at a level below what is typically considered acceptable for commercial weed control.
- Weed control effectiveness may be reduced in dry weather conditions following preemergence application of this product. Cultivate the field if weeds develop in conventional tillage corn.
- Sprayer or applicator contaminated with other materials may cause crop damage or sprayer clogging of the application device. Thoroughly clean sprayer or other application device before using. Dispose of cleaning solution in a responsible manner.
- This product will not provide consistent control of most emerged grass weeds.
- Severe adverse crop response and corn injury can result if applying this product postemergence to corn that has emerged and that has received an at-plant application of Terbufos insecticide. If this product is applied to emerged corn where an organophosphate insecticide other than Terbufos has been applied at planting temporary corn injury may occur.
- Postemergence applications of any carbamate or organophosphate insecticide within 7 days before or 7 days after an application of this product may result in severe corn injury.
- Avoid drift onto adjacent crops and non-target areas.
- · Avoid spray overlap as crop injury may occur.

#### • To Prevent Drift to Off-Site Areas Due to Runoff or Wind Erosion

- Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion.
   Under these conditions, the soil surface should first be settled by rainfall or irrigation.
- **DO NOT** apply to impervious substrates such as paved or highly compacted surfaces.
- **DO NOT** use tail water from the first flood or furrow irrigation of treated fields to treat non-target crops, unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

#### Restrictions

#### Atrazine Rate Restrictions

Certain states may have established rate limitation within specific geographical areas for the use of atrazine. These more restrictive and protective requirements must be followed. Consult your state pesticide control agency for additional information. It is a violation of the law and this label to deviate from state use regulations.

- The total pounds of atrazine applied (pounds ai per acre) must not exceed 2.5 pounds ai per acre per year.
- Maximum application rates for atrazine in field corn, field corn seed, field corn silage, sweet corn, and yellow popcorn must be as follows:
  - o If no applications of atrazine were made prior to corn emergence, apply a maximum of 2.0 pounds ai per acre as a broadcast spray.
  - o If a postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds ai per acre per calendar year.
  - When tank mixing or sequentially applying atrazine or products containing atrazine, DO NOT exceed 2.5 pounds ai per acre of atrazine for any single application.

- DO NOT apply more than 2.0 pounds ai per acre as a single preemergence application on soils that are not highly erodible or on highly erodible soils if at least 30% of the soil is covered with plant residues: or
- DO NOT apply more than 1.6 pounds ai per acre as a single preemergence application on highly erodible soils if less than 30% of the surface is covered with plant residues, or 2.0 pounds ai per acre if only applied postemergence.
- **DO NOT** apply more than 3.5 quarts (1.49 lb ai metolachlor, 1.50 lbs ai atrazine and 0.193 lb ai mesotrione) per acre per year.
- **DO NOT** make applications more than 14 days before planting or to field corn that is taller than 12 inches.
- DO NOT exceed label rates, nor combined maximum seasonal rates for metolachlor, atrazine or mesotrione.
- **Grazing Restriction: DO NOT** graze or feed forage from treated areas for 45 days following application.
- **Preharvest Interval (PHI):** Field corn may be treated up to 12 inches tall. Do not harvest forage, grain or stover within 60 days after application.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply via mechanically pressurized handguns to sweet corn.
- **DO NOT** apply under conditions which favor runoff or wind erosion to soil that has been treated with this product or drift to non-target areas.
- **DO NOT** apply other solo HPPD inhibitor postemergence herbicides such as Mesotrione, Topramezone or Tembotrione to areas that have been treated with this product during the same season.
- **DO NOT** make postemergence applications of this product in a tank mix with any carbamate or organophosphate insecticide.
- **DO NOT** use with this product on any crop other than field corn (for grain, seed, or silage), sweet corn (preemergence applications only), yellow popcorn (preemergence applications only) or grain sorghum (preemergence applications only).
- **DO NOT** use this product in white popcorn or ornamental (Indian) corn.
- DO NOT contaminate water used for domestic purposes or irrigation water used for crops other than field corn.
- **DO NOT** apply this product by air.
- **DO NOT** contaminate feed or food with this product.
- **DO NOT** store product near seeds, fertilizers, or foodstuffs.
- Keep all containers of this product tightly closed when not in use.
- Not for use in the states of Hawaii or Alaska, or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands).
- Use on roadsides, Conservation Reserve Program (CRP) land, conifers, including Christmas Tree plantings, timber, forestry; and, Miscanthus and other perennial bioenergy crops is prohibited.

Applied according to directions and under normal growing conditions, LIBERTY RMOC-AM will not harm the treated crop. Extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, carryover pesticide residues, the use of certain soil-applied systemic insecticides, improperly placed fertilizers or soil insecticides, may weaken crop seedlings during germination and early stages of growth. This product used under these conditions could result in crop injury.

#### **GROUND APPLICATION**

#### **Spray Equipment**

Spray nozzles should be the same size and type, spaced uniformly and should provide accurate and uniform application. Use spray nozzles that provide coarse or coarser droplet size to avoid drift yet provide good coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50 mesh or coarser. Use a pump that can maintain pressure of at least 35 to 40 psi at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles as long as adequate coverage is maintained. Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying.

#### **Preemergence**

Apply LIBERTY RMOC-AM in a spray volume of 10 to 80 gallons per acre.

#### **Early Postemergence**

Good weed coverage is essential for optimum weed control. Boom height for broadcast over-the-top applications should be based on the height of the crop - at least 15 inches above the crop canopy, but high enough to give uniform coverage. Apply in a spray volume of 10 to 30 gallons per acre. When weed foliage is dense, use a minimum spray volume of 20 gallons per acre. Flat fan nozzles of 80° or 110° are recommended for optimum postemergence coverage. **DO NOT** use flood jet nozzles or controlled droplet application equipment for postemergence applications. Nozzles may be angled 45° forward to enhance penetration of the crop and provide better coverage.

#### MANDATORY SPRAY DRIFT MANAGEMENT

#### **Ground Boom Applications:**

- User must only apply with the release height recommended by manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572).
- DO NOT apply when wind speeds exceed 10 miles per hour at the application site.
- User must maintain a 15 foot (4.6 meter) in-field downwind buffer (in the direction in which the wind is blowing from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.
- **DO NOT** apply during temperature inversions.

#### **Boomless Ground Applications:**

- Applicators are required to use a coarser or coarser droplet size (ASABE S572) for all applications.
- User must maintain a 15 foot (4.6 meter) in-field downwind buffer (in the direction in which the wind is blowing from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### IMPORTANCE OF DROPLET SIZE

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

#### **Controlling Droplet Size – Ground Boom**

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

#### **Boomless Ground Applications:**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### **Handheld Technology Applications**

Take precautions to minimize spray drift.

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

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### SHIELDED SPRAYERS

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

#### **TEMPERATURE AND HUMIDITY**

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

#### **TEMPERATURE INVERSIONS**

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

#### WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WINDCONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### **ADDITIVES / ADJUVANTS**

Where this product is applied after field corn has emerged, a non-ionic surfactant at 0.25% v/v (1 quart per 100 gallons) may be used. This use of a crop oil concentrate (COC) may result in temporary crop injury. If used, add COC at a rate that does not exceed 1% v/v (1 gallon per 100 gallons) or no more than 1 quart per acre. **DO NOT** use nitrogen based adjuvants (AMS or UAN) or methylated seed oil (MSO) with this product when applied alone to emerged field corn or when this product is applied as a postemergence tank mixture with other products, unless directed for a specific tank mix on this label or as a part of a supplemental label of this product. Any of these adjuvants may be used as a preemergence or preplant timing, i.e., where the corn crop has not yet emerged to increase burndown activing on existing weeds. **DO NOT** apply this product to emerged sweet corn or yellow popcorn or severe crop injury may occur.

**Tank Mixtures with Glufosinate:** For tank mixtures of this product with glufosinate applied to emerged field corn (glufosinate-tolerant hybrids only, e.g. LibertyLink®), AMS may be added as directed on the glufosinate product label. However, AMS should be the only adjuvant added to this tank mixture or severe crop injury may occur. 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 for use and precautionary statements of each product in the tank mixture.

**Early Preplant:** This product may be applied up to 14 days before planting.

**Preemergence Surface:** This product may be applied to the soil surface as a broadcast or banded application. **DO NOT** exceed 3.5 quarts of this product per year.

**Banded Preemergence:** Make applications of LIBERTY RMOC-AM in a 10- to 15-inch band after corn planting but before corn has emerged.

**Band Applications:** For banded applications, using row and band width measurements in inches, calculate the amount of product to be applied per acre as follows:

Band width in inches	- X	Rate per acre for a	_	Amount needed per acre
Row width in inches		broadcast treatment	_	

**Early Postemergence:** LIBERTY RMOC-AM may be applied after field corn has emerged. See the **Adjuvants** section of this label for specific recommendation if using an adjuvant. **DO NOT** make applications early postemergence to field corn with liquid fertilizer or severe adverse crop response or crop injury may result. Apply this treatment to small broadleaf weeds (less than 5 inches tall) and before the field corn exceeds 12 inches in height. Occasional field corn leaf burn may result, but this will not affect later growth or corn yield. **DO NOT** make applications of this product to sweet corn or yellow popcorn that has emerged or severe adverse crop response or crop injury may result.

**Emerged Grass Weeds:** LIBERTY RMOC-AM will not provide consistent control of emerged grass weeds. For control of emerged grass weeds a grass herbicide tank mix may be required (see **LIBERTY RMOC-AM Applied in Tank Mixtures** section).

#### **Sprinkler Irrigation**

**DO NOT** apply this product by sprinkler irrigation. Use a sprinkler system only to incorporate this product after application. After this product has been applied, a sprinkler irrigation system set to deliver 0.5 to 1 inch of water may be used to incorporate the product. **DO NOT** use flood irrigation to apply or incorporate this product.

#### **CULTIVATION**

Should weeds develop, a shallow cultivation or rotary hoeing will generally result in improved weed control. If this product was incorporated, cultivate less than half the depth of incorporation.

If cultivation is necessary due to escaped weeds, compaction, or soil crusting, adjust equipment to run shallow and minimize soil movement. This will decrease the potential of diluting or moving the herbicide away from the weed control zone.

#### **MIXING PROCEDURES**

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.

**Preemergence Applications:** Use either clean water or liquid fertilizers (excluding suspension fertilizers) as carriers for preemergence applications. If using fluid fertilizers, a compatibility test must be conducted. See **Compatibility Test** section for additional information. Even if this product is determined to be physically compatible with a fluid fertilizer, constant agitation will be necessary to maintain a uniform solution during application.

**Postemergence Applications:** Use only clean water as the carrier when making applications of this product after field corn emergence.

#### **Postemergence Restriction**

• DO NOT apply this product to sweet corn, yellow popcorn or grain sorghum that has emerged.

#### Adding LIBERTY RMOC-AM to the Spray Tank

The spray tank must be clean, thoroughly rinsed and decontaminated before adding either this product alone or with tank mix partners. If water is used as carrier, use clean water.

**LIBERTY RMOC-AM Applied Alone:** When this product is used alone, add the specified amount of this product to the spray tank when the tank is half full of the carrier, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform mixture.

**LIBERTY RMOC-AM Applied in Tank Mixtures:** Refer to the sections on this label for listed tank mixes. 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.

**DO NOT** exceed label dosage rates, nor combined maximum seasonal doses for Metolachlor, atrazine or mesotrione. This product cannot be mixed with any product bearing a label prohibition against such mixing. If a tank mixture is used, a compatibility test must be done. See **Compatibility Test** section for details on the procedure for such a test.

#### **COMPATIBILITY TEST**

To ensure compatibility of a tank-mixture of this product with other pesticides, conduct a compatibility test using the following test. The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredients.

**Note:** Nitrogen solutions or complete liquid fertilizers, excluding suspension fertilizers, may replace all or part of the water in the spray. Because liquid fertilizers vary, even within the same analysis, always check compatibility with pesticide(s) before use. Incompatibility of tank-mixtures is more common with mixtures of fertilizer and pesticides.

#### **Compatibility Test Procedure**

- 1. Add 1.0 pint of water or fertilizer carrier to each of two 1 quart jars with tight lids. Use the same source of water that will be used for the tank mix and conduct the test at the temperature the tank mix will be applied.
- 2. To one of the jars, add 1/4 teaspoon or 1.2 mL of a compatibility agent approved for the intended use, such as [Altitude Binder™ or Innvictis Envelop™, or other appropriate product name] (1/4 teaspoon equals 2.0 pints per 100 gallons of spray). Shake or stir gently to mix.
- 3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on specified label rates. If more than one pesticide product will be used, add them separately with dry pesticides first, flowables next and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.
- 4. After adding all ingredients, put lids on and tighten and invert each jar ten times to mix. Let the mixtures stand 15 to 30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) slurry the dry pesticide(s) in water before addition or (b) add one-half the compatibility agent to the fertilizer or water and the other one-half to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, **DO NOT** use the mixture.
- 5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the **STORAGE AND DISPOSAL** section in this label.

#### **TANK MIXTURES**

#### **Tank Mix Instructions**

If the tank mix partner is compatible, fill the tank half full of the carrier. Start and continue agitation throughout mixing and spraying. All return lines to the spray tank must discharge below the liquid level. Prepare the components and add in the following order:

- 1. If a wettable powder or dry flowable formulation is used, make a slurry with water and add it slowly through the screen into the tank. Agitate during the procedure.
- 2. If a flowable formulation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when a dry flowable is diluted with water before adding to the tank.
- 3. Add this product.
- 4. Add any other tank mix products next with emulsifiable concentrates added last.
- 5. Add adjuvant last, if needed.
- 6. Complete filling the sprayer tank and continue agitation. Apply as soon as possible after spray mixture is prepared. **DO NOT** leave mixture in spray tank overnight without agitation or unattended.

#### **Cleaning Equipment After Application**

Special attention must be given to cleaning equipment before spraying crops other than field corn. Mix only as much spray solution as needed.

- 1. Flush tank, hoses, boom and nozzles with clean water.
- 2. Prepare a cleaning solution of 1 gallon of household ammonia per 25 gallons of water. Many commercial spray tank cleaners may be used.
- 3. Use a pressure washer to clean the inside of the spray tank with this solution. Wash all parts of the tank, including the inside top surface. If a pressure washer is not available, completely fill the sprayer

with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.

- 4. Flush hoses, spray lines and nozzles for at least 1 minute with the cleaning solution.
- 5. Dispose of rinsate from steps 1 to 3 in an appropriate manner according to state and federal regulations.
- 6. Repeat steps 2 to 5.
- 7. Remove nozzles, screens and strainers and clean separately in the ammonia solution after completing the above procedures.
- 8. Rinse the complete spraying system with clean water.

#### **WEEDS CONTROLLED**

LIBETY RMOC-AM applied as directed in this label will control or partially control the weeds listed in **Tables** 1 and 2. Tank mixtures may control additional weeds. See the **Tank Mix Instructions** section of this label for additional information. 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 for use and precautionary statements of each product in the tank mixture.

Thoroughly till soil or make an application of a burndown herbicide to destroy germinating and emerged weeds prior to planting. Plant crop into moist soil immediately after tillage.

If a significant rainfall does not occur within 7 days after application, weed control may be decreased. If irritation is available, apply 0.5 to 1 inch of water. If irrigation is not available, a uniform shallow cultivation is recommended as soon as weeds emerge.

Table 1. Weeds Controlled or Partially Controlled by Preemergence Applications of LIBERTY RMOC-AM

Common Name	Scientific Name	Control (C) Partial Control (PC)
BROADLEAF WEEDS		
Amaranth, Palmer	Amaranthus palmeri	С
Amaranth, Powell	Amaranthus powellii	С
Bedstraw, catchweed	Galium aparine	PC
Beggarweed, Florida	Desmodium tortuosum	С
Buckwheat, wild	Polygonum convolvulus	С
Buffalobur	Solanum rostratum	С
Carpetweed	Mollugo verticillata	С
Chickweed, common	Stellaria media	С
Cocklebur, common	Xanthium strumarium	PC
Deadnettle, purple	Lamium purpureum	С
Devil's claw	Proboscidea louisianica	С
Galinsoga	Galinsoga parviflora	С
Henbit	Lamium amplexicaule	С
Horseweed (marestail)	Conyza canadensis	С
Jimsonweed	Datura stramonium	С
Kochia	Kochia scoparia	С
Lambsquarters, common	Chenopodium album	С
Mallow, Venice	Hibiscus trionum	С
Morningglory, entireleaf	Ipomoea hederacea	PC
Morningglory, ivyleaf	Ipomoea hederacea	PC
Mustard, wild	Brassica kaber	С
Nightshade, black	Solanum nigrum	С
Nightshade, Eastern black	Solanum ptycanthum	С
Nightshade, hairy	Solanum sarrachoides	С

Pigweed, redroot Amaranthus retroflexus C Pigweed, smooth Amaranthus rybridus C Pigweed, smooth Amaranthus rybridus C Purslane, common Portulaca oleracea C Pusley, Florida Richardia scabra C Radish, wild Raphanus raphanistrum C Ragweed, common Ambrosia artemisifolia C Ragweed, giant Ambrosia trifficia PC Sesbania, hemp Sesbania exaltata PC Sesbania, hemp Sesbania exaltata C Shepherd's purse Capsella bursa-pastoris C Sicklepod Senna obtusifolia PC Sida, prickly Sida spinosa C Smartweed, ladysthumb Polygonum persicaria C Sunflower, common Helianthus annus PC Velvetleaf Abutiion theophrasti C Waterhemp, common Helianthus annus PC Waterhemp, tall Amaranthus tuberculatus C GRASSES Barnyardgrass Echinochioa crus-galli C Crabgrass, prairie Eriochioa contracta C Cupgrass, prairie Eriochioa gracilis C Cupgrass, woolly Eriochioa villosa PC Foxtail, green Setaria viirdis C C Foxtail, green Setaria viirdis C C Panicum, fall Panicum fall Setaria pumila C Caparass PC C Poxtail, green Setaria viirdis C C Panicum, fall Panicum fall Setaria pumila C C Panicum, fall Panicum fall C C Panicum, fall Panicum fasciculatum C C Panicum, fall Panicum fasciculatum C C Panicum, field Panicum fasciculatum C C Panicum, field Panicum fasciculatum C C Signalgrass, broadleaf Brachiaria playphylia PC Signalgrass, provided Leptochola filiformis C S SEDES SEDES SEDES SEDES SEDES SIGNAGES SIGNA	Common Name	Scientific Name	Control (C) Partial Control (PC)
Puncturevine Tribulus terrestris PC Purslane, common Portulaca oleracea C Purslane, Common Portulaca oleracea C Radish, wild Raphanus raphanistrum C Ragweed, common Ambrosia artemisiiolia PC Sesbania, hemp Sesbania exaltata C Sesbania, hemp Sesbania exaltata C Shepherd's purse Capsella bursa-pastoris C Sicklepod Senna obtusifolia PC Sida, prickly Sida spinosa C Smartweed, ladysthumb Polygonum persicaria C Smartweed, ladysthumb Polygonum persivaria C Smartweed, Pennsylvania Polygonum pensylvanicum C Sunflower, common Helianthus annus PC Velvetleaf Abutilon theophrasti C Waterhemp, common Amaranthus rudis C Waterhemp, tall Amaranthus tuberculatus C GRASSES Barnyardgrass Echinochloa crus-galli C Crabgrass Digitaria spp. C Crowfootgrass Dactylootenium aegyptium C Cupgrass, prairie Eriochloa contracta C Cupgrass, southwestern Eriochloa contracta C Cupgrass, Southwestern Eriochloa gracilis C Cupgrass, woolly Eriochloa villosa PC Foxtail, giant Setaria faberi C Foxtail, green Setaria viridis C Goosegrass Eleusine indica C Goosegrass Eleusine indica C Millet, foxtail Setaria italica C Millet, foxtail Setaria italica C Millet, foxtail Setaria italica C Millet, foxtail Panicum miliaceum PC Panicum, fall Panicum dichotomiflorum C Panicum, foxon Panicum miliaceum PC Panicum, feld Cenchrus incertus PC Shattercane Sorghum bicolor PC Signalgrass, broadleaf Brachiaria platyshylla PC Signalgrass, narrowleaf Brachiaria platyshylla PC Signalgrass Panicum capillare C SEBOES	Pigweed, redroot	Amaranthus retroflexus	
Purslane, common	Pigweed, smooth	Amaranthus hybridus	С
Pusley, Florida   Richardia scabra   C   Radish, wild   Raphanus raphanistrum   C   Ragweed, common   Ambrosia artemisifolia   C   Ragweed, gjant   Ambrosia trifida   PC   Sesbania, hemp   Sesbania exaltata   C   Shepherd's purse   Capsella bursa-pastoris   C   Sicklepod   Senna obtusifolia   PC   Sida, prickly   Sida spinosa   C   Smartweed, ladysthumb   Polygonum persicaria   C   Smartweed, Pennsylvania   Polygonum persicaria   C   Smartweed, Pennsylvania   Polygonum persicaria   C   Sunflower, common   Helianthus annus   PC   Velvetleaf   Abutilon theophrasti   C   Waterhemp, common   Amaranthus rudis   C   Waterhemp, tall   Amaranthus tuberculatus   C   GRASSES   Sennyadgrass   Echinochioa crus-galli   C   C   C   C   C   C   C   C   C	Puncturevine	Tribulus terrestris	PC
Radish, wild Raphanus raphanistrum C Ragweed, common Ambrosia artemisificia C Ragweed, common Ambrosia artemisificia C Ragweed, giant Ambrosia trificia PC Sesbania, hemp Sesbania exaltata C Shepherd's purse Capsella bursa-pastoris C Sicklepod Senna obtusificiia PC Sida, prickly Sida spinosa C Smartweed, ladysthumb Polygonum persicaria C Smartweed, Pennsylvania Polygonum pensicaria C Smartweed, Pennsylvania Polygonum pensicaria C Smartweed, Pennsylvania Polygonum pensylvanicum C Sunflower, common Helianthus annus PC Velvetleaf Abution theophrasti C Waterhemp, common Amaranthus rudis C Waterhemp, tall Amaranthus rudis C GRASSES Barnyardgrass Echinochloa crus-galli C Crabgrass Digitaria spp. C Crowfootgrass Dactyloctenium aegyptium C Cupgrass, prairie Eriochloa contracta C Cupgrass, southwestern Eriochloa contracta C Cupgrass, woolly Eriochloa contracta C Cupgrass, woolly Eriochloa villosa PC Foxtail, giant Setaria faberi C Foxtail, green Setaria viridis C Foxtail, yellow Setaria spp. C Foxtail, yellow Setaria spp. C G Millet, wild proso Panicum miliaceum PC Panicum, fall Setaria Italica C Millet, wild proso Panicum miliaceum PC Panicum, fall Panicum fasciculatum C Panicum, fall Panicum lexanum PC Signalgrass, broadleaf Brachiaria platyphylla PC Signalgrass, narrowleaf Brachiaria platyphylla PC Signalgrass, narrowleaf Brachiaria platyphylla PC Starbur, bristly Acanthospermum hispidum C SteDGES	Purslane, common	Portulaca oleracea	С
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Ragweed, common Ambrosia artemisifiolia PC Ragweed, giant Ambrosia trificia PC Sesbania, hemp Sesbania exaltata C Shepherd's purse Capsella bursa-pastoris C Sicklepod Senna obtusifolia PC Sida, prickly Sida spinosa C Smartweed, ladysthumb Polygonum persicaria C Smartweed, Pennsylvania Polygonum persicaria C Smartweed, Pennsylvania Polygonum pensylvanicum C Smartweed, Pennsylvania Polygonum pensylvanicum C Sunflower, common Helianthus annus PC Velvetleaf Abution theophrasti C Waterhemp, common Amaranthus rudis C Waterhemp, tall Amaranthus tuberculatus C GRASSES Barnyardgrass Echinochloa crus-galli C Crabgrass Digitaria spp. C Crowfootgrass Dactyloctenium aegyptium C Cupgrass, prairie Eriochloa gracilis C Cupgrass, Southwestern Eriochloa gracilis C Cupgrass, Southwestern Eriochloa gracilis C Cupgrass, woolly Eriochloa gracilis C Foxtail, giant Setaria faberi C Foxtail, green Setaria viridis C Foxtail, robust (purple, white) Setaria pumilia C Goosegrass Eleusne indica C Johnsongrass, seedling Sorghum halepense PC Millet, wild proso Panicum millaceum PC Panicum, fall Panicum fisciculatum C Panicum, fall Panicum dichotomifiorum C Setarial pilgera C Sepangletop, red Leptochloa filifornis C Starbur, bristly Acanthospermum hispidum C Witchgrass Panicum capillare	•	Raphanus raphanistrum	С
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Sesbania, hemp         Sesbania exaltata         C           Shepherd's purse         Capsella bursa-pastoris         C           Sicklepod         Senna obtusifolia         PC           Sicklepod         Senna obtusifolia         PC           Sicklepod         Senard wed.         C           Sida, prickly         Sida spinosa         C           Smartweed, ladysthumb         Polygonum pensylvanicum         C           Sunflower, common         Helianthus annus         PC           Velvetleaf         Abution theophrasti         C           Waterhemp, common         Amaranthus rudis         C           Waterhemp, common         Amaranthus tuberculatus         C           Waterhemp, tall         Amaranthus tuberculatus         C           GRASSES         Barnyardgrass         Echinochloa crus-galli         C           Capgrass         Digitaria spp.         C           Crowfootgrass         Dactyloctenium aegyptium         C           Copgrass, prairie         Eriochloa contracta         C           Cupgrass, prairie         Eriochloa gracilis         C           Cupgrass, southwestern         Eriochloa gracilis         C           Cupgrass, prairie         Eriochloa villosa         PC </td <td>Ragweed, giant</td> <td>Ambrosia trifida</td> <td>PC</td>	Ragweed, giant	Ambrosia trifida	PC
Shepherd's purse   Capsella bursa-pastoris   C   Sicklepod   Senna obtusifolia   PC   Sida, prickly   Sida spinosa   C   C   Smartweed, ladysthumb   Polygonum persicaria   C   Smartweed, Pennsylvania   Polygonum pensylvanicum   C   Sunflower, common   Helianthus annus   PC   Waterhemp, common   Amaranthus rudis   C   Waterhemp, common   Amaranthus rudis   C   Waterhemp, tall   Amaranthus tuberculatus   C   C   Waterhemp, tall   Amaranthus tuberculatus   C   C   C   C   C   C   C   C   C	<u> </u>	Sesbania exaltata	С
Sicklepod         Senna obtusifolia         PC           Sida, prickly         Sida spinosa         C           Smartweed, ladysthumb         Polygonum pensicaria         C           Smartweed, Pennsylvania         Polygonum pensylvanicum         C           Sunflower, common         Helianthus annus         PC           Velvetleaf         Abutilon theophrasti         C           Waterhemp, common         Amaranthus rudis         C           Waterhemp, tall         Amaranthus tuberculatus         C           GRASSES         S           Barnyardgrass         Echinochloa crus-galli         C           Crabgrass         Digitaria spp.         C           Crowfootgrass         Dactyloctenium aegyptium         C           C coupgrass, prairie         Eriochloa contracta         C           Cupgrass, woolly         Eriochloa gracilis         C           Cupgrass, woolly         Eriochloa villosa         PC           Foxtail, giant         Setaria faberi         C           Foxtail, green         Setaria viridis         C           Foxtail, polust (purple, white)         Setaria pumila         C           Goosegrass         Eleusine indica         C           Johnsongrass, seedling <td>•</td> <td>Capsella bursa-pastoris</td> <td>С</td>	•	Capsella bursa-pastoris	С
Sida, prickly Sida spinosa C Smartweed, ladysthumb Polygonum persicaria C Smartweed, Pennsylvania Polygonum pensylvanicum C Sunflower, common Helianthus annus PC Velvetleaf Abutilon theophrasti C Waterhemp, common Amaranthus rudis C Waterhemp, tall Amaranthus tuberculatus C GRASSES Barnyardgrass Echinochloa crus-galli C Crabgrass Digitaria spp. C Crowfootgrass Dactyloctenium aegyptium C Cupgrass, prairie Eriochloa gracilis C Cupgrass, Southwestern Eriochloa gracilis C Cupgrass, woolly Eriochloa villosa PC Foxtail, giant Setaria faberi C Foxtail, giant Setaria faberi C Foxtail, green Setaria viridis C Goosegrass Eleusine indica C Goosegrass Eleusine indica C Goosegrass Eleusine indica C Millet, foxtail Setaria l'alica C Panicum, browntop Panicum fasciculatum C Panicum, fell Panicum, field Cenchrus incertus PC Shattercane Sorghum bisplayplylla PC Signalgrass, broadleaf Brachiaria platyphylla PC Starnal prickly PAnicum capillare C SteDGES			PC
Smartweed, ladysthumb       Polygonum persicaria       C         Smartweed, Pennsylvania       Polygonum pensylvanicum       C         Sunflower, common       Helianthus annus       PC         Velvetleaf       Abutilon theophrasti       C         Waterhemp, common       Amaranthus rudis       C         Waterhemp, tall       Amaranthus tuberculatus       C         GRASSES       Barnyardgrass       Echinochloa crus-galli       C         Barnyardgrass       Echinochloa crus-galli       C         Crowfootgrass       Dactyloctenium aegyptium       C         Cupgrass, prairie       Eriochloa contracta       C         Cupgrass, Southwestern       Eriochloa contracta       C         Cupgrass, woolly       Eriochloa villosa       PC         Foxtail, giant       Setaria faberi       C         Foxtail, green       Setaria faberi       C         Foxtail, probust (purple, white)       Setaria viridis       C         Foxtail, probust (purple, white)       Setaria pumila       C         Goosegrass       Eleusine indica       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Johnsongrass, seedling	•	Sida spinosa	С
Smartweed, Pennsylvania Polygonum pensylvanicum C Sunflower, common Helianthus annus PC Welvetleaf Abutilon theophrasti C Waterhemp, common Amaranthus rudis C Waterhemp, tall Amaranthus tuberculatus C GRASSES Barnyardgrass Echinochloa crus-galli C Crowfootgrass Dactyloctenium aegyptium C Cupgrass, prairie Eriochloa contracta C Cupgrass, southwestern Eriochloa gracilis C Cupgrass, woolly Eriochloa villosa PC Foxtail, giant Setaria faberi C Foxtail, green Setaria viridis C Goosegrass Eleusine indica Donsongrass, seedling Sorghum halepense PC Millet, foxtail Setaria lalica C Millet, wild proso Panicum fasciculatum PC Panicum, fall Panicum dichotomiflorum C Sendal pracible Servicus production PC Signalgrass, narrowleaf Brachiaria piligera C Starbur, bristly Acanthospermum hispidum C Starbur,		·	
Sunflower, common			
Velvetleaf       Abution theophrasti       C         Waterhemp, common       Amaranthus rudis       C         Waterhemp, tall       Amaranthus tuberculatus       C         GRASSES       Separate paraire       C         Barnyardgrass       Echinochloa crus-galli       C         Crabgrass       Digitaria spp.       C         Crowfootgrass       Dactyloctenium aegyptium       C         Cupgrass, prairie       Eriochloa contracta       C         Cupgrass, Southwestern       Eriochloa contracta       C         Cupgrass, woolly       Eriochloa gracilis       C         Cotali, glant       Setaria faberi       C         Foxtail, glant       Setaria faberi       C         Foxtail, glant       Setaria faberi       C         Foxtail, glen       Setaria faberi       C         Foxtail, glen       Setaria faberi       C         Goosegras			PC
Waterhemp, common       Amaranthus rudis       C         Waterhemp, tall       Amaranthus tuberculatus       C         GRASSES       C         Barnyardgrass       Echinochloa crus-galli       C         Crabgrass       Digitaria spp.       C         Crowfootgrass       Dactyloctenium aegyptium       C         Cupgrass, prairie       Eriochloa contracta       C         Cupgrass, Southwestern       Eriochloa gracilis       C         Cupgrass, woolly       Eriochloa villosa       PC         Foxtail, giant       Setaria faberi       C         Foxtail, green       Setaria viridis       C         Foxtail, green       Setaria viridis       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Willet, foxtail       Setaria italica       C         Willet, foxtail       Setaria italica       C         Millet, wild proso       Panicum miliaceum       PC         Panicum, browntop       Panicum faciculatum       C         Panicum, fell       Panicum dichotomiflorum			С
Waterhemp, tall       Amaranthus tuberculatus       C         GRASSES       Barnyardgrass       Echinochloa crus-galli       C         Crabgrass       Digitaria spp.       C         Crowfootgrass       Dactyloctenium aegyptium       C         Cupgrass, prairie       Eriochloa contracta       C         Cupgrass, Southwestern       Eriochloa gracilis       C         Cupgrass, woolly       Eriochloa villosa       PC         Foxtail, giant       Setaria faberi       C         Foxtail, green       Setaria faberi       C         Foxtail, green       Setaria viridis       C         Foxtail, robust (purple, white)       Setaria pumila       C         Gosegrass       Eleusine indica       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Gosegrass       Eleusine indica       C         Willet, foxtail       Setaria italica       C         Millet, foxtail       Setaria italica       C         Millet, wild proso       Panicum fasciculatum       PC         Panicum, browntop       Panicum fasciculatum       C         Panicum, feld       Panicum dichotomiflorum       C	Waterhemp, common		С
Barnyardgrass		Amaranthus tuberculatus	С
Crabgrass       Digitaria spp.       C         Crowfootgrass       Dactyloctenium aegyptium       C         Cupgrass, prairie       Eriochloa contracta       C         Cupgrass, Southwestern       Eriochloa gracilis       C         Cupgrass, woolly       Eriochloa villosa       PC         Foxtail, giant       Setaria faberi       C         Foxtail, green       Setaria viridis       C         Foxtail, robust (purple, white)       Setaria spp.       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Johnsongrass, seedling       Sorghum halepense       PC         Millet, foxtail       Setaria italica       C         Millet, wild proso       Panicum miliaceum       PC         Panicum, browntop       Panicum fasciculatum       C         Panicum, fall       Panicum fasciculatum       C         Panicum, Texas       Panicum dichotomiflorum       C         Panicum, Texas       Panicum texanum       PC         Rice, red       Oryza sativa       C         Sandbur, field       Cenchrus incertus       PC         Shattercane       Sorghum bicolor       PC         Signalgr			-
Crabgrass       Digitaria spp.       C         Crowfootgrass       Dactyloctenium aegyptium       C         Cupgrass, prairie       Eriochloa contracta       C         Cupgrass, Southwestern       Eriochloa gracilis       C         Cupgrass, woolly       Eriochloa villosa       PC         Foxtail, giant       Setaria faberi       C         Foxtail, green       Setaria viridis       C         Foxtail, robust (purple, white)       Setaria spp.       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Johnsongrass, seedling       Sorghum halepense       PC         Millet, foxtail       Setaria italica       C         Millet, wild proso       Panicum miliaceum       PC         Panicum, browntop       Panicum fasciculatum       C         Panicum, fall       Panicum fasciculatum       C         Panicum, Texas       Panicum dichotomiflorum       C         Panicum, Texas       Panicum texanum       PC         Rice, red       Oryza sativa       C         Sandbur, field       Cenchrus incertus       PC         Shattercane       Sorghum bicolor       PC         Signalgr	Barnyardgrass	Echinochloa crus-galli	С
Crowfootgrass       Dactyloctenium aegyptium       C         Cupgrass, prairie       Eriochloa contracta       C         Cupgrass, Southwestern       Eriochloa gracilis       C         Cupgrass, woolly       Eriochloa villosa       PC         Foxtail, giant       Setaria faberi       C         Foxtail, green       Setaria viridis       C         Foxtail, robust (purple, white)       Setaria spp.       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Johnsongrass, seedling       Sorghum halepense       PC         Millet, foxtail       Setaria italica       C         Millet, wild proso       Panicum miliaceum       PC         Panicum, browntop       Panicum miliaceum       PC         Panicum, fall       Panicum fasciculatum       C         Panicum, Texas       Panicum dichotomiflorum       C         Panicum, Texas       Panicum texanum       PC         Rice, red       Oryza sativa       C         Sandbur, field       Cenchrus incertus       PC         Shattercane       Sorghum bicolor       PC         Signalgrass, proadleaf       Brachiaria plitjera       C			
Cupgrass, prairie       Eriochloa contracta       C         Cupgrass, Southwestern       Eriochloa gracilis       C         Cupgrass, woolly       Eriochloa villosa       PC         Foxtail, giant       Setaria faberi       C         Foxtail, green       Setaria viridis       C         Foxtail, robust (purple, white)       Setaria spp.       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Johnsongrass, seedling       Sorghum halepense       PC         Millet, foxtail       Setaria italica       C         Millet, wild proso       Panicum miliaceum       PC         Panicum, browntop       Panicum fasciculatum       C         Panicum, fall       Panicum dichotomiflorum       C         Panicum, Texas       Panicum texanum       PC         Rice, red       Oryza sativa       C         Sandbur, field       Cenchrus incertus       PC         Shattercane       Sorghum bicolor       PC         Signalgrass, broadleaf       Brachiaria platyphylla       PC         Signalgrass, narrowleaf       Brachiaria plitjormis       C         Starbur, bristly       Acanthospermum hispidum       C			С
Cupgrass, Southwestern       Eriochloa gracilis       C         Cupgrass, woolly       Eriochloa villosa       PC         Foxtail, giant       Setaria faberi       C         Foxtail, green       Setaria viridis       C         Foxtail, robust (purple, white)       Setaria spp.       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Johnsongrass, seedling       Sorghum halepense       PC         Millet, foxtail       Setaria italica       C         Millet, wild proso       Panicum miliaceum       PC         Panicum, browntop       Panicum fasciculatum       C         Panicum, fall       Panicum dichotomiflorum       C         Panicum, fall       Panicum dichotomiflorum       C         Panicum, Texas       Panicum texanum       PC         Rice, red       Oryza sativa       C         Sandbur, field       Cenchrus incertus       PC         Shattercane       Sorghum bicolor       PC         Signalgrass, broadleaf       Brachiaria platyphylla       PC         Signalgrass, narrowleaf       Brachiaria plifigera       C         Starbur, bristly       Acanthospermum hispidum       C			С
Cupgrass, woolly       Eriochloa villosa       PC         Foxtail, giant       Setaria faberi       C         Foxtail, green       Setaria viridis       C         Foxtail, robust (purple, white)       Setaria spp.       C         Foxtail, yellow       Setaria pumila       C         Goosegrass       Eleusine indica       C         Johnsongrass, seedling       Sorghum halepense       PC         Millet, foxtail       Setaria italica       C         Millet, wild proso       Panicum miliaceum       PC         Panicum, browntop       Panicum fasciculatum       C         Panicum, fall       Panicum dichotomiflorum       C         Panicum, fall       Panicum dichotomiflorum       C         Panicum, Texas       Panicum texanum       PC         Rice, red       Oryza sativa       C         Sandbur, field       Cenchrus incertus       PC         Shattercane       Sorghum bicolor       PC         Signalgrass, broadleaf       Brachiaria platyphylla       PC         Signalgrass, narrowleaf       Brachiaria plitgera       C         Starbur, bristly       Acanthospermum hispidum       C         Witchgrass       Panicum capillare       C <td></td> <td></td> <td>С</td>			С
Foxtail, giant  Setaria faberi  C Foxtail, green  Setaria viridis  C Foxtail, robust (purple, white)  Setaria spp.  C Foxtail, yellow  Setaria pumila  C Goosegrass  Eleusine indica  C Johnsongrass, seedling  Sorghum halepense  PC  Millet, foxtail  Setaria italica  C Millet, wild proso  Panicum miliaceum  PC Panicum, browntop  Panicum fasciculatum  C Panicum, fall  Panicum dichotomiflorum  C Panicum, Texas  Panicum texanum  PC Rice, red  Oryza sativa  C Sandbur, field  Cenchrus incertus  PC Signalgrass, broadleaf  Brachiaria platyphylla  PC Signalgrass, narrowleaf  Brachiaria piligera  C Starbur, bristly  Acanthospermum hispidum  C SEDGES	1 0		PC
Foxtail, green		Setaria faberi	С
Foxtail, robust (purple, white)  Foxtail, yellow  Setaria pumila  C  Goosegrass  Eleusine indica  Johnsongrass, seedling  Sorghum halepense  PC  Millet, foxtail  Setaria italica  Millet, wild proso  Panicum miliaceum  PC  Panicum, browntop  Panicum fasciculatum  C  Panicum, Texas  Panicum texanum  PC  Rice, red  Oryza sativa  C  Sandbur, field  Cenchrus incertus  Sorghum bicolor  Signalgrass, broadleaf  Brachiaria platyphylla  PC  Signalgrass, narrowleaf  Brachiaria piligera  C  Starbur, bristly  Acanthospermum hispidum  C  SEDGES		Setaria viridis	С
Foxtail, yellow  Goosegrass  Eleusine indica  C  Johnsongrass, seedling  Sorghum halepense  PC  Millet, foxtail  Setaria italica  C  Millet, wild proso  Panicum miliaceum  PC  Panicum, browntop  Panicum fasciculatum  C  Panicum, Texas  Panicum texanum  PC  Rice, red  Oryza sativa  C  Sandbur, field  Cenchrus incertus  PC  Signalgrass, broadleaf  Brachiaria platyphylla  PC  Signalgrass, narrowleaf  Brachiaria piligera  C  Starbur, bristly  Acanthospermum hispidum  C  C  C  C  SedDGES		Setaria spp.	
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Panicum, Texas       Panicum texanum       PC         Rice, red       Oryza sativa       C         Sandbur, field       Cenchrus incertus       PC         Shattercane       Sorghum bicolor       PC         Signalgrass, broadleaf       Brachiaria platyphylla       PC         Signalgrass, narrowleaf       Brachiaria piligera       C         Sprangletop, red       Leptochloa filiformis       C         Starbur, bristly       Acanthospermum hispidum       C         Witchgrass       Panicum capillare       C			С
Panicum, Texas       Panicum texanum       PC         Rice, red       Oryza sativa       C         Sandbur, field       Cenchrus incertus       PC         Shattercane       Sorghum bicolor       PC         Signalgrass, broadleaf       Brachiaria platyphylla       PC         Signalgrass, narrowleaf       Brachiaria piligera       C         Sprangletop, red       Leptochloa filiformis       C         Starbur, bristly       Acanthospermum hispidum       C         Witchgrass       Panicum capillare       C	·	Panicum dichotomiflorum	С
Rice, red  Sandbur, field  Cenchrus incertus  PC  Shattercane  Sorghum bicolor  Signalgrass, broadleaf  Brachiaria platyphylla  PC  Signalgrass, narrowleaf  Brachiaria piligera  C  Sprangletop, red  Leptochloa filiformis  C  Starbur, bristly  Acanthospermum hispidum  C  SEDGES			
Sandbur, field       Cenchrus incertus       PC         Shattercane       Sorghum bicolor       PC         Signalgrass, broadleaf       Brachiaria platyphylla       PC         Signalgrass, narrowleaf       Brachiaria piligera       C         Sprangletop, red       Leptochloa filiformis       C         Starbur, bristly       Acanthospermum hispidum       C         Witchgrass       Panicum capillare       C         SEDGES	-	Orvza sativa	С
Shattercane       Sorghum bicolor       PC         Signalgrass, broadleaf       Brachiaria platyphylla       PC         Signalgrass, narrowleaf       Brachiaria piligera       C         Sprangletop, red       Leptochloa filiformis       C         Starbur, bristly       Acanthospermum hispidum       C         Witchgrass       Panicum capillare       C         SEDGES			
Signalgrass, broadleaf       Brachiaria platyphylla       PC         Signalgrass, narrowleaf       Brachiaria piligera       C         Sprangletop, red       Leptochloa filiformis       C         Starbur, bristly       Acanthospermum hispidum       C         Witchgrass       Panicum capillare       C         SEDGES			
Signalgrass, narrowleaf       Brachiaria piligera       C         Sprangletop, red       Leptochloa filiformis       C         Starbur, bristly       Acanthospermum hispidum       C         Witchgrass       Panicum capillare       C         SEDGES			
Sprangletop, red       Leptochloa filiformis       C         Starbur, bristly       Acanthospermum hispidum       C         Witchgrass       Panicum capillare       C         SEDGES	<u> </u>		
Starbur, bristly  Acanthospermum hispidum  C  Witchgrass  Panicum capillare  C  SEDGES	<u> </u>	, · ·	
Witchgrass Panicum capillare C SEDGES			
SEDGES	•	·	
		1	1
Tratologo, yonov   Oyperas coulistias   O	Nutsedge, yellow	Cyperus esculentus	С

Table 2. Weeds Controlled or Partially Controlled by Early Postemergence Applications of LIBERTY RMOC-AM\*

Scientific Name	Control (C) Partial Control (PC)
Amaranthus palmeri	С
	С
·	PC
	C
	C
	C
	C
	C
I I	C
	PC
	C
	C
	C
	C
	C
,	
	С
	С
	С
,	C
·	С
	С
	С
,	С
	С
Brassica kaber	С
Solanum nigrum	С
Solanum ptycanthum	С
Solanum sarrachoides	С
Amaranthus retroflexus	С
Amaranthus hybridus	С
Phytolacca americana	С
Solanum spp.	С
Portulaca oleracea	С
Richardia scabra	С
	С
	С
	C
	C
	C
	C
<del>-                                    </del>	C
	C
<del>-                                    </del>	C
	C
	C
,	C
Amaranthus tuberculatus	C
	Amaranthus palmeri Amaranthus powellii Galium aparine Desmodium tortuosum Polygonum convolvulus Solanum rostratum Mollugo verticillata Stellaria media Xanthium strumarium Taraxacum officinale Weber Lamium purpureum Proboscidea louisianica Galinsoga parviflora Cannabis sativa L. Lamium amplexicaule Solanum carolinense Conyza canadensis Datura stramonium Kochia scoparia Chenopodium album Hibiscus trionum Hippuris vulgaris L. Ipomoea hederacea Ipomoea hederacea Brassica kaber Solanum nigrum Solanum ptycanthum Solanum sarrachoides Amaranthus retroflexus Amaranthus retroflexus Amaranthus hybridus Phytolacca americana Solanum spp. Portulaca oleracea Richardia scabra Raphanus raphanistrum Ambrosia artemisiifolia Armbrosia trifida Sesbania exaltata Capsella bursa-pastoris Sida spinosa Polygonum pensylvanicum Helianthus annus Cirsium arvense Abutilon theophrasti Amaranthus rudis

Common Name	Scientific Name	Control (C) Partial Control (PC)			
Crabgrass, large	<i>Digitaria</i> spp.	C**			
Signalgrass, broadleaf	Brachiaria platyphylla	C**			
SEDGES					
Nutsedge, yellow	Cyperus esculentus	PC			
*This product will not provide consistent control of emerged weeds.					
** Apply before weed exceeds 2 inches in height.					

#### **ROTATIONAL CROPS**

When rotating crops following an application of this product:

- **DO NOT** rotate to crops other than corn (all types), cotton, peanuts, small grain cereals, sorghum or soybeans, the Spring following application of this product.
- If crop is lost, field corn, field seed corn, field silage corn, sweet corn, yellow popcorn and grain sorghum (seed treated with a seed safener that provides tolerance to Metolachlor) may be replanted immediately. **DO NOT** reapply this product.
- If this product is applied after June 1, rotating to crops other than corn (all types) or sorghum the next Spring may result in crop injury.
- Injury may occur to soybeans planted the year following application on soils having a calcareous surface layer, e.g., those found within the Clarion-Nicollet-Webster soil series of Northern Iowa and Southern Minnesota.
- In eastern parts of the Dakotas, Kansas, Western Minnesota and Nebraska, **DO NOT** rotate to Soybeans for 18 months following application if the combined atrazine rate applied was more than 2.0 pounds ai per acre or equivalent band application rate or soybean injury may occur.
- In the High Plains and Intermountain areas of the West, where rainfall is sparse and erratic or where irrigation is required, use only when corn (all types) or sorghum is to follow field corn or a crop of untreated corn (all types) or sorghum is to precede other rotational crops.
- · For all other crops, wait for 18 months.

### **CROP USE DIRECTIONS**

This product contains 1.70 pounds of metolachlor, 1.66 pounds of atrazine and 0.218 pounds mesotrione active ingredients (a.i.) per gallon. The equivalent amount of active ingredient contained in this product is shown below.

Amount of LIBERTY RMOC-AM	Pounds of Al Contained in LIBERTY RMOC-AM			
(Quarts per Acre)	Metolachlor ai	Atrazine ai	Mesotrione ai	
1	0.42	0.41	0.05	
1.25	0.53	0.52	0.07	
1.5	0.64	0.62	0.08	
1.75	0.74	0.73	0.09	
2	0.85	0.83	0.11	
2.25	0.96	0.93	0.12	
3	1.27	1.24	0.16	
3.5	1.49	1.45	0.19	

#### CORN

### [(Field Corn, Seed Corn, Corn Silage, Sweet Corn and Yellow Popcorn)]

LIBERTY RMOC-AM is for preemergence use to control most annual grass and broadleaf weeds in field corn, field seed corn, field corn silage, sweet corn and yellow popcorn. This product may also be applied early postemergence to control broadleaf weeds in field corn, field seed corn and field corn silage.

See **Tables 1** and **2** for a list of weeds controlled or partially controlled. This product will not consistently control grasses that have emerged at the time of application. A tank mix with another herbicide may be required for control of emerged weed grasses (refer to the Tank Mixtures section of this label).

#### **LIBERTY RMOC-AM USE RATES**

Make application of LIBERTY RMOC-AM at 3.0 to 3.5 quarts per acre for control or suppression of the weeds listed in **Tables 1** and **2**. The soil organic matter content of the field on which this product is to be applied must be known. **DO NOT** make applications to field corn taller than 12 inches, or apply more than 3.5 quarts per acre per year.

#### **LIBERTY RMOC-AM Use Rates in Corn**

% Organic Matter LIBERTY RMOC-AM Use Rate per Acre					
<3%	3.0 quarts				
<u>≥</u> 3%	3.5 quarts				
Use of this product on soils with >10% soil organic matter is not recommended and may result in poor weed control.					

#### LIBERTY RMOC-AM APPLIED ALONE

**Early Preplant:** This product may be applied up to 14 days before planting.

**Preemergence Surface:** This product may be applied to the soil surface as a broadcast or banded application.

**Banded Preemergence:** Make applications of this product in a 10- to 15-inch band after corn planting but before corn has emerged.

**Band Applications:** For banded applications, using row and band width measurements in inches, calculate the amount of product to be applied per acre as follows:

Band width in inches		Rate per acre for a	_	A managest managed and manages
Row width in inches	Х	broadcast treatment	_	Amount needed per acre

**Early Postemergence:** LIBERTY RMOC-AM may be applied after field corn has emerged. See the **Adjuvants** section of this label for specific recommendation if using an adjuvant. Apply this treatment to small broadleaf weeds (less than 5 inches tall) and before the field corn exceeds 12 inches in height. Occasional field corn leaf burn may result, but this will not affect later growth or corn yield.

If applications of metolachlor or s-metolachlor, and atrazine (either alone or in combination) have been made prior to an application of this product, limit the amount of this product as an early postemergent application to no more than a total of 2.5 lbs. of atrazine active ingredient or 3.75 lbs. of metolachlor active ingredient per acre, or illegal crop residues may result.

**Split Application:** LIBERTY RMOC-AM may be applied as split application in field corn, field corn seed corn and field corn silage. For a split application program, apply 1.5 to 2.0 quarts of this product per acre prior to crop emergence followed by a second application of this product at a rate of 1.25 to 1.75 quarts per acre as post-application after corn emergence. The total amount of this product applied in the split application program cannot exceed 3.0 quarts per acre in soils with <3% organic matter and cannot exceed 3.5 quarts per acre in soils with  $\geq$  3% organic matter. Refer to the **Early Postemergence** section above for instructions on postemergence applications.

#### LIBERTY RMOC-AM IN TANK MIXTURES

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.

#### **Use of Spray Adjuvants in Tank Mixtures**

When LIBERTY RMOC-AM is used as a preemergence herbicide and before weeds have emerged, spray adjuvants have little or no influence on performance. However, in burndown situations where the weeds

have emerged and corn has not, an adjuvant may be used with this product applied alone or when applied in tank-mixture with a burndown herbicide as allowed on the individual product labels. Use only those adjuvants suitable for agricultural crop use. See **Adjuvants** section for further instructions.

#### **Reduced Tillage Burndown Combinations**

In reduced or no-till corn and prior to crop emergence, LIBERTY RMOC-AM tank mixtures with glyphosate or paraquat will burndown weeds that have emerged. For optimum results, tank mix applications of LIBERTY RMOC-AM plus paraquat should be made to weeds that are 1 to 6 inches in height. Consult the paraquat or glyphosate product label for further information on weeds controlled and application timings

#### **Preemergence Tank-mixtures Applied Before Corn Emergence**

The tank mix partners listed in **Table 3** may be used in either conventional, reduced or no-till systems and be applied by the same methods and at the same timings as this product unless otherwise specified in the tank-mix product label. Follow all tank mix product labels for use rates, precautions and restrictions. 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.

Perform a compatibility test prior to spraying the tank mix application. Tank-mixtures with 2,4-D are allowed, but should only be done with extreme care with regard to ensuring compatibility before mixing a load. 2,4-D products (and even their batches), vary greatly with regard to compatibility and should be checked each time a water or carrier source, water or carrier temperature, product source or tank-mixture recipe is changed.

Table 3. Tank Mixtures of LIBERTY RMOC-AM for Preemergence Application in Corn

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TANK MIX PARTNER	PURPOSE		
Atrazine	Improved broadleaf and grass weed control		
Glyphosate	Burndown existing weeds		
Paraquat	Burndown existing weeds		
Simazine	Improved broadleaf and grass weed control		
Lambda-cyhalothrin	Insect control		

#### Early Postemergence Tank Mixtures Applied After Corn Emergence

The tank-mix partners listed in **Table 4** may be used in conventional, reduced or no-till systems and can be applied by the same methods and timings as this product unless otherwise specified in the tank mix product label. Follow all tank mix product labels for use rates and restrictions. Perform a compatibility test prior to spraying the tank mix application. 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.

Table 4. Tank Mixtures of LIBERTY RMOC-AM for Early Postemergence Application in Corn

TANK MIX PARTNER*	PURPOSE
Atrazine	Improved broadleaf and grass weed control
Glufosinate (only for corn hybrids	Emerged grass control
designated as glufosinate-tolerant, e.g.	
LibertyLink)	
Nicosulfuron	Emerged grass control
Nicosulfuron + Rimsulfuron	Emerged grass control
Rimsulfuron + Thifensulfuron methyl	Emerged grass control
Lambda-cyhalothrin	Insect control
* Refer to the Adjuvants section for direct	ions when applying this product in postemergence tank

Refer to the **Adjuvants** section for directions when applying this product in postemergence tank mixtures to field corn.

#### Programs for Use of LIBERTY RMOC-AM with Glyphosate to Glyphosate Tolerant Corn

LIBERTY RMOC-AM may be applied early postemergence at a rate down to 2.25 quarts per acre in tank mix with a solo glyphosate product that is registered for use for over-the-top use in glyphosate tolerant field corn.

To minimize weed competition with the crop, target the application of this mixture to weeds in the 1 to 2 inch range. If the glyphosate product has a built-in adjuvant system (the product label does not for additional adjuvant), only spray-grade ammonium sulfate (AMS) at 8.5 pounds per 100 gallons should be added to the tank mixture. If the glyphosate product label calls for an adjuvant in addition to AMS, add a non-ionic surfactant (NIS) at 0.25% v/v and AMS to this spray tank mixture. Read and follow all directions for use, precautions and restrictions on the tank mix partner glyphosate label.

Alternatively, LIBERTY RMOC-AM may be applied preemergence at a rate down to 2.25 quarts per acre as part of a two-pass weed control program when followed by a postemergence application of a glyphosate-containing product in glyphosate-tolerant corn. When used in this manner, this product will provide reduced competition of the weeds listed **Table 1** for a period of 30 or more days, improving the timing flexibility and effectiveness of the glyphosate-based product application. Follow all directions for use, precautions and restrictions on the glyphosate product label.

#### Programs for Use of LIBERTY RMOC-AM in Glufosinate Tolerant Corn

LIBERTY RMOC-AM may be applied early postemergence at a rate down to 2.25 quarts per acre in tank mixture with glufosinate and applied over-the-top in field corn designated as glufosinate-tolerant. To minimize weed competition with the crop, target the application of this mixture to weeds in the 1 to 2 inch range. Ammonium sulfate (AMS) may be added as a spray adjuvant as directed on the glufosinate label. However, AMS should be the only adjuvant added to this tank-mixture. Follow all directions for use and restrictions on the glufosinate product label.

Alternatively, LIBERTY RMOC-AM may be applied preemergence at a rate down to 2.25 quarts per acre as part of a two-pass weed control system when followed by a postemergence application of glufosinate in field corn designated as glufosinate-tolerant. When used in this manner, this product will provide reduced competition of the weeds listed in **Table 1** for a period of 30 or more days, improving the timing flexibility and effectiveness of the glufosinate application. Follow all directions for use and restrictions on the glufosinate product label.

#### **Precautions**

- It is not advised to apply this product on soils with greater than 10% organic matter or poor weed control may result.
- **DO NOT** apply early postemergence to field corn in liquid fertilizer or severe adverse crop response or crop injury may result.
- Glyphosate-tolerant Corn
  - **DO NOT** use urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants in these tank mixtures, or crop injury may result.
- Glufosinate-tolerant Corn
  - **DO NOT** add urea ammonium nitrate (UAN), crop oil concentrate (COC), nonionic surfactants or methylated seed oil (MSO) type adjuvants to these mixtures or crop injury may occur.

#### Restrictions

- **DO NOT** apply this product to emerged sweet corn or yellow popcorn.
- **DO NOT** apply to field corn taller than 12 inches.
- **DO NOT** apply via mechanically pressurized handguns to sweet corn.
- **DO NOT** apply more than the labeled rate for a given soil texture per year, either as a split or single treatment.
- Except for the split application, **DO NOT** make more than one application per year.
- Early Postemergence
  - **DO NOT** apply more than of 3.75 pounds of metolachlor ai or 2.5 pounds of atrazine ai per acre if products containing metolachlor or atrazine have been applied prior to application of this product.

- **DO NOT** apply to field corn in liquid fertilizer or severe crop injury may occur.
- Early Postemergence Tank Mixtures Applied After Corn Emergence
  - **DO NOT** apply tank-mixtures of this product to emerged sweet corn or yellow popcorn.
- · Glyphosate-tolerant Corn
  - **DO NOT** apply this mixture to corn that is greater than 12 inches tall.
- Glufosinate-tolerant Corn
  - **DO NOT** apply this mixture to corn that is greater than 12 inches tall.

#### **GRAIN SORGHUM**

LIBERTY RMOC-AM can be applied preplant non-incorporated (up to 21 days before planting) through preemergence for weed control in sorghum that was seed treated with a seed safener that provides tolerance to Metolachlor. For a listing of weeds controlled or partially controlled by this product, see **Table 1**.

Apply LIBERTY RMOC-AM at a rate of 3.0 quarts per acre as a broadcast non-incorporated spray beginning at 21 days before planting through planting but prior to sorghum emergence. Applying this product less than 7 days before sorghum planting will increase the risk of crop injury especially if irrigation or rainfall is received following application. Injury symptoms include temporary bleaching of newly emerging sorghum leaves or in extreme conditions, stunting or partial stand loss. Applying this product more than 7 days (but not more than 21) prior to sorghum planting will reduce the risk of crop injury.

If LIBERTY RMOC-AM is applied prior to planting, minimize disturbance of the herbicide treated soil barrier during the planting process in order to lessen the potential for poor weed control in the disturbed soil zone.

LIBERTY RMOC-AM may also be applied as a split application to grain sorghum. For split application program, apply this product at 1.5 to 1.75 quarts per acre as a non-incorporated early preplant (7 to 21 days before planting) followed by a second application of this product at the rate of 1.25 to 1.5 quarts per acre as a preemergence prior to sorghum emergence. The total amount of this product applied in the split application program cannot exceed 3.0 quarts per acre.

If weeds are present at the time of application, add a nonionic surfactant type of adjuvant at a rate of 0.25% v/v or crop oil concentrate at a rate of 1% v/v to the spray solution. In addition to COC or NIS, a spray grade UAN at a rate of 2.5% v/v or AMS at a rate of 8.5 pounds per 100 gallons of spray may be added to the solution for improved control of emerged weeds. If weeds are not emerged at the time of application, no additives are needed.

#### Restrictions

- **DO NOT** apply more than 3.0 quarts (1.29 lb ai metolachlor, 1.28 lb ai atrazine and 0.166 lb ai mesotrione) per acre per application.
- **DO NOT** apply more than 3.0 quarts (1.29 lb ai metolachlor, 1.28 lb ai atrazine and 0.166 lb ai mesotrione) per acre per year.
- Except for the split application, **DO NOT** make more than one application per year.
- **DO NOT** apply this product to sorghum grown on sandy soils (sand, sandy loam or loamy sand).
- DO NOT apply this product to emerged grain sorghum or severe injury will occur.
- **DO NOT** use this product in the production of forage sorghum, sweet sorghum (sorgo), sudangrass, sorghum-sudangrass hybrids or dual purpose sorghum.
- Sorghum seed must be treated with a seed safener that provides tolerance to Metolachlor prior to planting, or severe crop injury may occur.
- **DO NOT** apply atrazine and propazine products to the same sorghum acre.
- In Texas: DO NOT apply this product to sorghum grown South of Interstate 20 (1-20) or East of Highway 277.

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

#### **Pesticide Storage**

Store in original container. Keep container tightly closed when not in use. **DO NOT** store near seeds, fertilizers, or foodstuffs. **DO NOT** use containers for the storage of food, feed or drinking water. Keep away from heat and flame. 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**

Open dumping is prohibited. Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. Rinse spray equipment. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of as described above, 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.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration, or by other procedures allowed by state and local authorities.

**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. After triple rinsing is complete, and the container is not suitable for refilling or reconditioning, offer the container for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

#### 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. To the extent consistent with applicable law, neither LIBERTY CROP PROTECTION LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF LIBERTY CROP PROTECTION LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT.

LIBERTY CROP PROTECTION LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of Sale and Limitation of Warranty and Liability which may not be modified except by written agreement signed by a duly authorized representative of LIBERTY CROP PROTECTION LLC.

All trademarks are the property of their respective owners.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et al. v. EPA, C01-0132C, (W.D. WA). For further information, please refer to https://www.epa.gov/endangered-species/endangered-species-case-washington-toxics-coalition-v-epa.

#### [BASE LABEL AFFIXED TO CONTAINER EQUAL TO OR LESS THAN 5 GALLONS]

### RESTRICTED USE PESTICIDE

(GROUND AND SURFACE WATER CONCERNS)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION. THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

METOLACHLOR	GROUP	15	HERBICIDE
ATRAZINE	GROUP	5	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE
OR			

METOLACHLOR GROUP 15 HERBICIDE ATRAZINE GROUP 5 HERBICIDE MESOTRIONE GROUP 27 HERBICIDE

[Optional: Icon]



# **LIBERTY RMOC-AM**

[Optional: A PREEMERGENCE AND POSTEMERGENCE HERBICIDE FOR CONTROL OF ANNUAL GRASS AND BROADLEAF WEEDS IN FIELD CORN, FIELD SEED CORN, FIELD SILAGE CORN, SWEET CORN, YELLOW POPCORN AND GRAIN SORGHUM]

ACTIVE INGREDIENTS*:	% BY WT.
Metolachlor	. 19.00%
Atrazine	. 18.60%
Atrazine Related Compounds	. 0.48%
Mesotrione	. 2.44%
OTHER INGREDIENTS:	59.48%
TOTAL:	. 100.00%
*Equivalent to 1.70 pounds of Metolachlor, 1.66 pounds of atrazine and 0.218 pounds of mesotrione active ingredients	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 additional Precautionary Statements and Directions for Use.

Not for Sale, Sale into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.

#### **FIRST AID**

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. **DO NOT** induce vomiting unless told to by the poison control center or doctor. **DO NOT** give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to mouth, if possible. Call a poison control center or doctor for further treatment advice.

**HOTLINE 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**. For Chemical Spill, Leak, Fire or Exposure, call CHEMTREC **800-424-9300**.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to aquatic invertebrates. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean water mark. **DO NOT** apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. **DO NOT** contaminate water when disposing of equipment washwater.

Refer to label for complete Groundwater, Surface Water, and Non-Target Organism Advisories.

#### PHYSICAL AND CHEMICAL HAZARDS

**DO NOT** use or store near heat or open flame.

Refer to label for complete Agricultural Use Requirements.

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

**Pesticide Storage:** Store in original container. Keep container tightly closed when not in use. Do not store near seeds, fertilizers, or foodstuffs. **DO NOT** use containers for the storage of food, feed or drinking water. Keep away from heat and flame. 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:** Open dumping is prohibited. Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. Rinse spray equipment. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of as described above, 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.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration, or by other procedures allowed by state and local authorities.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et al. v. EPA, C01-0132C, (W.D. WA). For further information, please refer to https://www.epa.gov/endangered-species/endangered-species-case-washington-toxics-coalition-v-epa.

EPA Reg. No.: 89168-94
EPA Est. No.: \_\_\_\_\_\_
NET CONTENTS: \_\_\_\_Gal. (\_\_\_L)

Manufactured for: LIBERTY CROP PROTECTION, LLC 1880 Fall River Drive, Suite 100

Loveland, CO 80538

#### [BASE LABEL AFFIXED TO CONTAINER GREATER THAN 5 GALLONS OR RETURNABLE]

### RESTRICTED USE PESTICIDE

(GROUND AND SURFACE WATER CONCERNS)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION. THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

METOLACHLOR	GROUP	15	HERBICIDE
ATRAZINE	GROUP	5	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE
OR			

METOLACHLOR GROUP 15 HERBICIDE ATRAZINE GROUP 5 HERBICIDE MESOTRIONE GROUP 27 HERBICIDE

[Optional: Icon]



# **LIBERTY RMOC-AM**

[Optional: A PREEMERGENCE AND POSTEMERGENCE HERBICIDE FOR CONTROL OF ANNUAL GRASS AND BROADLEAF WEEDS IN FIELD CORN, FIELD SEED CORN, FIELD SILAGE CORN, SWEET CORN, YELLOW POPCORN AND GRAIN SORGHUM]

ACTIVE INGREDIENTS*:	% BY WT.
Metolachlor	19.00%
Atrazine	18.60%
Atrazine Related Compounds	0.48%
Mesotrione	
OTHER INGREDIENTS:	
TOTAL:	
*Equivalent to 1.70 pounds of Metolachlor, 1.66 pounds of atrazine and 0.218 pounds of mesotrione active ingredient:	

# 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).

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See inside booklet for additional Precautionary Statements and Directions for Use.

Not for Sale, Sale into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.

#### **FIRST AID**

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. **DO NOT** induce vomiting unless told to by the poison control center or doctor. **DO NOT** give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to mouth, if possible. Call a poison control center or doctor for further treatment advice.

**HOTLINE 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**. For Chemical Spill, Leak, Fire or Exposure, call CHEMTREC **800-424-9300**.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

#### **USER SAFETY RECOMMENDATIONS**

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

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to aquatic invertebrates. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean water mark. **DO NOT** apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. **DO NOT** contaminate water when disposing of equipment washwater.

**Note to reviewer:** Either Option 1 or 2 will be used based on the amount of space available on the base label.

#### Option 1:

#### **Groundwater Advisory**

Atrazine can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

Metolachlor/S-metolachlor is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

#### **Surface Water Advisory**

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks or months after application. A level, well-maintained

vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of metolachlor/S-metolachlor from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

#### **Non-Target Organism Advisory**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

#### **Reporting Ecological Incidents:**

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 844-425-8488.

#### Option 2:

Refer to label for complete Groundwater, Surface Water, and Non-Target Organism Advisories.

#### PHYSICAL AND CHEMICAL HAZARDS

**DO NOT** use or store near heat or open flame.

#### [Optional: Agricultural Use Requirements]

#### **AGRICULTURAL USE REQUIREMENTS**

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

## DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

**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: 1. Coveralls over short-sleeved shirt and short pants, 2. Chemical-resistant gloves made of barrier laminate, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, Viton ≥14 mils, 3. Chemical-resistant footwear plus socks and 4. Chemical-resistant headgear for overhead exposure

#### Or

Refer to label for complete Agricultural Use Requirements.

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

**Pesticide Storage:** Store in original container. Keep container tightly closed when not in use. **DO NOT** store near seeds, fertilizers, or foodstuffs. **DO NOT** use containers for the storage of food, feed or drinking water. Keep away from heat and flame. 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:** Open dumping is prohibited. Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. Rinse spray equipment. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of as described above, 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 (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.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration, or by other procedures allowed by state and local authorities.

**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. After triple rinsing is complete, and the container is not suitable for refilling or reconditioning, offer the container for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et al. v. EPA, C01-0132C, (W.D. WA). For further information, please refer to https://www.epa.gov/endangered-species/endangered-species-case-washington-toxics-coalition-v-epa.

EPA Reg. No.: 89168-94
EPA Est. No.: \_\_\_\_\_\_
NET CONTENTS: \_\_\_\_Gal. (\_\_\_L)

**Manufactured for:** 

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