



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 26, 2023

Blake Cowen  
Product Registration Manager, North America  
Albaugh, LLC  
2906-North Patterson Drive  
Valdosta, GA 31602

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from the Interim Decisions for Metolachlor and Mesotrione and the National Marine Fisheries Services' (NMFS) Biological Opinion on the Effects of Metolachlor on Pacific Salmonids  
*Product Name:* ROTAM METOLACHLOR+MESOTRIONE  
*EPA Registration Number:* 83100-48  
*Application Date:* 5/17/2021, 9/8/2021, and 3/18/2022  
*Decision Number:* 575881, 582618, and 583857

Dear Blake Cowen:

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 Metolachlor and Mesotrione Interim Decisions. The Agency has concluded that your submission is acceptable.

This letter also addresses the label mitigation resulting from the NMFS' Biological Opinion on the effects of Metolachlor on Pacific salmonids. The Agency has concluded that your submission is also 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 12 months from the date of this letter. After 12 months, you may only 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 at [gavin.quinn@epa.gov](mailto:gavin.quinn@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a long horizontal flourish extending to the right.

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

METOLACHLOR	GROUP	15	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE

# Rotam Metolachlor+Mesotrione

An herbicide product for pre-emergence and post-emergence use in corn (field, seed, sweet and yellow popcorn) and grain sorghum on grass and broadleaf weeds

<b>Active Ingredients*:</b>	<b>By Wt.</b>
Metolachlor .....	36.80%
Mesotrione .....	3.68%
<b>Other Ingredients:</b> .....	<u>59.52%</u>
<b>Total:</b> .....	<b>100.00%</b>

\*Equivalent to 3.26 lbs. a.i./gal. metolachlor and 0.33 lb. a.i./gal. mesotrione.

## KEEP OUT OF REACH OF CHILDREN

### CAUTION/PRECAUCION

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

FIRST AID	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <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>• <b>DO NOT</b> induce vomiting unless told to by the poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <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>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

**HOT LINE NUMBER**

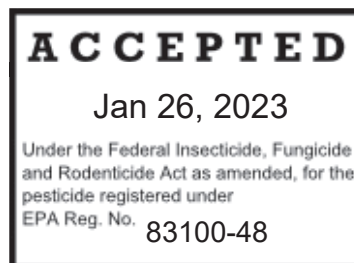
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-Hour Medical Emergency Assistance (Human or Animal), call: **1-800-222-1222**. For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), call CHEMTREC: **1-800-424-9300**.

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

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

Sale, use, and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

**Manufactured For[By]:**  
 Albaugh, LLC  
 1525 NE 36<sup>th</sup> Street  
 Ankeny, IA 50021



**EPA Reg. No.:** 83100-48  
**EPA Est. No.:**

**Net Contents:**

[Table of Contents to be added before the Precautionary Statement]

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

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

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

All Mixers, Loaders, Applicators, and other handlers must wear:

- Protective eyewear
- Long-sleeved shirt and long pants
- chemical-resistant gloves (e.g., barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, natural rubber  $\geq 14$  mils, polyethylene, polyvinyl chloride (PVC)  $\geq 14$  mils or Viton  $\geq 14$  mils)
- Shoes and socks

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

#### ENGINEERING CONTROL STATEMENTS

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

#### 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. If pesticide gets on skin, wash immediately with soap and water.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

**DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high-water mark.  
**DO NOT** contaminate water when disposing of equipment wash water or rinsate.

##### Ground Water Advisory

Metolachlor and mesotrione are 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 and mesotrione 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, contact your local Albaugh, LLC agent. at (800) 247-8013.

#### MIXING/LOADING INSTRUCTIONS

This product must be used in a manner that will prevent back siphoning into wells and prevent spills. Dispose of excess pesticide, spray mixtures or rinsates properly.

Mixing equipment must have check valves or anti-siphoning devices in use.

**DO NOT** mix or load this product within 50 feet of wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This restriction does not apply to plugged abandoned well or wells that are properly capped and does not apply to impervious pads or mixing/loading areas that are properly diked.

Mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well is strictly prohibited unless on an impervious pad constructed to withstand the weight of the heaviest load that could be on or moved across the pad. The pad must be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rainwater that may fall on the pad. Surface water must not be allowed to flow over or from the pad. To facilitate material removal, the pad must be sloped. A pad that is not under cover must have capacity to hold a minimum of 110% of the capacity of the largest pesticide product container or application equipment that will be on the pad. Covered pads that are completely protected from precipitation must have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment that will be on the pad. The containment capacities must be specified and maintained at all times. Minimum specific containment capacities **DO NOT** apply to vehicles that deliver pesticides to the mixing/loading site. There may be additional State requirements regarding containment and well setback restrictions. Consult local authorities for additional information.

#### PHYSICAL AND CHEMICAL HAZARDS

**DO NOT** use or store near heat or open flame. **DO NOT** mix or allow contact with oxidizing agents, as a hazardous chemical reaction may occur.

#### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read entire label before using this product.

**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.

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.

**NOTE: Not for sale, distribution or use in Nassau or Suffolk Counties in New York.**

#### Endangered Species Protection Requirements

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 6 months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email [ESPP@epa.gov](mailto:ESPP@epa.gov). You must use the Bulletin valid for the month in which you will apply the product.

#### 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.

The following PPE is required for early entry into 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:

- Protective eyewear
- Coveralls
- Chemical-resistant gloves (e.g., barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, natural rubber  $\geq 14$  mils, polyethylene, polyvinyl chloride (PVC)  $\geq 14$  mils or Viton  $\geq 14$  mils)
- Shoes and socks

#### PRODUCT INFORMATION

**Rotam Metolachlor+Mesotrione** is for use in field corn and seed corn for pre-emergence and early post-emergence control of many annual grass and broadleaf weeds.

**Rotam Metolachlor+Mesotrione** may also be applied to sweet corn, yellow popcorn, and grain sorghum as pre-emergence control of many annual grass and broadleaf weeds

Refer to the **Weeds Controlled** tables for lists of weeds. This product must be used before weeds emerge to effectively control most grass weeds.

If applications are made according to labeled directions for use and under normal growing conditions, **Rotam Metolachlor+Mesotrione** will not cause crop injury to the treated crop. During germination and early stages of growth, environmental conditions or other factors that contribute to stress of the crop may cause poor or slow growth and may weaken crop seedlings. Using **Rotam Metolachlor+Mesotrione** under these conditions can result in crop injury.

#### Use Restrictions:

- **DO NOT** make applications of this product through any type of irrigation system.
- **DO NOT** use flood irrigation to make applications with this product or to incorporate this product.
- **DO NOT** apply this product by air.
- **DO NOT** contaminate water used for domestic purposes or irrigation water used for crops that are not on this label.
- **DO NOT** make applications under conditions that favor runoff or wind erosion to soil that has been treated with this product or drift to non-target areas.

#### Use Precautions:

- To prevent movement to off-site areas due to runoff or wind erosion:
  - When conditions are favorable for wind erosion, avoid treating powdery dry or light sand soils. Allow the soil surface to settle by rainfall or irrigation first under these types of conditions.
  - Avoid applications to impervious substrates, including paved or highly compacted surfaces or snow covered/frozen soils.

#### WEED RESISTANCE MANAGEMENT

For resistance management, please note that **Rotam Metolachlor+Mesotrione** contains both a Group 15 and Group 27 herbicides. Any weed population may contain plants naturally resistant to Group 15 or Group 27 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of **Rotam Metolachlor+Mesotrione** or other Group 27 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a 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 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 resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact your local Albaugh, LLC representative.

#### Integrated Pest (Weed) Management

Integrate **Rotam Metolachlor+Mesotrione** 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.

#### APPLICATION INFORMATION

##### Pre-Emergence Applications

Make pre-emergence applications of **Rotam Metolachlor+Mesotrione** in a spray volume of 10 to 80 gals./A.

### Post-Emergence Applications

For optimum weed control, good weed coverage is essential. Make applications in a spray volume of 10 to 30 gals./A. If weed pressure is high and foliage is dense, use a minimum spray volume of 20 gals./A. For post-emergence applications, use flat fan nozzles for best coverage. **DO NOT** use flood jet or venture type nozzles or controlled droplet application. Use only clean water as a carrier.

### Aerial Application

**DO NOT** apply this product by air.

Amount of Product	Lbs. Active Ingredient
1 quart	0.84 lbs. metolachlor 0.083 lbs. mesotrione
1.2 quarts	1.01 lbs. metolachlor 0.1 lbs. mesotrione
1.6 quarts	1.34 lbs. metolachlor 0.133 lbs. mesotrione
2 quarts	1.68 lbs. metolachlor 0.17 lbs. mesotrione
2.4 quarts	2.02 lbs. metolachlor 0.2 lbs. mesotrione

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Ground Boom Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572).
- **DO NOT** release spray at a height greater than 3 feet above the ground or crop canopy.
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572).
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Airblast applications:

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer row.
- 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.

#### BOOM HEIGHT – Ground Boom

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

#### 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.

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

**ADDITIVES**

For applications where an adjuvant will be used, it is recommended to select one that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification.

**Post Emergence Applications - After Corn Has Emerged**

Add either a non-ionic surfactant at 0.25% v/v (1 qt./100 gals.) or crop oil concentrate at a rate of 1% v/v (1 gal./100 gals.) after field corn has emerged. Using a COC will provide better control than using an NIS, but temporary crop injury may occur.

If needed, a nitrogen-based adjuvant (AMS or UAN) may also be used to improve consistency of weed control. Risk of adverse crop response and crop injury will increase with the use of AMS or UAN adjuvants and temporary crop injury may occur.

**DO NOT** use methylated seed oil (MSO) with this product when applied alone to emerged field corn, or when applied as a post-emergence tank mixture with other products.

**Pre-Emergence Applications - Before Corn Emergence**

To increase burndown activity on weeds that have emerged, any adjuvant may be used at a pre-emergence or pre-plant timing.

**MIXING PROCEDURES**

Use either clean water or liquid fertilizers (excluding suspension fertilizers) as carriers for pre-emergence applications. If using fluid fertilizers, a compatibility test must be conducted. See **COMPATIBILITY TEST** section for additional information. Even if **Rotam Metolachlor+Mesotrione** is determined to be physically compatible with a fluid fertilizer, constant agitation will be necessary to maintain a uniform solution during application. Use only clean water as a carrier.

The spray tank must be thoroughly rinsed, decontaminated and clean before adding either **Rotam Metolachlor+Mesotrione** alone or with tank mix partners. Use only clean water, if water is used as the carrier.

Refer to specific tank mix recommendation sections in this label. Always refer to the tank mix partner label(s) for mixing directions and precautions. **DO NOT** exceed maximum label use rates, or combined total maximum seasonal use rates for mesotrione or metolachlor. **DO NOT** mix this product with any product bearing a label prohibition against such mixing. If a tank mixture is used, a compatibility test must be conducted. See **COMPATIBILITY TEST** section below for information on conducting a compatibility test.

**COMPATIBILITY TEST**

To ensure compatibility of a tank mix partner with Rotam Metolachlor+Mesotrione, a compatibility test should be conducted.

Complete liquid fertilizers or nitrogen solutions (excluding suspension fertilizers) may replace all or part of the water in the spray, as described in directions for use. Always conduct compatibility test and make actual applications according to label directions and use recommended carrier. Always check compatibility of liquid fertilizers with pesticide(s) before use because, even within the same analysis, liquid fertilizers vary. Tank mixtures incompatibility is more common with mixtures of fertilizers and pesticides.

**COMPATIBILITY TEST PROCEDURE (Assuming a 25 gals./A spray volume)**

1. Add 1.0 pt. of water or fertilizer carrier to each of **two** - 1 quart jars with tight lids. It is important to use the same source of water that will be used in the tank mix and to conduct the test at the same temperature the tank mix will be applied as water and temperature can affect compatibility.
2. Add ¼ tsp. or 1.2 mL of a compatibility agent approved for the intended use to **one of the jars** (¼ tsp equals 2.0 pts./100 gals. of spray). Mix by shaking or gently stirring (if shaking place lid on jar).



3. Add the appropriate amount of pesticide(s) based on described label rates to **both jars**. If more than one pesticide product will be used, add them separately in the order as described in the Mixing Procedures section of this label. Shake or stir gently after each addition to thoroughly mix (if shaking place lid on jar).
4. After all ingredients have been added, place lids on tightly, and invert each jar ten times. Allow the mixtures to stand 15 to 30 minutes. Look for separation, precipitates, gels, heavy oily film on the jar, large flakes, or other signs of incompatibility. Compare the two jars to determine if the compatibility agent is needed. If mixtures separate, but can be easily and readily remixed, the mixture can be sprayed but good agitation must be used. If it is determined the mixtures are incompatible, use the following methods to test for improving compatibility:
  - a) Make a slurry of the dry pesticide(s) in water before addition, or
  - b) Add ½ of the compatibility agent to the carrier (fertilizer or water) and the other ½ to the emulsifiable concentrate (EC) or flowable pesticide before adding to the mixture. If mixture is still not compatible, **DO NOT** use the mixture.
5. Dispose of any pesticide wastes in accordance with the Storage and Disposal section in this label.

#### Tank Mix Instructions

Use sprayers and equipment that are in good, clean condition and maintain adequate agitation. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

If the tank mix partner is determined to be compatible, fill the tank half full of the carrier. Begin agitation and maintain throughout mixing and application. Make sure all return lines to the spray tank discharge below the liquid level. Prepare the tank mixture components and add to the tank in the following order:

1. If using ammonium sulfate (AMS) – add and continue until it is completely dispersed.
2. If using a wettable powder or dry flowable formulation, make a slurry with water first and then add it slowly through the screen into the tank. Maintain agitation during this step.
3. If using a flowable formulation, add slowly through screen into the tank. Diluting the flowable with water before adding to the tank may improve mixing and compatibility with dry flowable formulations. .
4. Add Rotam Metolachlor+Mesotrione.
5. Add any other liquid tank mix products, adding emulsifiable concentrates last.
6. If an adjuvant will be used, add as the final step. Maintain agitation.
7. Complete filling the spray tank with the carrier and maintain agitation. Make application as soon as possible after spray mixture is prepared. **DO NOT** leave mixture in spray tank overnight unattended or without agitation.

If **Rotam Metolachlor+Mesotrione** is added to the spray tank via induction, compatibility of the spray mixture may be compromised. If using an induction tank (or comparable equipment), add each tank mixture product separately and allow each to fully disperse into the spray tank before adding the next product. For optimum compatibility, rinse the induction tank with clean water before adding each component.

The addition of **Rotam Metolachlor+Mesotrione** to the spray tank via in-line injection is not recommended.

#### Cleaning Equipment Post-Application

Careful attention must be use when cleaning equipment before spraying a crop other than field corn following applications with this product. Mix the volume of spray solution based on the area of application and mix only as much spray solution as needed.

#### Tank and Sprayer Clean Out

1. Use clean water to flush the tank, hoses, boom, and nozzles.
2. Add 1 gal. of household ammonia per 25 gals. of water. Or alternatively, use a commercially available spray tank cleaner.
3. Using pressure washer, clean the inside of the spray tank with this solution. Wash all parts of the tank, including the inside and top surface. If there is not a pressure washer available, fill the sprayer completely with the cleaning solution to provide contact with all internal surfaces of the tank and plumbing. Begin agitation in the sprayer and thoroughly recirculate the solution in the tank for at least 15 minutes. Remove all visible deposits from the spray equipment.
4. Use the cleaning solution to flush the hoses, spray lines, and nozzles for at least 1 minute.
5. Flush dead space areas with water by removing boom end caps, and then replace caps.
6. Dispose of rinsate from the clean-out according to all local State and Federal regulations.
7. Repeat the steps 2 to 5 above.
8. After completing the above procedures, remove and clean the nozzles, screens, and strainers separately in the cleaning solution.
9. Completely rinse the spray tank and equipment with clean water.

**WEEDS CONTROLLED**

Make applications of **Rotam Metolachlor+Mesotrione** as directed in this label to control or partially control the weeds listed in the tables below. Tank mixtures may control additional weeds. See the **Tank Mixtures** sections for specific and additional information. Always refer to the tank mix partner label(s) for specific use rates, directions, and restrictions.

Weed control may be reduced, if a sufficient rainfall is not received within 7 days after application. Apply 0.5 to 1 inch of water, if irrigation is available. Conduct a uniform, shallow cultivation as soon as weeds emerge, if irrigation is not available. Post-emergence control may be reduced or delayed when weeds are stressed or not actively growing due to drought, heat, lack of fertility, flooding, or prolonged cool temperatures.

#### Pre-Emergence Applications: Weeds Controlled or Suppressed

Common Name	Scientific Name	C = Control S=Suppression
Amaranth, Palmer	<i>Amaranthus palmeri</i>	C
Amaranth, Powell	<i>Amaranthus powellii</i>	C
Barnyardgrass	<i>Echinochloa crus-galli</i>	C
Buffalobur	<i>Solanum rostratum</i>	C
Carpetweed	<i>Mollugo verticillata</i>	C
Cocklebur, common	<i>Xanthium strumarium</i>	S
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	C
Cupgrass, prairie	<i>Eriochloa contracta</i>	C
Cupgrass, Southwestern	<i>Eriochloa acuminata</i>	C
Cupgrass, woolly	<i>Eriochloa villosa</i>	S
Foxtail, giant	<i>Setaria faberi</i>	C
Foxtail, green	<i>Setaria viridis</i>	C
Foxtail, robust (purple, white)	<i>Setaria</i> spp.	C
Foxtail, yellow	<i>Setaria pumila</i>	C
Galinsoga	<i>Galinsoga parviflora</i>	C
Goosegrass	<i>Eleusine indica</i>	C
Jimsonweed	<i>Datura stramonium</i>	C
Johnsongrass, seedling	<i>Sorghum halepense</i>	S
Kochia	<i>Kochia scoparia</i>	S
Lambsquarters, common	<i>Chenopodium album</i>	C
Millet, foxtail	<i>Setaria italica</i>	C
Millet, wild proso	<i>Panicum miliaceum</i>	S
Morningglory, entireleaf	<i>Ipomoea hederacea</i>	S
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>	S
Nightshade, black	<i>Solanum nigrum</i>	C
Nightshade, Eastern black	<i>Solanum ptycanthum</i>	C
Nightshade, hairy	<i>Solanum sarrachoides</i>	C
Nutsedge, yellow	<i>Cyperus esculentus</i>	C
Panicum, browntop	<i>Panicum fasciculatum</i>	C
Panicum, fall	<i>Panicum dichotomiflorum</i>	C
Panicum, Texas	<i>Panicum texanum</i>	S
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C
Pigweed, smooth	<i>Amaranthus hybridus</i>	C
Purslane, common	<i>Portulaca oleracea</i>	C
Pusley, Florida	<i>Richardia scabra</i>	C
Ragweed, common	<i>Ambrosia artemisiifolia</i>	S
Ragweed, giant	<i>Ambrosia trifida</i>	S
Rice, red	<i>Oryza sativa</i>	C
Sandbur, field	<i>Cenchrus incertus</i>	S
Shattercane	<i>Sorghum bicolor</i>	S
Sida, prickly	<i>Sida spinosa</i>	S
Signalgrass, broadleaf	<i>Brachiaria platyphylla</i>	S
Smartweed, ladysthumb	<i>Polygonum persicaria</i>	C
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>	C
Sprangletop, red	<i>Leptochloa filiformis</i>	C
Velvetleaf	<i>Abutilon theophrasti</i>	C
Waterhemp, common	<i>Amaranthus rudis</i>	C
Waterhemp, tall	<i>Amaranthus tuberculatus</i>	C
Witchgrass	<i>Panicum capillare</i>	C

#### Early Post-Emergence Applications: Weeds Controlled or Suppressed

Applied early post-emergence, **Rotam Metolachlor+Mesotrione** will provide control or suppression of small emerged broadleaf weeds that are less than 3 inches tall, but will not provide good control of weeds resistant to post-emergence HPPD inhibitors.

Common Name	Scientific Name	C = Control S=Suppression
Amaranth, Palmer	<i>Amaranthus palmeri</i>	C
Amaranth, Powell	<i>Amaranthus powellii</i>	C
Buffalobur	<i>Solanum rostratum</i>	C
Carpetweed	<i>Mollugo verticillata</i>	C
Cocklebur, common	<i>Xanthium strumarium</i>	C
Dandelion	<i>Taraxacum officinale</i>	S
Galinsoga	<i>Galinsoga parviflora</i>	C
Hemp	<i>Cannabis sativa</i>	C
Horsenettle	<i>Solanum carolinense</i>	C
Horseweed (maretail)	<i>Conyza canadensis</i>	C
Jimsonweed	<i>Datura stramonium</i>	C
Kochia	<i>Kochia scoparia</i>	S
Lambsquarters, common	<i>Chenopodium album</i>	C
Morningglory, entireleaf	<i>Ipomoea hederacea</i>	S
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>	S
Mustard, wild	<i>Brassica kaber</i>	C
Nightshade, black	<i>Solanum nigrum</i>	C
Nightshade, Eastern black	<i>Solanum ptycanthum</i>	C
Nightshade, hairy	<i>Solanum sarrachoides</i>	C
Nutsedge, yellow	<i>Cyperus esculentus</i>	S
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C
Pigweed, smooth	<i>Amaranthus hybridus</i>	C
Pokeweed	<i>Phytolacca americana</i>	C
Potatoes, volunteer	<i>Solanum spp.</i>	C
Purslane, common	<i>Portulaca oleracea</i>	S
Pusley, Florida	<i>Richardia scabra</i>	C
Ragweed, common	<i>Ambrosia artemisiifolia</i>	C
Ragweed, giant	<i>Ambrosia trifida</i>	C
Sida, prickly	<i>Sida spinosa</i>	S
Smartweed, ladysthumb	<i>Polygonum persicaria</i>	C
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>	C
Thistle, Canada	<i>Cirsium arvense</i>	S
Velvetleaf	<i>Abutilon theophrasti</i>	C
Waterhemp, common	<i>Amaranthus rudis</i>	C
Waterhemp, tall	<i>Amaranthus tuberculatus</i>	C

#### ROTATIONAL CROPS

The crop rotational intervals listed below should be observed following application of Rotam Metolachlor+Mesotrione. For tank mixtures of other products with Rotam Metolachlor+Mesotrione, follow the most restrictive product's crop rotation interval listed on the tank mix partner label.

#### Crop Rotational Intervals

Crop	Crop Rotational Interval*
Corn (all types) and grain sorghum**	Anytime
Cereals (barley, oats, rye, wheat)	4.5 Months
Cotton, peanuts, potatoes, and soybeans	Spring following the application
Beans (dry and snap), cucurbits, peas, red clover, sugar beets, tomatoes, and all other rotational crops	18 Months

\*Period between Rotam Metolachlor+Mesotrione application and planting of the rotational crop.

\*\*Seed for grain sorghum must be treated with a product safener to provide tolerance to metolachlor.

#### CORN - Directions for Use

Make a pre-emergence application of Rotam Metolachlor+Mesotrione for control of annual grass and broadleaf weeds in field corn, seed corn, sweet corn, and yellow popcorn. Make an early post-emergence application of Rotam Metolachlor+Mesotrione for the control of broadleaf weeds in field corn and seed corn. See the WEEDS CONTROLLED section of this label for a list of weeds controlled or suppressed. **DO NOT** make applications of Rotam Metolachlor+Mesotrione to yellow popcorn or sweet corn after the crop has emerged, or crop injury may result.

#### Application Timings

##### Reduced Tillage - Burndown Applications

In reduced or no-till corn and prior to crop emergence, Rotam Metolachlor+Mesotrione may be applied alone or in tank mixtures with Gramoxone Inteon® or Touchdown® brands (or equivalent glyphosate products including Roundup® brands) for the burndown of weeds that have emerged.

- See the **WEEDS CONTROLLED** section of this label for a list of weeds controlled or suppressed.
- Refer to the Gramoxone Inteon, Touchdown® brand, or glyphosate product label for additional information on weeds controlled, directions for use, restrictions, and precautions.
- See the **ADDITIVES** and **TANK MIX** sections on this product label for additional information.

#### Early Pre-Plant and Pre-Emergence Applications

Make an early pre-plant application of **Rotam Metolachlor+Mesotrione** up to 14 days before planting or pre-emergence application in field corn, seed corn, sweet corn, and yellow popcorn.

#### Post-Emergence Applications

Make a post-emergence application of **Rotam Metolachlor+Mesotrione** to field or seed corn after emergence up to the time when the plants reach 30 inches in height or up to the 8-leaf stage of corn growth. Use only clean water as the carrier. **DO NOT** make post-emergence applications in liquid fertilizer or severe crop injury will result. **DO NOT** make applications of **Rotam Metolachlor+Mesotrione** to emerged yellow popcorn or sweet corn, or severe crop injury may result. See the **ADDITIVES** section on this label for recommendations on adjuvants for burndown applications.

#### Rotam Metolachlor+Mesotrione Use Rates

Make application of **Rotam Metolachlor+Mesotrione** at 2.0 - 2.4 qts./A (1.68 lbs. a.i./A metolachlor + 0.165 lb. a.i./A mesotrione to 2.016 lbs. a.i./A metolachlor + 0.198 lb. a.i./A mesotrione) for control or suppression of the weeds listed in the **WEEDS CONTROLLED** section of this label. Before making applications of this product, determine the soil organic matter content of the field.

For soils with <3% organic matter content – use 2.0 quarts of **Rotam Metolachlor+Mesotrione** per acre.

For soils with ≥3% organic matter content – use 2.4 quarts of **Rotam Metolachlor+Mesotrione** per acre.

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

#### 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.

#### Pre-Emergence Applications (before crop has emerged)

Tank mix partners listed in the table below may be used in conventional, reduced, or no-till operations and by the same application methods and the same timings as **Rotam Metolachlor+Mesotrione** unless otherwise directed in the tank mix partner product label. Follow all tank mix product labels for use rates, precautions, and restrictions.

#### Pre-Emergence Tank Mix Applications Rotam Metolachlor+Mesotrione in Field Corn

Tank Mixture Recommendation*	Target Use
Atrazine 4 L, AAtrex® or other atrazine solo products	Broadleaf and grass weed control improved
Gramoxone Inteon®	Burndown of emerged existing weeds
Metribuzin 75DF or other metribuzin solo products	Broadleaf weed control improved
Sim-Trol®, Princep® or other simazine solo products	Broadleaf and grass weed control improved
Touchdown® Brands	Burndown of emerged existing weeds
Roundup® Brands or equivalents	Burndown of emerged existing weeds
2,4-D products	Burndown of emerged existing weeds
Warrior II with Zeon Technology® or equivalents	Insect control (see product label)

\*Reference the tank mix partner(s)' product label for directions for use, 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.

#### Early Post-Emergence Applications (after crop has emerged)

Tank mix products listed in the table below may be used in conventional, reduced, or no-till systems and applied by the same methods and at the same timings as **Rotam Metolachlor+Mesotrione** unless otherwise specified in the tank mix product label. Follow all tank mix product labels for use rates and restrictions.

#### Post-Emergence Tank Mixture Applications Rotam Metolachlor+Mesotrione in Field Corn

Tank Mixture Recommendation <sup>1,2</sup>	Target Use
Atrazine 4L, AAtrex or other solo atrazine products	Broadleaf and grass weed control improved
Accent® Q	Emerged grass weed control
Basis®	Emerged grass weed control
Ignite®	Refer to instructions under the "Rotam Metolachlor+Mesotrione Spray Programs in LibertyLink® Corn" section of this label.
NorthStar®	Broadleaf and grass weed control improved
Peak®	Broadleaf and grass weed control improved

Resolve® Q	Emerged grass weed control
Roundup Glyphosate Brands or equivalents	Refer to the instructions under the “ <b>Rotam Metolachlor+Mesotrione Spray Programs in glyphosate-tolerant Corn</b> ” section of this label.
Spirit®	Broadleaf and grass weed control improved
Status®	Emerged grass weed control
Steadfast® Q	Emerged grass weed control
Touchdown Brands or equivalents	Refer to the instructions under the “ <b>Rotam Metolachlor+Mesotrione Programs in glyphosate tolerant Corn</b> ” section of this label.
Warrior II with Zeon Technology	Insect control (see product label)

<sup>1</sup>Reference the tank mix partner(s)' product label for directions for use, 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.

<sup>2</sup>Refer to the **Additives** section of this label for recommendations when making applications of **Rotam Metolachlor+Mesotrione** alone or in tank mixture to field corn that has emerged.

#### Tank Mix Partner Products

Product Name	EPA Reg. No.	Active Ingredient
Atrazine 4L	66222-36, 5905-470, 55457-13, 34704-69, 1381-158, 33270-10, 19713-11, 33270-10	atrazine
AAtrex 4L	100-497	atrazine
Accent® Q	352-773	nicosulfuron
Basis®	352-571	Rimsulfuron + thifensulfuron-methyl
Concept III	Corn safener	fluxofenim
Gramoxone Inteon®	100-1217	paraquat
Ignite®	264-829	glufosinate-ammonium
NorthStar®	100-923	Primisulfuron-methyl + sodium salt of dicamba
Peak®	100-763	prosulfuron
Princep®	100-526, 100-603	simazine
Resolve® Q	352-777	Rimsulfuron + thifensulfuron-methyl
Roundup	524-343, 524-475, 524-535, 524-537, 524-579, 524-659	Glyphosate, in the form of potassium salt
Sim-Trol®	35915-11-60063	simazine
Spirit®	100-911	Primisulfuron-methyl+ prosulfuron
Status®	7969-242	Sodium salt of dicamba + sodium salt of diflufenzoxyr
Steadfast® Q	352-774	Nicosulfuron + rimsulfuron
Touchdown®	100-1169	Glyphosate, in the form of potassium salt
Warrior II with Zeon Technology	100-1295	Lambda-cyhalothrin

#### Rotam Metolachlor+Mesotrione Spray Programs in Glyphosate-Tolerant Corn

Make early post-emergence tank mixture applications of **Rotam Metolachlor+Mesotrione** with a solo glyphosate product (example: Touchdown® or Roundup® brands) that is registered for use over-the-top in glyphosate tolerant field corn (example: Roundup® Ready or Agrisure® GT Corn) at rates as low as 1.6 qts./A.

To reduce weed competition with the crop, application of this mixture should be targeted to weeds that are 1 to 2 inches. If the glyphosate product has an adjuvant included in the formulation (the product label does not call for an adjuvant being added), only spray-grade ammonium sulfate (AMS) at 8.5 lbs./100 gals. should be added to the tank mixture. If the glyphosate product label recommends an adjuvant in addition to AMS, add a non-ionic surfactant (NIS) at 0.25% v/v and AMS to this spray tank mixture. **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. Read and follow all directions for use, precautions, and restrictions on the tank mix partner glyphosate label.

As an alternative, a pre-emergence application of **Rotam Metolachlor+Mesotrione** may be made at rates as low as 1.6 qts/A as part of a two-pass weed control program when followed by a post-emergence application of a glyphosate-containing product in glyphosate-tolerant corn (example: Roundup® Ready or Agrisure® GT Corn). When this type of application is made, **Rotam Metolachlor+Mesotrione** will provide reduced competition of the weeds listed in the **Pre-Emergence Applications: Weeds Controlled or Suppressed** table for a period of 30+ days, improving the flexibility in application timing and effectiveness of the glyphosate-based product application. Follow all directions for use, precautions, and restrictions on the glyphosate product label.

A pre-emergence application of **Rotam Metolachlor+Mesotrione** may be made at 1.0 to 1.2 qts./A as part of a two-pass weed control program when followed by a tank mix of **Rotam Metolachlor+Mesotrione** and glyphosate in glyphosate-tolerant corn (example: Roundup® Ready or Agrisure GT Corn). Make application of **Rotam Metolachlor+Mesotrione** at 1.0 qt./A for soils with less than 3% organic matter, and 1.2 qts./A for soils with greater than 3% organic matter. Follow all directions for use, precautions, and restrictions on each product label.

**Rotam Metolachlor+Mesotrione Spray Programs in LibertyLink® Corn**

A post-emergence application of **Rotam Metolachlor+Mesotrione** may be made at 1.6 qts./A in tank mixture with Ignite® and applied over-the-top in field corn designated as LibertyLink®. To reduce weed competition with the crop, application of this mixture should be targeted to weeds that are 1 to 2 inches. Ammonium sulfate (AMS) may be added as an adjuvant as directed on the Ignite® label. However, AMS should be the only adjuvant used in this tank mixture. **DO NOT** make tank mixture applications with urea ammonium nitrate (UAN), crop oil concentrate (COC), non-ionic surfactants (NIS), or methylated seed oil (MSO) type adjuvants in these type of spray programs, or crop injury may result. Follow all directions for use, precautions, and restrictions on the Ignite® product label.

As an alternative, a pre-emergence application of **Rotam Metolachlor+Mesotrione** may be made at 1.6 qts./A as part of a two-pass weed control program when followed by a post-emergence application of Ignite® in field corn designated as LibertyLink®. When this type of application is made, **Rotam Metolachlor+Mesotrione** will provide reduced competition of the weeds listed in the **Pre-Emergence Applications: Weeds Controlled or Suppressed** table for a period of 30+ days, improving the flexibility in application timing and effectiveness of the Ignite® product application. Follow all directions for use, precautions, and restrictions on the Ignite® product label.

**Restrictions for all Corn Uses:**

- **DO NOT** make applications of more than 2.4 qts. of **Rotam Metolachlor+Mesotrione** per acre per year.
- **DO NOT** make applications of **Rotam Metolachlor+Mesotrione** to corn that is taller than 30 inches in height or corn that is larger than the 8-leaf stage of growth.
- **DO NOT** graze or feed forage from treated areas for 45 days following last application.
- **DO NOT** harvest corn for grain, forage, or stover within 45 days after a post-emergence application of Rotam Metolachlor+Mesotrione.
- **DO NOT** apply **Rotam Metolachlor+Mesotrione** as a post-emergence application in a tank mix with any organophosphate or carbamate insecticide, or severe corn injury may result.

**Precautions for all Corn Uses:**

- Severe adverse crop response and corn injury can result if applying **Rotam Metolachlor+Mesotrione** post-emergence to corn that has emerged and that has received an at-plant application of Counter® insecticide. Environmental conditions that promote poor growth will increase the likelihood and risk of severe crop injury.
- Severe corn injury can occur when an organophosphate or carbamate insecticide post-emergence application is made to corn within 7 days before or 7 days after a **Rotam Metolachlor+Mesotrione** application. Environmental conditions that promote poor growth will increase the likelihood and risk of severe crop injury.

**Rotam Metolachlor+Mesotrione Applications – Grain Sorghum**

Make a non-incorporated, pre-plant application of **Rotam Metolachlor+Mesotrione** in sorghum that has been seed-treated with Concep® III (or equivalent safener that provides tolerance to metolachlor) up to 21 days before planting and up through pre-emergence for weed control. See the **Pre-Emergence Applications: Weeds Controlled or Suppressed** table for a listing of weeds.

Make a broadcast, non-incorporated spray application at 2.0 qts./A starting at 21 days pre-plant and up through planting, but before sorghum has emerged. Making application less than 7 days before the sorghum planting can increase the risk of crop injury, particularly if there is rainfall or irrigation after the application. Symptoms of crop injury include temporary bleaching of young sorghum leaves, or in severe conditions, stunting or partial stand loss. Making the application of **Rotam Metolachlor+Mesotrione** at greater than 7 days (and no more than 21 days) before the sorghum planting will reduce the risk of adverse crop response.

When **Rotam Metolachlor+Mesotrione** application is made before planting, **DO NOT** incorporate and minimize soil disturbance of the treatment area during planting to minimize the potential for reduced weed control.

Split applications of **Rotam Metolachlor+Mesotrione** may be made to sorghum as an early pre-plant (7 to 21 day prior to planting), non-incorporated application at 1.0 to 1.25 qts./A of **Rotam Metolachlor+Mesotrione** following with a second application of **Rotam Metolachlor+Mesotrione** made at 0.75 to 1.0 qt./A before the sorghum has emerged. **DO NOT** exceed 2.0 qts./A of product for the split applications.

It is recommended to use a nonionic surfactant (NIS) type adjuvant at 0.25% v/v or a crop oil concentrate (COC) at 1% v/v in the spray solution if weeds are present at the time of application. A spray grade UAN at 2.5% v/v or AMS at 8.5 lbs./100 gallons of spray may also be added in addition to the COC or NIS to the mixture to improve control of weeds that have already emerged. The addition of additives is not recommended, if weeds have not emerged at the time of application.

**Sorghum Use Restrictions:**

- **DO NOT** make applications of more than 2.0 quarts of **Rotam Metolachlor+Mesotrione** per acre per year.
- **DO NOT** make applications of **Rotam Metolachlor+Mesotrione** to sorghum that is grown on sandy soils (sand, sandy loam, or loamy sand).
- **DO NOT** make applications of **Rotam Metolachlor+Mesotrione** to grain sorghum that has emerged or severe crop injury will result.
- **DO NOT** make applications of **Rotam Metolachlor+Mesotrione** to sorghum grown for forage, sweet sorghum (sorgo), sudangrass, sorghum-sudangrass hybrids, or dual-purpose sorghum.

- Seeds must be treated with Concep® III herbicide or an alternate seed safener that provides tolerance to metolachlor before planting, or severe adverse crop response and injury may result.
- **DO NOT** apply **Rotam Metolachlor+Mesotrione** to sorghum that is grown south of Interstate 20 (I-20) or east of Highway 277 in the State of Texas.

### STORAGE AND DISPOSAL

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

#### Pesticide Storage

Keep container tightly closed when not in use. **DO NOT** store near seeds, fertilizers, or foodstuffs. Can be stored at temperatures as low as -10°F. Keep away from heat and flame.

#### Pesticide Disposal

Open dumping is prohibited. Waste resulting from the use of this product may 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 [less than 5 gallons]

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

#### Container Handling [greater than 5 gallons]

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 person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by State and local authorities.

**Non-Refillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down):** Non-refillable container. **DO NOT** reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, 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. Metal Containers, 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.

**All Other Refillable Containers:** Refillable container. Refill this container with this herbicide only. **DO NOT** reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transporting. Disposing of Container: **DO NOT** reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, 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. For Metal Containers, 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.

**DO NOT USE CONTAINERS FOR THE STORAGE OF FOOD, FEED, OR DRINKING WATER!**

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

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of this product,

which are beyond the control of ALBAUGH, 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 ALBAUGH, LLC and Seller harmless for any claims relating to such factors.

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