



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505T)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

83100-64

Date of Issuance:

4/24/23

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Rotam Mesotrione 36.8% +  
Nicosulfuron 14.4% WG

Name and Address of Registrant (include ZIP Code):

Rotam Agrochemical Co. Ltd  
c/o Wagner Regulatory Associates, Inc.  
P.O. Box 640  
Hockessin, DE 19707

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

*Continues page 2*

Signature of Approving Official:

*Heather E McFarley*  
Heather McFarley, Product Manager 24  
Fungicide and Herbicide Branch  
Registration Division (7505T)

Date:

4/24/23

2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 83100-64.”
3. Submit one copy of the final printed label for the record before you release the product for shipment.

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 FIFRA 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) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF(s):

- Basic CSF dated 04/06/2022

If you have any questions, please contact Manjula Unnikrishnan at [unnikrishnan.manjula@epa.gov](mailto:unnikrishnan.manjula@epa.gov) or 202-566-2949.

Enclosure

- Stamped label

[MASTER LABEL]

MESOTRIONE	GROUP	27	HERBICIDE
NICOSULFURON	GROUP	2	HERBICIDE

# Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG

Water Dispersible Granules

For Post-Emergence use in Field Corn grown for Grain, Silage or Seed, Yellow Popcorn, or Sweet Corn.

ACTIVE INGREDIENTS:	BY WT.
Mesotrione .....	36.8%
Nicosulfuron: 2-[[[4,6-dimethoxypyrimidin-2-yl)aminocarbonyl]aminosulfonyl] -N,N-dimethyl-3-pyridinecarboxamide .....	14.4%
<b>OTHER INGREDIENTS:</b> .....	<b>48.8%</b>
<b>TOTAL:</b> .....	<b>100.0%</b>

**KEEP OUT OF REACH OF CHILDREN****CAUTION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted detalle.

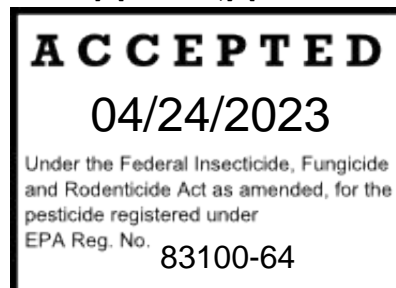
(If you **DO NOT** understand the label, find someone to explain it to you in detail.)

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 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 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 do so by a poison control center or doctor.</li> <li><b>DO NOT</b> give anything by mouth to an unconscious person.</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>
HOTLINE NUMBERS	
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: <b>1-800-222-1222</b> . For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), call CHEMTREC: <b>1-800-424-9300</b> .	

[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.]]

**Manufactured [For][By]:**  
Rotam Agrochemical Co. Ltd.  
26/F, E-Trade Plaza  
24 Lee Chung Street  
Chai Wan, Hong Kong  
[Product of XXXXXX]



EPA Reg. No.: 83100-XX  
EPA Est. No.: \_\_\_\_\_

Net Contents: \_\_\_\_\_ [Pounds/Kg] [Batch No.: \_\_\_\_\_] [Lot No.: \_\_\_\_\_]

{Note to Reviewer: Either Batch or Lot No. will be selected and included on container label based on what method and container is used by manufacturer.}

[Table of Contents to be added before the Precautionary Statements.]

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Causes moderate eye irritation. Harmful if absorbed through the skin, swallowed, or inhaled. Avoid contact with eyes, skin, or clothing. Avoid inhaling dust. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Mixers, loaders, applicators, and other handlers must wear:**

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves made of any waterproof material including polyethylene or polyvinylchloride.
- Shoes plus socks.

#### USER Safety Requirement:

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

#### ENGINEERING CONTROL STATEMENTS

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

#### ENVIRONMENTAL HAZARDS

**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. **DO NOT** contaminate water when disposing of equipment wash water or rinsate. **DO NOT** apply where/when conditions could favor runoff.

#### Groundwater Advisory

This product is known to leach through soil into groundwater under certain conditions as a result of label use. This product 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 a high potential for reaching surface water via runoff for several months or more after application. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

#### Windblown Soil Particles Advisory

This product has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying this product if prevailing local conditions may be expected to result in off-site movement.

#### 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.

#### DIRECTIONS FOR USE

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

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

**AGRICULTURAL USE REQUIREMENTS**

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

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

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, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material including polyethylene or polyvinylchloride
- Shoes plus socks

**PRODUCT INFORMATION**

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** is a selective herbicide for burndown and residual control of certain annual grass and broadleaf weeds when applied post-emergence to field corn grown for grain, silage or seed, yellow popcorn, or sweet corn.

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** can be tank mixed with a variety of herbicides to improve burndown and residual control. **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may also be applied with pyrethroid or diamide type insecticides.

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** is absorbed through the roots and leaf tissue of plants, rapidly inhibiting the growth of susceptible weeds. Rainfall or sprinkler irrigation is needed to move **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** into the soil. Susceptible weeds will generally not emerge from a post-emerge application with activating rainfall or sprinkler irrigation (>0.5 inch). In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases and leaves become chlorotic 3 - 5 days after emergence. Death of leaf tissue and growing point will follow in some species, while others will remain green, stunted, and noncompetitive.

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** is best used as part of a sequential application herbicide program, following a pre-plant or pre-emergence application of other pre-applied corn herbicides. Refer to the label of the respective corn herbicide partner for specific use directions.

For post-emergence applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**, if activating rainfall or sprinkler irrigation (>0.5 inch) is not received within 5 - 7 days after application, follow with a cultivation or with a sequential application of ACCENT® Q herbicide or glyphosate product including ABUNDIT® Edge or Durango® DMA® as needed.

Degree of control and duration of effect depend on: rate used, weed spectrum, growing conditions at and following time of treatment, soil pH, soil texture, organic matter, moisture, and precipitation.

**Use Restrictions:**

- Make only 1 application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per year.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre in a single application.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre per year.
- **DO NOT** apply more than 3.85 ounces of mesotrione in a year. This includes post-emergence applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**, as well as mesotrione from application(s) of products including INSTIGATE®, Realm® Q, and Resicore® herbicides.
- **DO NOT** apply more than 1 ounce of nicosulfuron in a year. This includes post-emergence applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**, as well as nicosulfuron from application(s) of products including ACCENT® Q or STEADFAST® Q herbicides.
- **DO NOT** tank mix **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** with products containing bentazon or severe crop injury may occur.
- **DO NOT** tank mix **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** with foliar-applied organophosphate insecticides including chlorpyrifos, malathion, parathion, etc., as severe crop injury may occur. To avoid crop injury or antagonism, apply these products at least 7 days before or 3 days after the application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**.
- **DO NOT** apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** within 45 days of crop emergence where the organophosphate insecticide, terbufos was applied since crop injury may occur. Applications made to corn previously treated with chlorpyrifos or other similar organophosphate insecticides may result in unacceptable crop injury. Any crop injury or yield loss resulting from these applications are the responsibility of the grower.
- **DO NOT** make a late application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to field corn grown for grain or silage,

that is taller than 30 inches or that exhibits 8 or more collars (V8), whichever is more restrictive.

- **DO NOT** apply to yellow popcorn or seed corn that is taller than 20 inches or that exhibits more than 5 leaf-collars (V5), whichever is more restrictive.
- **DO NOT** apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to sweet corn taller than 18 inches or which exhibits 6 or more leaf-collars (V6).
- **DO NOT** apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to any white popcorn inbred, white popcorn hybrid, or ornamental (Indian) corn.
- **DO NOT** include a nitrogen-based adjuvant when making post-emergence applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to yellow popcorn or sweet corn.
- **DO NOT** apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to corn that exhibits herbicide injury from previous applications made to the current or preceding crop.
- **DO NOT** use liquid nitrogen fertilizer as the total carrier solution for post-emergence applications. Injury or loss of desirable trees or vegetation may result from failure to observe the following:
  - **DO NOT** apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** or drain or flush application equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
  - **DO NOT** use on lawns, walks, driveways, tennis courts. Prevent drift of spray to desirable plants.
  - **DO NOT** contaminate any body of water.
- **DO NOT** graze or feed forage, grain, or fodder (stove) from treated areas to livestock within 45 days after a **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** application.
- **DO NOT** harvest forage or stover within 45 days after a **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** application.
- **DO NOT** harvest grain within 70 days after a **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** application.
- **DO NOT** use aerial applications to apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**.
- **DO NOT** apply this product through any type of irrigation system.
- This product contains 0.036 lb. of the safener isoxadifen-ethyl per pound of product. Applying the maximum application rate of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** at 4 oz. (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) per acre will deliver 0.01 lb. of isoxadifen-ethyl per acre. When tank mixing for applications to field corn, **DO NOT** apply more than a total of 0.17 lb. of isoxadifen-ethyl per acre per crop growing season.
- **DO NOT** apply where/when conditions could favor runoff.

#### Use Precautions:

- **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may interact with certain insecticides previously applied to the crop. Crop response varies with field corn type, insecticide used, insecticide application methods, and soil type.
- **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be applied to corn previously treated with "Fortress" 5G, "SmartChoice" 5G, "Aztec" 4.67% G, "Aztec" 2.1G or "Force" 3G, "Force" CS or "Force" 6.5G insecticides, or other non-organophosphate soil insecticides regardless of soil type.
- Crop injury may occur following an application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** if there is a prolonged period of cold weather and/or in conjunction with wet soils.
- Prevent drift or spray onto desirable plants.
- Thoroughly clean application equipment immediately after use (see **SPRAYER PREPARATION/CLEANUP** section).

#### WEED RESISTANCE MANAGEMENT

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**, which contains the active ingredients nicosulfuron and mesotrione, is both a Group 2 and a Group 27 herbicide based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To delay herbicide resistance, consider the below best practices for resistance management:

- Plant into weed-free fields and keep fields as weed-free as possible.
- To the extent possible, use a diversified approach toward weed management. Whenever possible, incorporate multiple weed-control practices including mechanical cultivation, biological management practices, and crop rotation.
- Fields with difficult to control weeds must be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.
- To the extent possible, **DO NOT** allow weed escapes to produce seeds, roots, or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup of the weed seed-bank.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules. Thoroughly clean plant residues from equipment before leaving fields.
- Prevent an influx of weeds into the field by managing field borders.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program must consider all of the weeds present.

- Difficult to control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.
- Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed-control program. **DO NOT** use more than 2 applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes.
- Monitor treated weed populations for loss of field efficacy.
- Scout field(s) before and after application.
- Report lack of performance to registrant or their representative.

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.

Contact Sharda USA LLC (302 635 7632), extension agent, or certified crop advisors to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed.

### INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your State Cooperative Extension service, professional consultants, or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Aerial Applications:

- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use one-half swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Boom-less Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **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.

#### Boom-less 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.

### 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.

#### Controlling Droplet Size – Aircraft

- **Adjust Nozzles** - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles must be oriented parallel with the airflow in flight.

### BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom must remain level with the crop and have minimal bounce.

### RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for spray drift. When applying aurally to crops, **DO NOT** release spray at a height greater than 10 ft. above the crop canopy, unless a greater application height is necessary for pilot safety.

### 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. Avoid applications during temperature inversions.

### 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.

### DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read, and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Chemical Producers and Distributors Association (CPDA).

### APPLICATION INFORMATION

#### Rate Summary for Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG

Rate of Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG	Pounds of Active Ingredient Mesotrione	Pounds of Active Ingredient Nicosulfuron
3.4 oz.	0.078	0.031
4 oz.	0.092	0.036

#### Application Rate

Apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** at 3.4 - 4 oz. (0.078 - 0.092 lb. mesotrione a.i. and 0.031 - 0.036 lb. nicosulfuron a.i.) per acre as a post-emergence broadcast application. **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** is rainfast in 4 hours.

### FIELD CORN GROWN FOR GRAIN OR, SILAGE - POST-EMERGENCE

#### Timing to Crop

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be broadcast to corn up to 20" tall or that is exhibiting up to and including 6 leaf-collars (V6), whichever is more restrictive.



While **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** has a wide application window, research has shown best results are obtained when applications are made early post-emergence (row n' go) when corn and weeds are small. Target post-applications to corn generally less than 12" tall for best overall performance.

Applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** made after weed emergence will provide contact control of labeled weeds as well as residual control of later emerging weeds.

#### **Late Applications for Field Corn Grown for Grain or Silage**

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be applied to field corn for the control of escaped weeds, or as a directed post-emergence application on corn that is taller than 20" or which has more than 6 collars (V6), whichever occurs first.

For corn 20" - 30" tall, apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** with drop nozzles only and avoid spraying into the whorl of cornstalks.

Applications made to weeds larger than those listed on this label may vary from complete control to suppression. Level of control will depend on the weed species, stage of growth, and environmental conditions.

Due to the nature of late applications, choices must be made between the risks that arise from applications made beyond the proper time for **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** use, and the effects of season long weed competition and/or harvest complications.

Applications to weeds that exceed the labeled sizes can result in reduced control. This incomplete control may reduce corn yield.

Temporary crop response (transient bleaching) from post-emergence applications to field corn may occur under extreme weather conditions or when the crop is suffering from stress. Field corn quickly outgrows these effects and develops normally.

#### **Restrictions:**

- Make only 1 application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per year.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre in a single application.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre per year.
- **DO NOT** apply to corn that is taller than 30" or that exhibits 8 or more collars (V8), whichever is more restrictive.
- **DO NOT** feed or harvest forage or stover within 45 days after application.
- **DO NOT** harvest grain within 70 days after application.

#### **FIELD CORN GROWN FOR SEED, YELLOW POPCORN AND SWEET CORN - POST-EMERGENCE**

Not all seed corn inbreds, popcorn or sweet corn hybrids have been tested, nor does Rotam Agrochemical Co. Ltd. have access to all seed company data. Consequently, to the extent consistent with applicable to law, Rotam Agrochemical Co. Ltd. is not responsible for any crop injury arising from the use of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** on field corn growth for seed, popcorn, or sweet corn.

Contact your popcorn, seed corn, or sweet corn company, Fieldman, or University Specialist about hybrid/inbred specifications before making a post-emergence application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**.

#### **Timing to Crop**

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be broadcast or applied with drop nozzles to yellow popcorn or field corn grown for seed that is less than 20" tall (free-standing) or that exhibits up to and including 5 leaf-collars (V5), whichever is more restrictive.

Many seed companies have tested seed corn inbreds or yellow popcorn hybrids for sensitivity to **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** and have reported excellent safety.

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be applied to certain sweet corn hybrids grown for fresh markets or under contract for processing.

Applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be applied broadcast on sweet corn up to 12" tall or up to and including 5 leaf-collars (V5).

#### **Restrictions:**

- Make only 1 application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per year.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre in a single application.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre per year.
- **DO NOT** apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to sweet corn taller than 18 inches or which exhibits 6 or more leaf-collars (V6).

- **DO NOT** apply to corn that is taller than 20" or that exhibits more than 5 leaf-collars (V5), whichever is more restrictive.
- **DO NOT** apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to any white popcorn inbred, or white popcorn hybrid or ornamental (Indian) corn.
- **DO NOT** harvest grain within 70 days after application.

#### Late Application for Sweet Corn

For sweet corn 12" - 18" tall, apply only with drop nozzles.

Post-emergence applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may cause crop bleaching in some yellow popcorn and sweet corn hybrids. Crop bleaching is typically transitory and has no effect on final yield or quality.

#### Restrictions:

- Make only 1 application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per year.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre in a single application.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre per year.
- **DO NOT** apply to sweet corn taller than 18 inches or which exhibits 6 or more leaf-collars (V6) and make only 1 application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per year.
- **DO NOT** include nitrogen-based adjuvant, UAN, when making post-emergence applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to yellow popcorn or sweet corn.
- **DO NOT** harvest grain within 70 days after application.

#### Timing to Emerged Weeds

Apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** when grasses and broadleaf weeds are young and actively growing, but before they exceed sizes listed on this label. Applications made to weed sizes greater than those listed on this product label may result in incomplete control. Grass and broadleaf weed competition due to incomplete control may reduce corn yields.

On glyphosate-resistant corn, glyphosate products, including ABUNDIT® Edge and Durango® DMA® may be applied with **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** after weeds emerge but before they reach the maximum size listed on the glyphosate herbicide label.

On glufosinate-resistant corn, glufosinate may be applied with **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** after weeds emerge but before they reach the maximum size listed on the glufosinate herbicide label.

#### Sequential Application - Pre-Emergence

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be used as a sequential application in a planned post-emergence weed control program in corn following a pre-emergence herbicide.

Apply pre-emergence products including ALLUVEX®, BASIS® Blend, CINCH® ATZ, CINCH® ATZ Lite, FulTime® NXT, Keystone® NXT, Keystone® LA NXT, INSTIGATE®, DuPont™ LEADOFF®, PREQUEL®, Resicore®, RESOLVE® Q herbicides. Refer to the pre-emergence grass herbicide label for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to applying **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**. Follow the most restrictive product labeling.

#### Restriction:

- Make only 1 application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per year.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre in a single application.
- **DO NOT** apply more than 4 ounces (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** per acre per year.
- **DO NOT** apply **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to corn that exhibits herbicide injury from previous applications made to the current or preceding crop.
- **DO NOT** harvest grain within 70 days after application.

#### SPRAY ADJUVANTS

##### Field Corn Grown for Grain, Silage, or Seed

For control of emerged weeds, applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** must include a crop oil concentrate or a high surfactant oil concentrate (HSOC):

- The use of a nonionic surfactant (NIS) instead of a COC or HSOC is allowed, but the weed control achieved with COC or HSOC is consistently better than NIS.
- The use of methylated seed oil (MSO) adjuvants or MSO blend adjuvants may cause severe crop injury to occur. MSO adjuvants are not advised.

In addition to COC or HSOC, always add spray grade UAN (e.g., 28-0-0) to the spray solution or AMS, except if precluded elsewhere on this label.

When applied in tank mix combination with a glyphosate that contains a built-in adjuvant including ABUNDIT® Edge, ensure the total adjuvant load is equivalent to the specifications on this label. Select adjuvants authorized for use with both products.

#### Yellow Popcorn or Sweet Corn

For control of emerged weeds, applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** must include a crop oil concentrate (COC) or nonionic surfactant (NIS). A COC will increase the level of weed control achieved, especially under dry growing conditions, but the risk of crop injury is increased under lush growing conditions.

In addition to COC or NIS add AMS to the spray solution, except if precluded elsewhere on this label.

When applied in tank mix combination with a glyphosate product that contains a built-in adjuvant including ABUNDIT® Edge, ensure the total adjuvant load is equivalent to the specifications on this label. Select adjuvants authorized for use with both products.

**Petroleum Crop Oil Concentrate (COC):** Apply at 1% (1 gallon per 100 gallons spray solution), or 2% under arid conditions. Oil adjuvants must contain at least 80% high quality, petroleum (mineral) oil with at least 15% surfactant emulsifiers.

**High Surfactant Oil Concentrate (HSOC):** Apply at 0.5% (2 quarts per 100 gallons spray solution).

**Nonionic Surfactant (NIS):** Apply at 0.25% v/v (1 quart per 100 gallons spray solution). Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12. **DO NOT** use liquid nitrogen fertilizer as the total carrier solution for post-emergence applications.

**Ammonium Nitrogen Fertilizer:** Use 2 quarts per acre of a high-quality urea ammonium nitrate (UAN) including 28%N or 32%N, or 2 pounds per acre of a spray-grade ammonium sulfate (AMS).

**Special Adjuvant Types:** Combination adjuvant products may be used at doses that provide the required amounts of NIS, COC, and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.

#### Restrictions:

- **DO NOT** add UAN when making post-emergence applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** to yellow popcorn or sweet corn, as severe crop injury may occur. In yellow popcorn or sweet corn, weeds less than 5" needs to be targeted, and the addition of atrazine is advised wherever rotational or local atrazine restrictions will allow.
- **DO NOT** use with spray additives that alter the pH of the spray solution below 5.0 or above 9.0 as rapid product degradation can occur. Spray solutions of pH 6.0 - 8.0 allow for optimum stability of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**.

Consult local Rotam Agrochemical Co. Ltd. fact sheets, technical bulletins, or supplemental labels prior to using other adjuvant systems. Products must contain only EPA-exempt ingredients.

#### WEEDS CONTROLLED/SUPPRESSED

Refer to the **SPRAY ADJUVANTS** section for additional information on proper adjuvant selection.

**Table 1 - Weeds Controlled with Post Emergence Applications of Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**

Common Name	3.4 oz./A (0.078 lb. mesotrione a.i. and 0.031 lb. nicosulfuron a.i.) Weeds <4 Inches Tall	3.4 oz./A (0.078 lb. mesotrione a.i. and 0.031 lb. nicosulfuron a.i.) + atrazine Weeds <5 Inches Tall	4 oz./A (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) + atrazine Weeds <5 Inches Tall	4 oz./A (0.092 lb. mesotrione a.i. and 0.036 lb. nicosulfuron a.i.) + atrazine Weeds 5 - 10 Inches Tall
Amaranth, Palmer*	PC <sup>3</sup>	C <sup>1,3</sup>	C	C
Amaranth, Powell	C	C	C	C
Amaranth, Spiny	C	C	C	C
Atriplex	C	C	C	C
Barnyardgrass	C	C	C	PC
Buckwheat, Wild	PC	PC	PC	PC
Buffalobur	C	C	C	C
Burcucumber	C <sup>2</sup>	C	C	C
Carpetweed	C	C	C	C
Carrot, Wild	C	C	C	C
Cereals, Volunteer	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>
Chickweed, Common	C	C	C	C
Cocklebur, Common	C	C	C	C
Crabgrass, Large	C <sup>2</sup>	C <sup>2</sup>	C <sup>2</sup>	PC
Cupgrass, Woolly	C	C <sup>4</sup>	C <sup>4</sup>	PC
Dandelion	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>
Dock, Curly	PC	PC	PC	PC
Foxtails (Bristly, Giant, Green, Yellow)	C	C <sup>4</sup>	C <sup>4</sup>	PC

Galinsoga	C	C	C	C
Hemp	C	C	C	C
Horse Nettle	C	C	C	C
Itchgrass	C	C	C	PC
Jimsonweed	C	C	C	C
Johnsongrass, Seedling	C <sup>7</sup>	C <sup>7</sup>	C <sup>7</sup>	C <sup>7</sup>
Johnsongrass, Rhizome	C <sup>8</sup>	C <sup>8</sup>	C <sup>8</sup>	C <sup>8</sup>
Knotweed, Prostrate	PC	PC	PC	PC
Kochia*	C <sup>2</sup>	C <sup>2</sup>	C <sup>1</sup>	PC
Lambsquarters, Common	C	C	C	C
Mallow, Venice	C	C	C	PC
Marestail (Horseweed)*	PC	C	C	PC
Millet, Wild Proso	C	C <sup>4</sup>	C <sup>4</sup>	PC
Morningglory (Entireleaf, Ivyleaf, Pitted)	C <sup>2</sup>	C <sup>2</sup>	C	PC
Mustard, Wild	C	C	C	C
Nightshade (Black, Eastern Black, Hairy)	C	C	C	C
Nutsedge, Yellow	PC	PC	PC	PC
Oats, Wild	C	C <sup>4</sup>	C <sup>4</sup>	PC
Panicum (Texas, Browntop)	C <sup>3</sup>	C <sup>3</sup>	C <sup>3</sup>	PC
Panicum, Fall	C	C <sup>4</sup>	C <sup>4</sup>	PC
Pigweed (Redroot, Smooth, Tumble)	C	C	C	C
Pokeweed, Common	PC	PC	PC	PC
Potatoes, Volunteer	C	C	C	C
Pusley, Florida	C <sup>2</sup>	C <sup>2</sup>	C <sup>2</sup>	PC
Quackgrass	C <sup>6</sup>	C <sup>6</sup>	C <sup>6</sup>	C <sup>6</sup>
Ragweed (Common, Giant)	C <sup>3</sup>	C <sup>3</sup>	C	C
Ryegrass (Italian, Perennial)*	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>
Sandbur (Field, Longspine)	C <sup>3</sup>	C <sup>3</sup>	C <sup>3</sup>	PC
Sesbania, Hemp	C	C	C	C
Shattercane	C <sup>7</sup>	C <sup>7</sup>	C <sup>7</sup>	C <sup>7</sup>
Sida, Prickly (Teaweed)	C <sup>3</sup>	C <sup>3</sup>	C <sup>3</sup>	PC
Signalgrass, Broadleaf	C <sup>2</sup>	C <sup>2</sup>	C <sup>2</sup>	PC
Smartweed (Ladysthumb, Pale, Pennsylvania)	C	C	C	C
Sorghum Album	C <sup>7</sup>	C <sup>7</sup>	C <sup>7</sup>	C <sup>7</sup>
Sunflower, Common	C	C	C	C
Thistle, Canada	PC	PC	C	PC
Timothy	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>
Velvetleaf	C	C	C	C
Waterhemp*	PC <sup>3</sup>	C <sup>1,3</sup>	C	C
Wirestem Muhly	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>
Witchgrass	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>	C <sup>5</sup>

**C = Control    PC = Partial Control    NC = No Control**

\*ALS-resistant biotypes are known to exist.

<sup>1</sup>For control add atrazine at 1 pt. (0.5 lb.) per acre.

<sup>2</sup>Apply before weed exceeds 2 inches in height.

<sup>3</sup>Apply before weed exceeds 3 inches in height.

<sup>4</sup>Apply before weed exceeds 4 inches in height.

<sup>5</sup>Apply before weed exceeds 6 inches in height.

<sup>6</sup>Apply before weed exceeds 10 inches in height.

<sup>7</sup>Apply before weed exceeds 12 inches in height.

<sup>8</sup>Apply before weed exceeds 18 inches in height.

### 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.

### Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG Applied 3.4 - 4 Oz. (0.078 - 0.092 lb. mesotrione a.i. and 0.031 - 0.036 lb. nicosulfuron a.i.) per Acre with Glyphosate

Glyphosate may be tank mixed with post-emerge applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** when made to glyphosate-resistant corn hybrids. Refer to the Spray Adjuvants section for additional information on proper adjuvant selection. When used in a tank mixture with glyphosate herbicide, **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** will deliver improved burndown and/or residual activity on the following weeds:

Alfalfa, Volunteer	Millet, Wild Proso	Ryegrass, Italian
Buckwheat, Wild	Morningglory, Ivyleaf	Sandbur (Field, Longspine)
Chamomile, False	Mustard (Birdsrape, Black, Wild)	Shepherd's Purse
Crabgrass	Nutsedge, Yellow	Signalgrass, Broadleaf

Filaree, Redstem	Oat, Wild	Stinkgrass
Henbit	Purslane, Common	Thistle, Canada
Johnsongrass, Seedling	Quackgrass	Waterhemp (Smooth, Tall)

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG Applied 3.4 - 4 Oz. (0.078 - 0.092 lb. mesotrione a.i. and 0.031 - 0.036 lb. nicosulfuron a.i.) per Acre with Glufosinate**

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be tank mixed with glufosinate herbicide if applications are made to glufosinate-resistant corn hybrids. Consult with your seed supplier to confirm the corn hybrid is glufosinate-resistant before applying any herbicide containing glufosinate.

**Tank Mixtures - Additional Control of Broadleaf and Grass Weeds**

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be tank mixed with other post-emergence labeled grass and broadleaf herbicides including atrazine, dicamba, Cinch® ATZ, Cinch® ATZ Lite, FulTime® NXT, Keystone® NXT, Keystone® LA NXT, or Resicore® to provide added residual or burndown activity on emerged weeds.

Consult tank mix partner labeling for rate and soil-type restrictions. Read and follow all manufacturers' label instructions for the companion herbicide(s). **DO NOT** use a tank mix partner product if its label conflicts with this **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** label. Ensure the tank mix product is labeled for the same timing, method of application, adjuvants, and use restrictions as **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**, as well as other products used in the tank mixture.

As EC formulations, acetochlor or metolachlor formulations including CINCH® or Surpass® NXT can act like an adjuvant in certain combinations and thus increase the risk of crop injury. If either of these tank mixtures are used, leave the crop oil concentrate (COC) out of the adjuvant mix.

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be tank mixed with atrazine formulations including, CINCH® ATZ, CINCH® ATZ Lite, FulTime® NXT, Keystone® NXT, Keystone® LA NXT or products that contain the same active ingredients, but special attention must be paid to adjuvant selection and/or application method. If any of these tank mixtures are used leave the urea ammonium nitrate (UAN) out of the mix. There is still a risk of temporary crop injury in the form of leaf burn with these mixtures. To further reduce the risk of crop injury, also leave out the crop oil concentrate (COC) and replace it with a nonionic surfactant (NIS).

The control of emerged weeds may be reduced due to less than optimum adjuvant effect or weed coverage and there is still a risk of temporary crop injury in the form of leaf burn with these mixtures.

The crop safety of all possible tank mixture combinations with **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** which may include physically compatible pesticides, fertilizers, adjuvants and/or additives has not been tested.

To the extent consistent with applicable law, Rotam Agrochemical Co. Ltd. will not be responsible for any crop injury arising from the use of a tank mixture that is not specifically described on the **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** product labeling or in other Rotam Agrochemical Co. Ltd. product use instruction.

Always follow the tank mix instructions of the product label that is most restrictive.

**Tank Mix Compatibility Testing**

Perform a jar test prior to tank mixing to ensure compatibility of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** and other pesticides. Use a clear quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately a half hour. If the mixture balls-ups, forms flakes, sludge, gel, oily film or layers, or other precipitates, it is not a compatible tank mix combination.

**Mixing Instructions**

**Water Carrier Instructions**

1. Fill the tank 1/4 - 1/3 full of water.
2. While agitating, add the required amount of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**.
3. Continue agitation until the **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** is fully dispersed.
4. Once dispersed, maintain agitation, and continue filling tank with water.
5. As tanks fills, add desired tank mix partners.
6. If not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply mixture within 48 hours of mixing for best results.

If the selected companion herbicide has a ground or surface water advisory, consider this advisory when using the companion herbicide.

**Application and Spray Volumes**

**Ground Application**

Use a minimum of 15 gals. of water per acres (GPA) to ensure thorough coverage of the weeds and the best performance. Use a minimum of 10 GPA for light, scattered stands of weeds. Avoid spray overlaps as excessive rates may result in adverse crop response. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser. Maintain adequate agitation at all times, including momentary stops.

**Aerial Application**

**Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** may be applied aerially for post-emergence weed control in the following states: Alabama, Arkansas, Colorado, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, and Texas.

For aerial application only use nozzles producing coarse-ultra coarse droplets. Applications must be made in a minimum of 2 gals. of water per acre.

**ROTATIONAL CROP GUIDELINES**

Rotational crops vary in their crop response to low concentrations of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** remaining in the soil. The amount of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** that may be present in the soil depends on soil moisture, soil temperature, application rate, elapsed time since application and other environmental factors. When **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** is used in combination with other products, always follow the most restrictive rotational crop requirements.

The following rotational intervals must be observed when using **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**:

<b>3.4 - 4 Oz. (0.078 - 0.092 lb. mesotrione a.i. and 0.031 - 0.036 lb. nicosulfuron a.i.) Use Rate per Acre per Year</b>	
<b>Rotational Crop</b>	<b>Interval (Months)</b>
Corn*	Anytime
Cereals, Winter	4
Cereals, Spring	8
Alfalfa <sup>1,2</sup> , Canola <sup>2</sup> , Cotton, Flax <sup>1</sup> , Peanuts <sup>4</sup> , Peas and Snap Beans <sup>5</sup> , Potatoes <sup>2</sup> , Rice <sup>4</sup> , Sorghum <sup>3</sup> , Soybeans, Sunflower, Sweet Potatoes/Yams <sup>4</sup> , and Tobacco <sup>4</sup>	10
Crops not listed	18

\*Corn is defined to include field corn grown for grain, seed or silage, popcorn, and sweet corn. Sweet corn varieties "Merit", "Carnival", and "Sweet Success" the minimum interval is 15 months.

<sup>1</sup>On sprinkler irrigated fields in Idaho, Utah, and Northern Nevada it is best to use deep fall tillage including plowing prior to planting alfalfa. Product degradation may be less on furrow irrigated soils and may result in some crop injury.

<sup>2</sup>Extend rotation intervals to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the growing season.

<sup>3</sup>With composite soil pH >7.5 extend the rotation interval to 18 months except in Texas and Oklahoma east of HWY 281, where the rotational interval is 10 months regardless of pH.

<sup>4</sup>On soils with pH 6.5 or less.

<sup>5</sup>Plant these rotational crops only if the following criteria below have been met. If all criteria are not met, plant peas and snap beans a minimum of 18 months following **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** application.

- A minimum of 20" of rainfall plus irrigation has been received between application and planting of the rotational crop.
- Soil pH is 6.0 or greater.
- Application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** applied no later than June 30 the year preceding rotational crop planting.
- No other HPPD herbicides were applied the year prior to planting peas and snap beans. **DO NOT** plant peas or snap beans on sand, sandy loam or loamy sands in Minnesota or Wisconsin.

Planting unspecified rotational crops, or those rotational crops that are specified at shorter than listed intervals may result in injury to the rotational crop.

**Cover Crops**

Use of cover crops as a means of soil improvement, erosion control, weed and/or insect suppression, etc., following harvest of corn in the fall is increasing. Planting of cover crops in fields treated with **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** is allowed as long as these cover crops are not grazed by livestock nor harvested for food. Cover crops are to be tilled under or chemically controlled with burndown herbicides in the spring. Many cover crops can be planted within 90 - 120 days after application of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**. However, all potential cover crops have not been evaluated for sensitivity to **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** and significant injury may occur. Prior to seeding a cover crop complete a successful field/ home bioassay to provide an indication of the level of sensitivity to the prior **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** application. Refer to the below **Field/Small Scale Bioassay** section. If used in tank mixtures with other herbicides, always follow the most restrictive label.

**Field/Small Scale Bioassay**

A field/ small scale bioassay must be completed before rotating to a cover crop other than those specified in the above **ROTATIONAL CROP GUIDELINES** section. To conduct an effective field bioassay, grow strips of the crop(s) you intend to grow the following season in a field previously treated with **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**. The test strip must be placed in a controlled area and must include low areas and knolls and include variations in soil including type and pH. Crop response to the bioassay will determine if the crop(s) grown in the test strips can be grown safely in the areas previously treated with **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**.

For an effective small-scale bioassay, collect uniform samples of all soil types from the **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** treated field (see example above for types of soil in the sample) and place the soil into a sturdy container. Plant the desired cover crop into the soil, apply water and place the container in a warm, sunny area to allow germination and growth of the crop. Monitor growth of the cover crop over a 3 - 4 week period. If the cover crop emerges and grows normally, the risk to establish

and grow the cover crop in the field treated with **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG** must be acceptable.

### SPRAYER PREPARATION/CLEANUP

It is important that spray equipment is clean and free of previous pesticide deposits before using **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**, and then properly cleaned out following application. Clean all application equipment before applying **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**. Follow the cleanup procedures specified on the label of the product previously sprayed. If no cleanup procedure is provided, use the procedure that follows. Immediately following applications of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**, thoroughly clean all mix and spray equipment to avoid subsequent crop injury.

When cleaning spray equipment before applying **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**, read and follow label directions for proper rinsate disposal of the product previously sprayed.

When spraying or mixing equipment will be used over an extended period to apply multiple loads of **Rotam Mesotrione 36.8% + Nicosulfuron 14.4% WG**, partially fill the tank with fresh water at the end of each day of spraying, flush the boom and hoses, and allow to sit overnight.

#### Cleanup Procedure

1. Drain the tank and hose down the interior surfaces with clean water. Flush the tank, hoses, and boom with clean water for a minimum of 5 min.
2. Partially fill the tank with clean water and add 1 gal. of household ammonia\* (containing 3% active) for every 100 gals. of water. Finish filling tank with water, then flush the cleaning solution through the hoses, boom, and nozzles. Add more water to completely fill the tank and allow agitating/re-circulating for at least 15 minutes. Again, flush the hoses, boom, and nozzles with the cleaning solution, then drain the tank.
3. Repeat Step 2.
4. Remove the nozzles, screens, and the end caps of sprayer booms and clean separately in a bucket containing the cleaning agent and water.
5. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing the water through the hoses and boom.

\*Equivalent amounts of an alternate-strength ammonia solution or a cleaner which dissolves and removes sulfonylurea herbicide residues can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions.

### IDENTIFICATION INFORMATION FOR OTHER PRODUCTS INCLUDED IN THIS LABEL

U.S. EPA Registered Products Mentioned in This Label for Use In Tank Mixtures or Other Reasons		
Product Brand Name	Active Ingredient(S)	Epa Registration Number
Cinch® ATZ Lite Herbicide	atrazine + S-metolachlor + atrazine related compounds	352-623
Cinch® ATZ Herbicide	atrazine + S-metolachlor + atrazine related compounds	352-624
Cinch® Herbicide	S-metolachlor	352-625
Resolve® Q Herbicide	rimsulfuron + thifensulfuron-methyl	352-777
Prequel® Herbicide	isoxaflutole + rimsulfuron	352-779
Leadoff® Herbicide	rimsulfuron + thifensulfuron-methyl	352-853
Basis® Blend Herbicide	rimsulfuron + thifensulfuron-methyl	352-854
Instigate® Herbicide	mesotrione + rimsulfuron	352-873
FulTime® NXT	acetochlor + atrazine	62719-668
Keystone® NXT Herbicide	acetochlor + atrazine	62719-671
Keystone® LA NXT Herbicide	acetochlor	62719-670
Surpass® NXT Herbicide	acetochlor	62719-672
Abundit® Edge Herbicide	glyphosate	352-922
Durango® DMA® Herbicide	glyphosate	62719-559
Resicore® Herbicide	acetochlor + mesotrione + clopyralid	62719-693
Force® 3G Insecticide	tefluthrin	100-1075
Force® CS Insecticide	tefluthrin	100-1253
Warrior® II Insecticide	lambda-cyhalothrin	100-1295
Force® 6.5G Insecticide	tefluthrin	100-1625
Counter® 20G Insecticide	terbufos	5481-562
Aztec® 4.67% Granular Insecticide	tebupirimphos + cyfluthrin	5481-9028
Aztec® 2.1G Insecticide	tebupirimphos + cyfluthrin	5481-9030
Fortress® 5G Insecticide	Chlorethoxyfos	5481-493
Smartchoice™ 5G Insecticide	bifenthrin + chlorethoxyfos	5481-561
Asana® XL Insecticide	esfenvalerate	59639-209

### STORAGE AND DISPOSAL

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

#### Pesticide Storage

Store product in original container only. **DO NOT** contaminate water, other pesticides, fertilizer, food, or feed in storage.

#### Pesticide Disposal

**DO NOT** contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

#### Container Handling

**[[Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):]** Nonrefillable container. **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 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. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by State and local ordinances. 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.]

**[[Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds):]** Nonrefillable container. **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. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by State and local ordinances. 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.]

**[[Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled, or Turned Upside Down):]** Nonrefillable 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. 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.]

**[[Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC), or Fiber Drums with Liners:]** Nonrefillable container. **DO NOT** reuse or refill this container. Completely empty paper or plastic bag, fiber sack, or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack, or fiber drum and liner in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.]

**[[Refillable Fiber Drums With Liners:]** Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with this pesticide only. **DO NOT** reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Disposing of Fiber Drum and/or Liner: **DO NOT** reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by State and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by State and local ordinances.]

**[[Outer Plastic or Foil Pouches of Water-Soluble Packets (WSP):]** Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken. If the outer pouch contacts the formulated product in any way, the pouch must be triple rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer pouch as described previously.]

#### 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 the product,



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