

U.S. ENVIRONMENTAL PROTECTION AGENCY

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

EPA Reg. Number:

Date of Issuance:

5/21/21

NOTICE OF PESTICIDE:

X Registration
Reregistration
(under FIFRA, as amended)

Term of Issuance:
Unconditional

Name of Pesticide Product:
Mesotrione 40% SC

Name and Address of Registrant (include ZIP Code):

Red Eagle International LLC 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.

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/registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
- 2. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, "EPA Reg. No. 85678-77."
- 3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Signature of Approving Official:	Date:
for Product Manager 24 (Vacant) Fungicide Herbicide Branch Registration Division (7505P)	5/21/21

Page 2 of 2 EPA Reg. No. 85678-77 Decision No. 566373

EPA Form 8570-6

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If 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. Please also note that the record for this product currently contains the following CSFs:

• Basic CSF dated 11/19/2020

If you have any questions, please contact BeWanda Alexander by phone at (703)347-0313, or via email at alexander.bewanda@epa.gov

Enclosure

[MASTER LABEL]

MESOTRIONE GROUP 27 HERBICIDE



Mesotrione 40% SC ABN: MESOTRIONE 40 SC

[Master Label consists of:

- Sub-Label A: For Control of Annual Broadleaf Weeds in Corn (Field, Seed, Sweet, and Yellow Popcorn), Soybean, and Other Listed Crops.
- Sub-Label B: Provides Selective and Residual Control of Weeds in Ornamental Turfgrasses.]

Active Ingredient:	% By Wt.
Mesotrione: (CAS No. 104206-82-8)	40.0%
Other Ingredients:	<u>60.0%</u>
Total:	100.0%

Contains 4 pounds of active ingredient per gallon.

CAUTION

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

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

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

Leak, Fire, or Accident), call CHEMTREC: 1-800-424-9300.

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

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,

Manufactured For:

RedEagle International LLC 5143 S. Lakeland Dr., Suite 4 Lakeland, FL 33813

ACCEPTED
05/21/2021
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 85678-77

EPA Reg.	No.: 85678-XX
EPA Est. No.:	

Net Contents:_____ [Gallons/Liters]

[Sub-Label-A]

MESOTRIONE GROUP 27 HERBICIDE



Mesotrione 40% SC ABN: MESOTRIONE 40 SC

For Control of Annual Broadleaf Weeds in Corn (Field, Seed, Sweet, and Yellow Popcorn), Soybean, and Other Listed Crops.

[Not registered for sale or use in Arizona]

 Active Ingredient:
 % By Wt.

 Mesotrione: (CAS No. 104206-82-8)
 40.0%

 Other Ingredients:
 60.0%

 Total:
 100.0%

Contains 4 pounds of active ingredient per gallon.

CAUTION

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

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

Manufactured For:

RedEagle International LLC 5143 S. Lakeland Dr., Suite 4 Lakeland, FL 33813

EPA	Reg.	No.:	8567	8-XX
FPΔ Fst.	No.			

Net Contents:_____ [Gallons/Liters]

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation.

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

PERSONAL PROTECTION EQUIPMENT (PPE)

Applicators and Other Handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Chemical-resistant gloves made of Barrier Laminate, Butyl Rubber \geq 14 mils, Nitrile Rubber \geq 14 mils, Neoprene Rubber \geq 14 mils, Polyvinyl Chloride (PVC) \geq 14 mils, and Viton \geq 14 mils.

User Safety Requirements:

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

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:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove and wash contaminated clothing before reuse.
- 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.

SURFACE WATER ADVISORY

This product may contaminate water through drift or spray in wind. This product has a high potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. 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.

PHYSICAL AND CHEMICAL HAZARDS

DO NOT use or store near heat or open flame. **DO NOT** use with or store near any oxidizing or reducing agents. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and 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 over long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Polyvinyl Chloride (PVC) ≥ 14 mils, and Viton ≥ 14 mils.

PRODUCT INFORMATION

Mesotrione 40% SC is a systemic pre-emergence and post-emergence herbicide for selective contact and residual control of broadleaf weeds in the crops listed in the Crop Use Directions section of this label. In pre-emergence applications, weeds take up the product through the soil during weed emergence. Dry weather conditions reduce pre-emergent effectiveness of Mesotrione 40% SC. At least 0.25 inch of rainfall must occur within 7 - 10 days of application; rotary hoeing activates Mesotrione 40% SC. In post-emergence applications, vulnerable weeds take up the product through treated foliage and stop growing soon after application. It can take up to 2 weeks for weeds to die. Mesotrione 40% SC is absorbed by soil and/or through foliage of emerged weeds.

Mesotrione 40% SC does not control most species of grass weeds. Mesotrione 40% SC can be tank-mixed with other herbicides registered to control grass weeds (refer to the Tank Mixture sections in this label for additional information). Mesotrione 40% SC can be used in combination with a burndown herbicide prior to planting to provide weed control in field corn, seed corn, yellow popcorn, and sweet corn. 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 statement for each product in the tank mixture.

Use Precautions:

- Severe corn injury and/or yield loss can occur:
- From post-emergent application of Mesotrione 40% SC to corn treated with Terbufos or Chlorpyrifos.
- If foliar post-emergent applications of **Mesotrione 40% SC** are made to corn in a tank mix with any organophosate or carbamate insecticide.
- If an organophosphate or carbamate insecticide is applied foliar post-emergence within 7 days before or 7 days after **Mesotrione 40% SC** application.
- When weeds are stressed due to drought, heat, lack of fertility, flooding, or prolonged cool temperatures control can
 be reduced or delayed since the weeds are not actively growing. Weed escapes or regrowth may occur when
 application is made under prolonged stress conditions. Optimum weed control will be obtained if an application of
 Mesotrione 40% SC is made following label directions when weeds are actively growing.
- Mesotrione 40% SC may be applied with pyrethroid type insecticides (e.g., Lambda cyhalothrin).

Use Restrictions:

- **DO NOT** apply this product to white popcorn or ornamental (Indian) corn.
- **DO NOT** cultivate corn within 7 days before or after application of this product as weed control may be reduced.
- **DO NOT** apply this product through any type of irrigation system unless specified under the specific crop section of the label.
- **DO NOT** apply this product with suspension fertilizers as the carrier.
- **DO NOT** apply this product post-emergence in a tank mix with emulsifiable concentrate grass herbicides, unless specifically directed under 1 of the tank mix sections of this label, or crop injury can occur.
- **DO NOT** make aerial applications of this product unless specified in the specific crop directions of this label.
- [Not registered for sale or use in Arizona]

RESISTANCE MANAGEMENT (GROUP 27 HERBICIDE)

For resistance management, **Mesotrione 40% SC** is a Group 27 herbicide. Any weed population may contain or develop plants naturally resistant to **Mesotrione 40% SC** and other Group 27 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

The efficacy of **Mesotrione 40% SC** is not affected by the presence of biotype weed species that are resistant to Protoporphyrinogen Oxidase (PPO), 4-Hydroxyphenylpyruvate Dioxygenase (HPPD) or Acetolactate Synthase (ALS)

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inhibiting herbicides or to Triazine or Glyphosate herbicides.

To reduce the risk of weeds developing resistance to mesotrione in corn, always use full specified label rates. When applying **Mesotrione 40% SC** post-emergence after a mesotrione-containing pre-emergence herbicide, add atrazine as a tank mix partner. **DO NOT** apply more than 0.24 lb. of mesotrione active ingredient per acre of corn per year (equivalent to 7.7 fl. oz. (0.24 lb. a.i.) per acre per year of **Mesotrione 40% SC**). If additional herbicide is needed, use an herbicide product other than a HPPD inhibitor (Group 27 Herbicide). Use specified label rates of **Mesotrione 40% SC** to prevent selection for, or population shifts toward, marginally resistant weed species and/or species biotypes.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

To minimize the occurrence of resistant biotypes, observe the following weed management practices:

- Scout application site before and after herbicide applications.
- Start with a clean application site, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g., a selective and/or a residual herbicide) and cultural practices (e.g., tillage or crop rotation) where appropriate.
- Utilize the specified label rate for the most difficult to control weed in your field. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture directions that encourage application rates of this product below the label directions.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Report any incidence of repeated non-performance of this product on a particular weed to local extension specialists, certified crop advisors, or your RedEagle International LLC representative.
- Contact your local sales representative, crop advisor, or extension agent 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 actions for each target weed.

INTEGRATED WEED PEST MANAGEMENT

Integrate **Mesotrione 40% SC** 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.

MANDATORY SPRAY DRIFT MANAGEMENT

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 all applications, applicators are required to use a Coarse 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 ½ 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.

Ground Applications:

- Apply with the nozzle height specified by the manufacturer, but no more than 3 ft. above the ground or crop canopy.
- For all applications, applicators are required to use a Coarse 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.

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 specified 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' directions for setting up nozzles. To reduce fine droplets, nozzles should 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 should remain level with the crop and have minimal bounce.

Release Height - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially 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 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.

Windblown Soil Particles

Mesotrione 40% SC 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 **Mesotrione 40% SC** if prevailing local conditions may be expected to result in off-site movement.

AERIAL APPLICATION INSTRUCTIONS FOR CORN AND SUGARCANE

Restriction: Mesotrione 40% SC can be applied aerially only to corn and sugarcane.

Mesotrione 40% SC may be applied aerially for pre-emergence or post-emergence weed control in corn only in the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois,

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Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Nebraska, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Mesotrione 40% SC may be applied aerially for pre-emergence or post-emergence weed control in sugarcane only in the following states: Florida, Louisiana, and Texas.

Applications must be made in a minimum of 2 gallons of water per acre.

PRE-EMERGENCE GROUND APPLICATION INSTRUCTIONS

Apply Mesotrione 40% SC pre-emergence with a carrier volume of 10 - 60 gals./A.

Spray nozzles must be uniformly spaced, the same size and type, and must provide accurate and uniform application. Apply in a spray volume of 10 - 60 gals./A using water or liquid fertilizer (excluding suspension fertilizers) as the carrier. Use a pump that can maintain a pressure of at least 35 - 40 PSI at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles.

Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, resuspend the spray solution by running on full agitation prior to spraying.

POST-EMERGENCE GROUND APPLICATION INSTRUCTIONS

Spray nozzles must be uniformly spaced, the same size and type, and must provide accurate and uniform application. Use spray nozzles that provide medium to coarse droplet size to provide good coverage and avoid drift. Good weed coverage is essential for optimum weed control. Boom height for broadcast over-the-top applications must be based on the height of the crop – at least 15" above the crop canopy.

Apply in a spray volume of 10 - 30 gals./A using water as a carrier. Use a pump that can maintain a pressure of at least 35-40 PSI at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles. When weed foliage is dense, use a minimum of 20 gals.

Flat fan nozzles of 80° or 110° are advised for optimum post-emergence coverage. **DO NOT** use floodjet nozzles or controlled droplet application equipment for post-emergence applications.

Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Ensure that all inline strainer and nozzle screens in the sprayer are 50-mesh or coarser.

Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, resuspend the spray solution by running on full agitation prior to spraying.

USE DIRECTIONS WITH SPRAY ADDITIVES

Post-Emergence Adjuvants

When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is advised.

The following adjuvant directions are intended primarily for **Mesotrione 40% SC** use in corn. Refer to the use directions section of each crop section for specific adjuvant directions.

Post-Emergence Applications to Field Corn and Seed Corn

For post-emergence applications made after the crop has emerged, add crop oil concentrate (COC) to the spray solution at the rate of 1 gal./100 gals. of water (1% v/v). The use of a nonionic surfactant (NIS) at 1 qt./100 gals. of water (0.25% v/v) instead of COC is allowed, but the weed control achieved with COC is consistently better than NIS. The use of methylated seed oil (MSO) adjuvants or MSO blend adjuvants for post-emergence applications of **Mesotrione 40% SC** may cause severe crop injury to occur. DO NOT use MSO adjuvants for post-emergence use unless directed for a specific tank mix under the **Mesotrione 40% SC Tank Mixtures for Corn** section of this label. In addition to COC, always add spray grade UAN (e.g., 28-0-0) to the spray solution at a rate of 2.5% (v/v) or AMS at 8.5 lbs./100 gals. of spray solution, except if precluded elsewhere on this label or by a supplemental **Mesotrione 40% SC** label.

Post-Emergence Applications to Sweet Corn and Yellow Popcorn

DO NOT add UAN or AMS when making post-emergence applications of Mesotrione 40% SC to yellow popcorn or sweet

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corn, or severe crop injury may occur.

For post-emergence applications to yellow popcorn and sweet corn, the use of a nonionic surfactant (NIS) instead of a crop oil concentrate (COC) is advised, so as to minimize the risk of crop injury. A COC may be used, and will increase the level of weed control achieved, especially under dry growing conditions, but the risk of crop injury is increased significantly under lush growing conditions. For optimum control, the addition of atrazine is advised wherever rotational or local atrazine restrictions allow.

Pre-Emergence Adjuvants

For **Mesotrione 40% SC** pre-plant or pre-emergence applications, and where weeds are present, the use of any adjuvant for agricultural use is permitted. In these situations, MSO type adjuvants are typically better than COC type adjuvants, which are typically better than NIS type adjuvants for enhancing weed control. UAN or AMS can be added and typically provides better weed control than not adding one of these. 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.

SPRAY EQUIPMENT CLEANING

It is important to follow the procedures below for cleaning equipment before spraying a crop other than corn. Mix only as much spray solution as is needed.

- 1. Flush tank, hoses, boom, and nozzles with clean water.
- 2. Prepare cleaning solution of 1 gal. of household ammonia per 25 gals. of water. Commercial spray tank cleaners can be used in lieu of ammonia/water solution.
- 3. Using a pressure washer, clean the inside of the spray tank with the cleaning solution. Wash ALL parts of the tank, including the inside top surface. If a pressure washer is not available, fill the sprayer with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the spray and recirculate the cleaning solution for a minimum of 15 minutes. All visible deposits of spray solution must be removed from the spray tank before making any other applications.
- 4. Flush hoses, spray lines, and nozzles with cleaning solution for a minimum of 1 minute.
- 5. Dispose of rinsate from steps 1 3 in an appropriate manner.
- 6. Repeat steps 2 5.
- 7. Remove nozzles, screens, and strainers and clean separately in the ammonia solution after completing the
- 8. previous steps.
- 9. Rinse the complete spray system with clean water.

MIXING INSTRUCTIONS

See the specific crop listing within the **CROP USE DIRECTIONS** section of the label for specific tank mix instructions.

Always refer to labels of other pesticide products for mixing directions and precautions which may differ from those outlined here. Use in accordance with the most restrictive label limitations and precautions.

Mixing Restrictions:

- DO NOT exceed any dosage rates specified on labels.
- DO NOT mix this product with any product containing a label prohibition against such mixing.
- DO NOT tank mix Mesotrione 40% SC with any other insecticide, fungicide, fertilizer, or adjuvant not specified on
 this label without first testing compatibility, as poor mixing can occur. Test compatibility on a small scale (including a
 jar test) before actual tank mixing.

MIXING PROCEDURE

- 1. Use sprayers in good operating condition with good agitation. Ensure that the sprayer is cleaned according to the label instructions of the product label used prior to **Mesotrione 40% SC**. For post-emergence applications, use clean water only for the spray solution. Ensure that all in-line strainers and nozzle screens in the sprayer are 50-mesh or coarser. **DO NOT** use screens finer than 50-mesh.
- 2. Use liquid fertilizer (NOT suspension fertilizer) as the carrier for pre-emergence applications.
- 3. Start filling spray tank or pre-mix tank with clean water and begin agitation. Maintain constant agitation.
- 4. When sprayer or pre-mix is half full of water, add AMS, maintaining agitation until dispersed.
- 5. Add Mesotrione 40% SC slowly and agitate until completely dissolved. Wait at least 1 minute after the last of the Mesotrione 40% SC has been added to allow for complete dispersion. If using cold water, a longer agitation period may be required to ensure adequate dispersing.
- 6. If tank mixing, add the tank mix product.

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7. Add the adjuvant and UAN, if needed, and continue to fill tank to desired level with water.

WEEDS CONTROLLED

Mesotrione 40% SC applied as directed in this label will control or partially control the weeds listed in Tables 1 and 2.

Partial control means either erratic control (good to poor control) or control that is below what is regarded as acceptable control for commercial weed control.

For best post-emergence results, apply **Mesotrione 40% SC** to actively growing weeds.

Dry weather following pre-emergence applications may reduce efficacy of residual weed control. If irrigation is available, apply 0.5" - 1" inch water after pre-emergence application. If irrigation is not available, make a uniform shallow cultivation as soon as weeds emerge.

Mesotrione 40% SC applied alone or in a tank-mix with atrazine will not provide consistent or adequate control of weeds that are resistant to post-emergence HPPD inhibiting herbicides.

Refer to the crop sections of this label for specific use directions and application rates.

Table 1. Weeds Controlled with Post-Emergence Applications of Mesotrione 40% SC

Table 1. Weeds Controlled with Post-Emergence Applications of Mesotrione 40% SC Mesotrione 40% SC Mesotrione 40% SC			
		3 Fl. Oz. /A (0.094 lb. a.i./A)	2.5 - 3 Fl. Oz./A (0.078 -
Common Name	Scientific Name	Applied Alone	0.094 lb. a.i./A) + Atrazine
			eeds <5" Tall ²
Amaranth, Palmer	Amaranthus palmeri	PC*	C*
Amaranth, Powell	Amaranthus powellii	С	С
Amaranth, Spiny	Amaranthus spinosus	С	С
Atriplex	Chenopodium orach	С	С
Buckwheat, Wild	Polygonum convolvulus	PC	PC
Buffalobur	Solanum rostratum	С	С
Burcucumber	Sicyos angulatus	PC	C*
Carpetweed	Mollugo verticillata	С	С
Carrot, Wild	Daucus carota	PC	С
Chickweed, Common	Stellaria media	C	C
Cocklebur, Common	Xanthum strumarium	С	С
Crabgrass, Large	Digitaria sanguinalis	C*	C*
Dandelion	Taraxacum officinale	NC	PC
Dock, Curly	Rumex crispus	PC	PC
Galinsoga	Galinsoga parviflora	С	С
Hemp	Cannabis sativa	C	С
Horsenettle	Solanum carolinense	PC	C
Jimsonweed	Datura stramonium	С	С
Horseweed (Marestail)	Conyza canadensis	PC	С
Knotweed, Prostrate	Polygonum aviculare	PC	PC
Kochia	Kochia scoparia	PC*	C*
Lambsquarters, Common	Chenopodium album	С	С
Mallow, Venice	Hibiscus trionum	NC	С
Morningglory, Entireleaf	Ipomoea hederacea	PC	С
Morningglory, Ivyleaf	Ipomoea hederacea	PC	С
Morningglory, Pitted	Ipomoea lacunosa	PC	С
Mustard, Wild	Brassica kaber	С	С
Nightshade, Black	Solanum nigrum	С	С
Nightshade, Eastern Black	Solanum ptychanthum	С	С
Nightshade, Hairy	Solanum sarrachoides	С	С
Nutsedge, Yellow	Cyperus esculentus	PC	PC
Pigweed, Redroot	Amaranthus retroflexus	С	С
Pigweed, Smooth	Amaranthus hybridus	С	С
Pigweed, Tumble	Amaranthus albus	С	С
Pokeweed, Common	Phytolacca americana	PC	PC
Potatoes, Volunteer	Solanum spp.	С	С

Common Name	Scientific Name	Mesotrione 40% SC 3 Fl. Oz. /A (0.094 lb. a.i./A) Applied Alone	Mesotrione 40% SC ¹ 2.5 - 3 Fl. Oz./A (0.078 - 0.094 lb. a.i./A) + Atrazine	
		Apply to Weeds <5" Tall ²		
Pusley, Florida	Richardia scabra	C*	C*	
Ragweed, Common	Ambrosia artemisiifolia	PC	С	
Ragweed, Giant	Ambrosia trifida	C*	С	
Sesbania, Hemp	Sesbania exaltata	С	С	
Sida, Prickly (Teaweed)	Sida spinosa	NC	C*	
Signalgrass, Broadleaf	Urochloa platyphylla	C*	C*	
Smartweed, Ladysthumb	Polygonum persicaria	C*	С	
Smartweed, Pale	Polygonum lapathifolium	C*	С	
Smartweed, Pennsylvania	Polygonum pensylvanicum	C*	С	
Sunflower, Common	Helianthus annuus	С	С	
Thistle, Canada	Circium arvense	NC	PC	
Velvetleaf	Abutilon theophrasti	С	С	
Waterhemp, Common	Amaranthus rudis	C*	С	
Waterhemp, Tall	Amaranthus tuberculatus	C*	С	

¹Mesotrione 40% SC tank mixture with atrazine is approved only for use on corn and sugarcane.

C = Control NC = Not Controlled

PC = Partial Control

Table 2. Weeds Controlled with Pre-Emergence Applications of Mesotrione 40% SC

Common Name	Scientific Name	Mesotrione 40% SC Applied Alone	Mesotrione 40% SC + Atrazine*
Amaranth, Palmer	Amaranthus palmeri	С	С
Amaranth, Powell	Amaranthus powellii	С	С
Amaranth, Spiny	Amaranthus spinosus	С	С
Buffalobur	Solanum rostratum	С	С
Carpetweed	Mollugo verticillata	С	С
Chickweed, Common	Stellaria media	С	С
Cocklebur, Common	Xanthum strumarium	PC	С
Crabgrass, Large	Digitaria sanguinalis	PC	PC
Galinsoga	Galinsoga parviflora	С	С
Jimsonweed	Datura stramonium	С	С
Kochia	Kochia scoparia	PC	С
Lambsquarters, Common	Chenopodium album	С	С
Morningglory, Entireleaf	Ipomoea hederacea	PC	С
Morningglory, Ivyleaf	Ipomoea hederacea	PC	С
Morningglory, Pitted	Ipomoea lacunosa	PC	С
Nightshade, Eastern Black	Solanum ptychanthum	С	С
Nightshade, Hairy	Solanum sarrachoides	С	С
Pigweed, Redroot	Amaranthus retroflexus	С	С
Pigweed, Smooth	Amaranthus hybridus	С	С
Pigweed, Tumble	Amaranthus albus	С	С
Ragweed, Common	Ambrosia artemisiifolia	С	С
Ragweed, Giant	Ambrosia trifida	PC	С
Signalgrass, Broadleaf	Urochloa platyphylla	PC	PC
Smartweed, Ladysthumb	Polygonum persicaria	С	С
Smartweed, Pale	Polygonum lapathifolium	С	С
Smartweed, Pennsylvania	Polygonum pensylvanicum	С	С
Sunflower, Common	Helianthus annuus	PC	С
Velvetleaf	Abutilon theophrasti	С	С
Waterhemp, Common	Amaranthus rudis	С	С
Waterhemp, Tall	Amaranthus tuberculatus	С	С

^{*}Mesotrione 40% SC tank mixture with atrazine is approved only for use on corn, grain sorghum and sugarcane. Refer to the crop sections on this label for specific use directions.

C = Control PC = Partial Control

²Weeds can be controlled at larger than listed sizes; however, to protect crop yield, manage weed resistance, and provide effective control, treat weeds before they reach 5" tall.

^{*}Apply before weeds exceed 3" tall.

ROTATIONAL CROP INTERVALS

If **Mesotrione 40% SC** is applied alone, follow the crop rotation intervals listed below in Table 3. If **Mesotrione 40% SC** is tank-mixed with other products, then follow the most restrictive product's crop rotation interval.

Table 3. Time Interval between Mesotrione 40% SC Application and Replanting/Planting of Rotational Crop

Crop	Replant/Rotational Interval (Month)
Asparagus, Corn (All Types), Cranberry, Flax, Kentucky Bluegrass Grown For Seed, Pearl Millet, Oats, Rhubarb, Ryegrass (Perennial and Annual) Grown For Seed, Sorghum (Grain and Sweet), Soybeans, Sugarcane, and Tall Fescue Grown For Seed	Anytime
Small Grain Cereals (Wheat, Barley, Rye)	4
Alfalfa, Blueberry, Canola, Cotton, Currant, Lingonberry, Okra, Peanuts, Peas*, Potato, Rice, Snap Beans*, Sunflowers, and Tobacco	10
Cucurbits, Dry Beans, Red Clover, Sugar Beets, All Other Crops	18

^{*}Plant these rotation crops ONLY if the criteria listed below have been met. If all criteria have NOT been met, plant peas and snap beans a minimum of 18 months following **Mesotrione 40% SC** application.

- A minimum of 20" of rainfall plus irrigation has occurred between application and planting of the rotational crop.
- Soil pH is greater than 6.0.
- 3 fl. oz./A (0.094 lb. a.i./A) or less of this product has been applied no later than June 30th the year preceding rotational crop planting.
- No other HPPD herbicides (e.g., Mesotrione, Glyphosate + Mesotrione + S-Metolachlor, + S-Metolachlor 19% Atrazine 18.61% + Mesotrione 2.44%, S-Metolachlor 27.1% + Atrazine 9.94% + Mesotrione 2.71%, Mesotrione + S-Metolachlor, Topramezone, Isoxaflutole, Thiencarbazone-methyl + Tembotrione, Thiencarbazone-methyl + Isoxaflutole, or Tembotrione) were applied the year prior to planting peas and snap beans.

Restriction:

• DO NOT plant peas or snap beans on sand, sandy loam, or loamy sand soils in Minnesota or Wisconsin.

CROP USE DIRECTIONS

CORN

Apply **Mesotrione 40% SC** by ground for pre-emergence or post-emergence weed control in field corn, seed corn, yellow popcorn, and sweet corn. Apply **Mesotrione 40% SC** to corn up to 30" tall or up to the 8-leaf stage of corn growth to control broadleaf and grass weeds listed in Tables 1 and 2.

Aerial applications of **Mesotrione 40% SC** can be made pre-emergence or post-emergence in the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

See seed company instructions for use on field corn inbred lines. Special adjuvant restrictions must be followed for post-emergence applications of **Mesotrione 40% SC** in yellow popcorn or sweet corn (refer to the **SPRAY ADDITIVES** section).

Post-emergence application of **Mesotrione 40% SC** to yellow popcorn and sweet corn hybrids may cause crop bleaching. Bleach is transitory and will not affect final yield or quality. Herbicide sensitivity, however, can vary widely in yellow popcorn and sweet corn, and all hybrids of these have not been tested. Contact your local popcorn/sweet corn company, Fieldman, or University Specialist to learn about hybrid directions before making a post-emergence application of **Mesotrione 40% SC** to yellow popcorn or sweet corn. **DO NOT** include nitrogen-based adjuvants (UAN or AMS) when making post-emergence applications of **Mesotrione 40% SC** to yellow popcorn or sweet corn.

Temporary transient bleaching may occur in field corn treated with **Mesotrione 40% SC** post-emergence under extreme weather conditions or when the crop is under stress. Field corn will quickly outgrow this condition and develop normally.

Corn Restrictions:

- DO NOT apply more than 7.7 fl. oz./A (0.24 lb. a.i./A) of Mesotrione 40% SC per year.
- **DO NOT** make more than 2 applications per year when using reduced application rates.
- **DO NOT** exceed 7.7 fl. oz. (0.24 lb. a.i./A) in a single pre-emergence application.
- **DO NOT** exceed 3 fl. oz. (0.094 lb. a.i/A) in a single post-emergence application.

- Minimum retreatment interval is 14 days.
- **DO NOT** feed or harvest forage, grain, or stover within 45 days after application.
- DO NOT apply Mesotrione 40% SC to white popcorn or ornamental (Indian) corn.

Mesotrione 40% SC Used Alone – Post-Emergence

Apply 3 fl. oz./A (0.094 lb. a.i./A) per application. Always add an appropriate adjuvant to the spray tank (see the Spray Additives section of this label).

Apply to actively growing weeds. See Table 1 for a complete list of weeds controlled. Susceptible weeds that emerge post-application may be controlled after the herbicide is absorbed into the soil. **Mesotrione 40% SC** will not control most grass weeds.

Two post-emergence applications of **Mesotrione 40% SC** may be made under the following restrictions:

- Only 1 post-emergence application may be made if **Mesotrione 40% SC** has been applied pre-emergence. **DO NOT** exceed a total of 7.7 fl. oz./A (0.24 lb. a.i./A) per year.
- Minimum retreatment interval is 14 days.
- Applications made at rates lower than 3 fl. oz./A. (0.094 lb. a.i./A) post-emergence may not provide adequate weed control and may result in reduced residual control.
- DO NOT exceed a total of 6 fl. oz./A (0.19 lb. a.i./A) for the 2 post-emergence applications.
- If a post-emergence application of **Mesotrione 40% SC** was made to ground that received pre-emergence treatment of another mesotrione-containing herbicide, atrazine must be tank mixed with **Mesotrione 40% SC**.
- If mixing Mesotrione 40% SC with atrazine, DO NOT apply to corn taller than 12".
- Treat corn up to 30" tall or up to the 8-leaf stage of growth.
- DO NOT harvest, forage, or stover within 45 days post-application.

Mesotrione 40% SC Used Alone - Pre-Emergence

Apply 6 - 7.7 fl. oz./A (0.19 - 0.24 lb. a.i./A) by ground sprayer in 10 - 30 gals. of water per acre to control broadleaf weeds (up to 80 gals. if applied with liquid fertilizer). See Table 2 for a complete list of weeds controlled. **Mesotrione 40% SC** can be tank mixed with other approved pre-emergence grass herbicides to control grasses. Refer to the tank mix section for a list of tank-mix partners.

Mesotrione 40% SC Tank Mixtures for Corn

Apply **Mesotrione 40% SC** in tank mix with other registered herbicides to improve spectrum of weed control in burndown, pre-emergence, or post-emergence applications. These tank mixtures can also be used to include a different mode of action herbicide to control and manage the development of resistant weed biotypes.

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.

Burndown Tank Mixtures in Corn

Apply Mesotrione 40% SC in tank mixture with other registered herbicides for burndown and residual weed control.

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.

Apply 3 fl. oz./A (0.094 lb. a.i./A) **Mesotrione 40% SC** with paraquat dichloride, glyphosate-isopropylammonium, dicamba, diglycolamine salt, and/or for improved broadleaf weed control with limited residual control before planting corn and before corn emergence. For better residual control, apply 6 - 7.7 fl. oz./A (0.19 - 0.24 lb. a.i./A) **Mesotrione 40% SC** (see Table 2) with the products listed. Use the adjuvant system specified by the burndown herbicide. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

Pre-Emergence Tank Mixture in Corn

Apply 5.3 - 7.7 fl. oz./A (0.16 - 0.24 lb. a.i./A) of **Mesotrione 40% SC** in tank mixture with other registered herbicides (Table 4) for pre-emergence residual weed control. Refer to Table 2 for a list of weeds controlled by **Mesotrione 40% SC** applied pre-emergence.

Table 4. Mesotrione 40% SC Tank Mixtures for Pre-Emergence Application in Corn

Refer to the individual product labels of the products listed for precautionary statements, restrictions, use rates, approved

uses, and a list of weeds controlled.

Atrazine	Atrazine + glyphosate-isopropylammonium
Atrazine + S-	Atrazine + dimethenamide-P
S-Metolachlor	Dimethenamide-P
Acetochlor	Pendimethalin
Acetochlor + Atrazine	

Post-Emergence Tank Mixtures in Corn

See Table 5 below for a list of tank mixtures that can be applied after corn has emerged. **DO NOT** apply less than 3 fl. oz./A (0.094 lb. a.i./A) of **Mesotrione 40% SC** unless specified on this label, as a loss of residual control can occur.

Always add an appropriate adjuvant to the spray tank (refer to the **SPRAY ADDITIVES** section). Refer to the individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled. Not all of the tank mix pesticides listed are registered for use on field corn, yellow popcorn, or sweet corn.

Table 5. Mesotrione 40% SC Tank Mixtures for Post-Emergence Application to Corn

Refer to the individual product labels for products listed for precautionary statements, restrictions, use rates, approved uses, and a list of weeds controlled.

Tank Mix Partner	Use Directions
Atrazine	See Table 1 for application rates and list of weeds controlled.
Nicosulfuron	This mixture will provide additional grass control. Refer to the product label for a list of weeds controlled.
Sodium salt of bentazon	This mixture will provide additional broadleaf weed control. Refer to the product label for a list of weeds controlled.
Rimsulfuron + Thifensulfuron-methyl	This mixture will provide additional weed control. Refer to the product label for a list of weeds controlled.
Atrazine + Nicosulfuron + Rimsulfuron	
Atrazine + S-Metolachlor	DO NOT use nitrogen-based adjuvants (UAN or AMS); apply as post-directed spray. DO NOT use crop oil concentrate (COC); use a non-ionic surfactant (NIS) to avoid crop injury. Control
Citric acid	of emerged weeds can be reduced due to the adjuvant effect on weed coverage.
Bromoxynil octanoate	This mixture will provide additional broadleaf weed control. Refer to the product label for use rates.
Atrazine + Glyphosate- isopropylammonium + S-Metolachlor	Use only on Agrisure® GT corn or Roundup Ready® corn. Crop death will occur if this mixture is applied to a corn hybrid that is not designated as Agrisure® GT or Roundup Ready®. DO NOT add urea ammonium nitrate (UAN) or methylated seed oil (MSO) adjuvants to this mixture or crop injury can occur.
Glufosinate	Use only on corn designated as LibertyLink®. Use of this mixture on corn hybrids not designated as LibertyLink® will result in severe crop injury or death. DO NOT use crop oil concentrate (COC) as an adjuvant or crop injury can occur.
Imazapyr + Imazethapyr	Use only on corn designated at Clearfield® corn. Use of this mixture on corn hybrids not designated as Clearfield® will result in severe crop injury or death. DO NOT use Methylated Seed Oil (MSO) or any MSO blend with this mixture or severe crop injury can occur.
Dicamba, Sodium salt + Primisulfuron-methyl	This mixture will control additional weeds. See product label for list of weeds controlled.
Prosulfuron	This mixture will control additional weeds. See product label for list of weeds controlled.
Primisulfuron-methyl + Prosulfuron	This mixture will control additional weeds. See product label for list of weeds controlled.
Nicosulfuron + Rimsulfuron	This mixture will control additional weeds. See product label for list of weeds controlled.
Nicosulfuron + Rimsulfuron + Atrazine	
Nicosulfuron + Thifensulfuron-methyl	This mixture will control additional weeds. See product label for list of weeds controlled.
Glyphosate	Use only on corn Agrisure® GT corn or Roundup Ready® corn. Use of this mixture on corn hybrids that are not designated as Agrisure® GT or Roundup Ready® will result in crop death. Add spray-grade ammonium sulfate (AMS) at a rate that delivers 8.5 - 17.0 lbs. of AMS/100

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gals. of water. If the glyphosate product calls for an adjuvant in addition to AMS, add 0.25-
0.5% v/v (1 - 2 qts./100 gals.) of a non-ionic surfactant (NIS). DO NOT add urea ammonium
nitrate (UAN), crop oil concentrate (COC) or methylated seed oil (MSO) adjuvants to this tank
mixture or crop injury can occur.

ASPARAGUS

Mesotrione 40% SC can be applied broadcast or banded at a rate of 3 - 7.7 fl. oz./A (0.094 - 0.24 lb. a.i./A) to asparagus as a spring application prior to spear emergence, as a post-harvest application (after final harvest), or both.

Use the 3 fl. oz./A (0.094 lb. a.i./A) rate for post-emergence control or partial control of the emerged weeds listed in Table 1. Use the 6 - 7.7 fl. oz./A (0.19 - 0.24 lb. a.i./A) rate for pre-emergence control or partial control of the weeds listed in Table 2. For banded applications, the application must be made to account for band width, i.e., to deliver 3 - 7.7 fl. oz. (0.094 - 0.24 lb. a.i.) per treated acre. For the best pre-emergence weed control with spring applications, **Mesotrione 40% SC** must be applied after fern mowing, disking, or other tillage operation but prior to asparagus spear emergence.

When making post-harvest applications, the rate applied pre-emergence in the spring must be taken into account so as not to exceed the 7.7 fl. oz./A (0.24 lb. a.i./A) per year rate limit. Post-harvest applications must be made in a way that minimizes contact with any standing asparagus spears or ferns and maximizes contact with the weeds and/or soil, e.g., by using a directed or semi-directed type application, or crop injury may occur. With post-harvest applications, the use of an adjuvant will increase the risk of crop injury.

If weeds are emerged at the time of the **Mesotrione 40% SC** application, the addition of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v or a non-ionic surfactant (NIS) at the rate of 0.25% v/v is advised. In addition to COC or NIS, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% v/v or ammonium sulfate (AMS) at the rate of 8.5 lbs./100 gals. of spray solution may be added for improved burndown of emerged weeds. If weeds have not yet emerged, no adjuvant is advised.

Asparagus Restrictions:

- DO NOT apply more than 7.7 fl. oz./A (0.24 lb. a.i./A) of Mesotrione 40% SC per year.
- **DO NOT** apply more than 7.7 fl. oz./A (0.24 lb. a.i./A) in a single application.
- **DO NOT** make more than 2 **Mesotrione 40% SC** applications per year when using reduced application rates.
- Minimum retreatment interval is 14 days.

BLUEGRASS, RYEGRASS (ANNUAL AND PERENNIAL), AND TALL FESCUE GROWN FOR SEED

Mesotrione 40% SC can be applied to bluegrass, annual ryegrass, perennial ryegrass, or tall fescue which is grown for seed. **Mesotrione 40% SC** can be applied as a pre-emergence application to bare soil (new seeding) or as a post-emergence application to an emerged grass crop.

Pre-Emergence Applications

Apply Mesotrione 40% SC as a broadcast, surface spray at a rate of 6 fl. oz./A (0.19 lb. a.i./A) to a newly seeded crop. The Mesotrione 40% SC application must be made prior to crop and weed emergence. Rainfall or irrigation as the newly seeded grass crop emerges from the soil may increase the risk of injury from Mesotrione 40% SC. Grass crop injury symptoms include temporary bleaching of newly emerged leaves, or in extreme conditions, stunting. For a list of preemergence weeds controlled or partially controlled see Table 2. In addition to the weeds listed in Table 2, Mesotrione 40% SC applied pre-emergence will control mannagrass.

Post-Emergence Application

Apply **Mesotrione 40% SC** as a broadcast post-emergence spray at a rate of 3 - 6 fl. oz./A (0.094 - 0.19 lb. a.i./A) to emerged bluegrass, perennial ryegrass or tall fescue grown for seed. Use the 3 fl. oz./A (0.094 lb. a.i./A) rate for post-emergence control or partial control of the weeds listed in Table 1. In addition to the weeds listed in Table 2, **Mesotrione 40% SC** applied post-emergence will control mannagrass (up to 3 tillers).

Use the 6 fl. oz./A (0.19 lb. a.i./A) rate for post-emergence weed control plus extended residual weed control (see Table 2). The addition of a crop oil concentrate type adjuvant at 1% v/v or a non-ionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v is advised. Post-emergence applications of **Mesotrione 40% SC** may result in temporary bleaching of the grass crop.

In addition to COC or NIS, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% v/v or ammonium sulfate (AMS) at the rate of 8.5 lbs./100 gals. of spray solution may also be added for improved control of emerged weeds. The addition of UAN or AMS will improve consistency of post-emergence weed control but will also increase the risk of grass crop injury, especially

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at **Mesotrione 40% SC**C rates greater than 3 fl. oz./A (0.094 lb. a.i./A). If grass crop injury is a concern, do not add UAN or AMS to the spray solution.

Tank mixing other pesticides with **Mesotrione 40% SC** post-emergence may increase the risk of crop injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to **Mesotrione 40% SC** for applications made post-emergence to the crop.

Restrictions:

- DO NOT harvest the grass crop for seed or straw within 60 days following the application of Mesotrione 40% SC.
- **DO NOT** graze or feed forage from treated areas within 14 days following harvest of seed or straw and at least 74 days after application of **Mesotrione 40% SC**.
- **DO NOT** make more than 2 applications of **Mesotrione 40% SC** per year.
- Minimum retreatment interval is 14 days.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) in a single application and not more than 9 fl. oz./A (0.282 lb. a.i./A) of **Mesotrione 40% SC** per year.
- Applications of Mesotrione 40% SC to grasses grown for seed species not listed on this label may result in severe injury.

BUSH AND CANEBERRIES (CROP GROUP 13-07A AND 13-07B)

Note: Not all cultivars and types of berries that are included within the Environmental Protection Agencies definition of bush and caneberries (Crop Subgroups 13-07A and 13-07B) have been tested and shown to have adequate crop safety to mesotrione. Those that have been tested, and are believed to be reasonably fit, are listed below along with use directions for that crop. If **Mesotrione 40% SC** is used on bush or caneberries not listed below, severe crop injury may occur.

Mesotrione 40% SC may be applied as a pre-bloom post-directed spray in high bush blueberry, lingonberry, red currant, black currant, black raspberry, red raspberry, and blackberry. For a list of weeds controlled see Tables 1 and 2. Mesotrione 40% SC may be applied in bush or caneberries at a rate up to 6 fl. oz./A (0.19 lb. a.i./A). If a split application weed control program is desired, 3 fl. oz./A (0.094 lb. a.i./A) followed by 3 fl. oz./A (0.094 lb. a.i./A) may be used, but no more than 2 applications per year are allowed and not more than 6 fl. oz./A (0.19 lb. a.i./A) in total per year. If 2 applications are made, they must be made no closer than 14 days apart. The use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is advised, but avoid using COC adjuvants that are injurious to bush or caneberry leaves. DO NOT apply Mesotrione 40% SC to bush or caneberries after the onset of the bloom stage or illegal residues may occur.

In low bush blueberries, **Mesotrione 40% SC** may only be applied in the non-bearing year. This application may be a broadcast application. Up to 6 fl. oz./A (0.19 lb. a.i./A) of **Mesotrione 40% SC** may be applied in a single application, or 3 fl. oz./A (0.094 lb. a.i./A) followed by 3 fl. oz./A (0.094 lb. a.i./A) if used in a split application program. No more than 2 applications per year are allowed and not more than 6 fl. oz./A (0.19 lb. a.i./A) in total per year. If 2 applications are made, they must be made no closer than 14 days apart. The use of a crop oil concentrate (COC) type adjuvant at 1% v/v is advised. Applications of **Mesotrione 40% SC** during dry weather conditions and/or temperatures above 85° can cause injury to low bush blueberries. Applications of **Mesotrione 40% SC** Turf can cause yellowing or necrosis of leaves and under severe conditions, leaf drop may occur especially on "Sourtop" variety blueberries.

Bush and Caneberry Restrictions:

- **DO NOT** make more than 2 applications of **Mesotrione 40% SC** per year when using reduced application rates.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) in a single application.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) per year.
- If 2 applications are made, they must be made no closer than 14 days apart.

CITRUS FRUIT, POME FRUIT, STONE FRUIT, AND TREE NUTS

Mesotrione 40% SC may be used for post-emergence and residual control of weeds listed in Tables 1 and 2 in the following crops.

Citrus Fruit – Group 10-10: Australian desert lime, Australian finger lime, Australian round lime, Brown River finger lime, calamondin, citron, citrus hybrids, grapefruit, Japanese summer grapefruit, kumquat, lemon, lime, Mediterranean mandarin, sour orange, sweet orange, pummelo, Russell River lime, Satsuma mandarin, sweet lime, Tachibana orange, Tahiti lime, tangelo, tangerine (Mandarin), tangor, trifoliate orange, uniq fruit, cultivars, varieties and/or hybrids of these

Pome Fruit – Group 11-10: apple, azarole, crabapple, loquat, mayhaw, medlar, pear, Asian pear, quince, Chinese quince, Japanese quince, tejocote, cultivars, varieties and/or hybrids of these

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Stone Fruit – Group 12-12: apricot, Japanese apricot, capulin, black cherry, Nanking cherry, sweet cherry, tart cherry, Chinese jujube, nectarine, peach, plum, American plum, beach plum, Canada plum, cherry plum, Chickasaw plum, Damson plum, Japanese plum, Klamath plum, prune plum, plumcot, sloe, cultivars, varieties and/or hybrids of these

Tree Nuts – Group 14-12: African nut-tree, almond, beech nut, Brazil nut, Brazilian pine, bunya, bur oak, butternut, Cajou nut, candlenut, cashew, chestnut, chinquapin, coconut, Coquito nut, Dika nut, ginkgo, Guiana chestnut, hazelnut (filbert), heartnut, hickory nut, Japanese horse-chestnut, macadamia nut, Mongongo nut, monkeypot, monkey puzzle nut, Okari nut, Pachira nut, peach palm nut, pecan, pequi, pili nut, pine nut, pistachio, Sapucaia nut, tropical almond, black walnut, English walnut, yellowhorn, cultivars, varieties and/or hybrids of these

Precautions:

- Avoid crop injury by applying the spray to the grove or orchard floor and to the weeds, while avoiding contact with crop foliage, stems, or fruit.
- Contact of **Mesotrione 40% SC** with crop can result in bleaching injury that is typically temporary.
- Use trunk guards to protect plants until adequate bark has developed.
- Specified rates are based on broadcast treatment. For band applications around trees in fruit or nut plantings, reduce
 the broadcast rate of Mesotrione 40% SC and carrier per acre in proportion to the area actually sprayed (see Banded
 Applications section).

Restrictions:

- Apply Mesotrione 40% SC only to pome fruit, stone fruit and nut trees that have been established for a minimum of 12 months. Mesotrione 40% SC can be applied in citrus trees or plantings that are less than 12 months old and are exhibiting normal growth and vigor.
- **DO NOT** apply in stressed orchards stressed due to poor weather or other abiotic factors.
- DO NOT exceed a total of 12 fl. oz. per acre (0.376 lb. a.i./A) of Mesotrione 40% SC per year or in a 12-month period.
- DO NOT exceed 6 fl. oz. per acre (0.19 lb. a.i./A) of Mesotrione 40% SC for the first application.
- **DO NOT** exceed 3 applications per year or in a 12-month period when using reduced application rates.
- Allow at least 5 months between applications of **Mesotrione 40% SC** at 6 fl. oz./A (0.19 lb. a.i./A) and at least 6 weeks between applications of 6 fl. oz./A (0.19 lb. a.i./A) and subsequent applications of 3 fl. oz./A. (0.094 lb. a.i./A). Applications must follow 1 of the 4 programs listed in Table 6 below.
- Pre-Harvest Interval (PHI) Pome fruit, stone fruit or tree nuts: 30 days
- Pre-Harvest Interval (PHI) Citrus: 1 day
- **DO NOT** use on soils with greater than 20% gravel.
- DO NOT apply Mesotrione 40% SC through any type of irrigation system.
- **DO NOT** apply **Mesotrione 40% SC** by air.

Spray Adjuvants

For application to emerged weeds, the use of COC (crop oil concentrate) type adjuvant at 1% v/v or NIS (non-ionic surfactant) at 0.25% v/v is advised. Addition of AMS (ammonium sulfate) or other nitrogen-based adjuvants will increase efficacy when used in combination with COC or NIS. For more information see Spray Adjuvants section on this label.

Banded Applications

When applying a row or banded treatment of **Mesotrione 40% SC**, the following formula may be used to calculate the amount per acre:

Band Width in Inches	V	Broadcast Rate Per Acre	_	Amount Needed per Acre of Field
Row Width in Inches	^	bioducast Nate Per Acre	_	Amount Needed per Acre of Field

Tank Mix Instructions

Mesotrione 40% SC may be mixed and applied in combination with most commonly used herbicides registered for use in the approved crops in order to expand the post-emergence weed control – spectrum and residual activity. Acceptable tank mix partners include: Helmquat (EPA Reg. No. 74530-48, paraquat-dichloride), Gramoxone SL 2.0 (EPA Reg. No. 100-1431, paraquat-dichloride), Helosate PlusAdvance (EPA Reg. No. 74530-43, Glyphosate-isopropylammonium), Touchdown Total (EPA Reg. No. 100-1169, Glycine, N-(phosphonomethyl)- potassium salt), Touchdown HiTech (EPA Reg. No. 100-1182, Glycine, N-(phosphonomethyl)-potassium salt), Rely® 280 (EPA Reg. No. 7969-448, glufosinate), GoalTender® (EPA Reg. No. 62719-447, oxyfluorfen), Princep® (EPA Reg. No. 100-526, somazine), Solicam® (EPA Reg. No. 61842-41, norflurazon), Tetris™ SG (EPA Reg. No. 91234-85, rimsulfuron), Surflan® (EPA Reg. No. 70506-43, oryzalin), Prowl H2O (EPA Reg. No. 241-418, pendimethlin), Karmex® (EPA Reg. No. 66222-51, diuron), Hyvar® (EPA Reg. No. 432-1546, bromacil), Krovar® (EPA Reg. No. 5481-635, bromacil + diuron) or Alion® (EPA Reg. No. 264-1106, indaziflam). Tank mixtures can be effective tools to help control or manage the development of resistant weeds. The application of mixtures or sequences

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of effective herbicides, with different sites of action, can provide the diversity needed for management of herbicide resistance.

Refer to individual product labels for precautionary statements, restrictions, rates, approved uses and a list of weeds controlled.

Weed Control (Table 1 and 2)

Mesotrione 40% SC provides both pre-emergence and post-emergence control of susceptible weeds. Best control is obtained from pre-emergence applications before germination of seed or as post-emergence applications are made before weeds reach 5" in height. Susceptible weeds are listed in Tables 1 and 2 of this label. Rainfall or irrigation soon after application will enhance pre-emergence activity.

Use Directions

Apply as a directed or shielded spray. Avoid contact with trunk surfaces, fruit, or crop foliage. **DO NOT** apply when nuts or fruits are on the ground at harvest. Ensure that soil is firm, settled and relatively free of trash at time of application. Also ensure that the soil is free of depressions around trees where rain or irrigation water can concentrate. Apply the first application of **Mesotrione 40% SC** in late fall/early winter or spring and subsequent applications utilizing 1 of the programs noted in the Table 6.

Table 6. Mesotrione 40% SC Application Programs, Rates, and Intervals

Drogram	Application Rate (fl. oz./A)			Application Interval
Program	1 st Application	2 nd Application	3 rd Application	(Weeks)
1	6 (0.19 lb. a. i/A)	6 (0.19 lb. a. i/A)	-	20
2	6 (0.19 lb. a. i/A)	3 (0.094 lb. a.i./A)	-	6
3	6 (0.19 lb. a. i/A)	3 (0.094 lb. a.i./A)	3 (0.094 lb. a.i./A)	6
4	3 (0.094 lb. a.i./A)	3 (0.094 lb. a.i./A)	3 (0.094 lb. a.i./A)	6

Apply Mesotrione 40% SC in a spray volume of 10 - 40 gals./A.

For effective residual weed control, **Mesotrione 40% SC** must be moved into the weed seed germination zone. For preemergence weed control, apply **Mesotrione 40% SC** before rainfall or irrigation. For optimum residual control **Mesotrione 40% SC** can be tank-mixed with residual herbicides including: Princep® (EPA Reg. No. 100-526, somazine), Solicam® (EPA Reg. No. 61842-41, norflurazon), Tetris™ SG (EPA Reg. No. 91234-85, rimsulfuron), Goal Tender (EPA Reg. No. 62719-447, oxyfluorfen), Prowl (EPA Reg. No. 241-418, pendimethlin), Karmex® (EPA Reg. No. 66222-51, diuron), Hyvar® (EPA Reg. No. 432-1546, bromacil), Krovar® (EPA Reg. No. 5481-635, bromacil + diuron) or Alion® (EPA Reg. No. 264-1106, indaziflam).

For optimum post-emergence weed control, apply **Mesotrione 40% SC** to actively growing weeds in tank mixture with burndown herbicides including: Helmquat 3SL (EPA Reg. No. 74530-48, paraquat-dichloride), Gramoxone SL 2.0 (EPA Reg. No. 100-1431, paraquat-dichloride), and glyphosate products including: Helosate Plus Advance (EPA Reg. No. 74530-43), Touchdown Total (EPA Reg. No. 100-1169) or Touchdown HiTech (EPA Reg. No. 100-1182), Rely 280 (EPA Reg. No. 7969-448, glufosinate) or GoalTender (EPA Reg. No. 62719-447, oxyfluorfen) before weeds exceed 5" in height.

Subsequent application(s) of **Mesotrione 40% SC** can be made alone or in tank mixture, with the herbicides noted above, if weed emergence occurs.

Refer to individual product labels for precautionary statements, restrictions, rates, approved uses and a list of weeds controlled.

CRANBERRY

Apply **Mesotrione 40% SC** to bearing or non-bearing cranberry beds to control or suppress the weeds listed in Tables 1 and 2, and:

- Bog St. John's Wort (Hypericum boreale)
- Rushes (Juncus canadensis, J. effuses, J. bufonulus, J. tenuis)
- Sedges spp. (Carex spp.)
- Silverleaf (Potentilla pacifica)
- Yellow Loosestrife (Lysimachia terrestris)

Restrictions for Bearing/Non-Bearing Application Rates:

• Apply up to 8 fl. oz./A (0.25 lb. a.i./A) in a single application.

- **DO NOT** apply more than 16 fl. oz./A (0.5 lb. a.i./A) in total per year.
- **DO NOT** make more than 2 applications per year.
- If 2 applications are made, **DO NOT** make them closer than 14 days apart. Use 1% v/v of a crop oil concentrate (COC) or 0.25% v/v non-ionic surfactant (NIS).
- **DO NOT** use COC adjuvants that are known to injure cranberry leaves.
- Non-Bearing Cranberries: Apply after the bud break stage no less than 45 days before flooding in fall or winter.
- Bearing Cranberries: Apply after the bud break stage no less than 45 days before flooding or harvest.

Mesotrione 40% SC can be applied through irrigation systems (chemigation) including center pivot or solid set.

Cranberry Restrictions:

- DO NOT make more than 2 applications of Mesotrione 40% SC per year.
- **DO NOT** apply more than 8 fl. oz./A (0.25 lb. a.i./A) in a single application.
- **DO NOT** apply more than 16 fl. oz./A (0.5 lb. a.i./A) per year.
- If 2 applications are made, they must be made no closer than 14 days apart.

Sprinkler Irrigation Application – Cranberries Only

Check the irrigation system to ensure uniform application of water to all areas. Thorough coverage of foliage is required for optimal control. Maintain good agitation in the pesticide supply tank prior to and during the entire application process. Inject the specified rate of **Mesotrione 40% SC** into the irrigation system with a metering device designed to introduce a constant flow and that will distribute the product to target areas in 0.1 - 0.2 acre-inch of water. Use the least amount of water with this rate range required for proper distribution and coverage.

After application is complete, flush the entire irrigation and injection systems with clean water before stopping the system. If application is being made during a normal irrigation set of a stationary sprinkler, the specified rate of **Mesotrione 40% SC** the area covered needs to be injected into the system only during the end of the irrigation set for sufficient time to provide optimal coverage and distribution.

Chemigation Use Precautions – Sprinkler Irrigation Application

Apply this product through center pivot or solid set sprinkler irrigation systems only. **DO NOT** apply this product through any other type of irrigation system.

Non-uniform distribution of treated water can cause crop injury, product ineffectiveness, and/or illegal pesticide residues in the crop. Contact State Extension Service Specialists, equipment manufacturers or other experts if you have questions about calibrating equipment.

DO NOT connect an irrigation system or greenhouse system used for pesticide application to any public water system. A public water system is any system used for provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible personal shall shut the system down and make necessary adjustments if the need arises.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back-flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when pressure decreases to the point where pesticide distribution is adversely affected. Systems must also use a metering pump, including a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and are capable of being fitted with a system interlock.

Any alternatives to the above required safety devices must conform to the list of EPA-approved alternative devices.

Chemigation Use Restrictions – Sprinkler Irrigation Application:

- **DO NOT** apply this product through any other type of irrigation system.
- DO NOT apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of

treated water.

- **DO NOT** apply directly to water or areas where surface water is present outside the bog system.
- **DO NOT** contaminate water when disposing of equipment washwater or rinsate.
- **DO NOT** apply within 10 ft. of surface water outside the bog system.
- **DO NOT** spray to runoff.

FLAX

Mesotrione 40% SC may be applied pre-emergence in flax, i.e., after planting but before crop emergence, at a rate up to 6 fl. oz./A (0.19 lb. a.i./A). For a list of weeds controlled see Tables 1 and 2. **DO NOT** apply more than 1 application, and not more than 6 fl. oz./A (0.19 lb. a.i./A), per year in flax. If weeds are emerged at the time of application, the use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is advised. In addition, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% (v/v) or AMS at the rate of 8.5 lbs./100 gals. of spray solution may be added to improve the burndown of existing weeds. Applications of **Mesotrione 40% SC** to emerged flax can result in severe crop injury.

Flax Restrictions:

- **DO NOT** make more than 1 application of **Mesotrione 40% SC** per year.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) in a single application.
- DO NOT apply Mesotrione 40% SC more than 6 fl. oz./A (0.19 lb. a.i./A) per year.

OATS

Mesotrione 40% SC can be applied pre-emergence or post-emergence (but not both) for weed control in oats.

For pre-emergence control or partial control of the weeds listed in Table 2, apply **Mesotrione 40% SC** broadcast at a rate of 6 fl. oz./A (0.19 lb. a.i./A) prior to oat emergence. For best pre-emergence weed control, the **Mesotrione 40% SC** application must be made prior to weed emergence.

For post-emergence (after oat emergence) control or partial control of the weeds listed in Table 1, apply **Mesotrione 40% SC** at a rate of 3 fl. oz./A (0.094 lb. a.i./A). For best results, **Mesotrione 40% SC** must be applied to emerged weeds that are less than 5" tall. Post-emergence applications of **Mesotrione 40% SC** may result in temporary injury of the oat crop. Injury symptoms may include leaf bleaching, leaf burn and in extreme conditions, stunting.

If emerged weeds are present at the time of the **Mesotrione 40% SC** application, the addition of a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v or a non-ionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v is advised. In addition to COC or NIS, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% v/v or ammonium sulfate (AMS) at the rate of 8.5 lbs./100 gals. of spray solution may be added for improved weed control. If emerged weeds are not present at the time of the **Mesotrione 40% SC** application, no additives are advised. If oat injury is a concern, eliminating the use of UAN or AMS will reduce the risk for post-emergence crop injury. Additionally, the use of NIS instead of COC will also reduce the oat injury risk. However, weed control is also reduced if UAN or AMS is eliminated and when switching from COC to NIS.

Tank mixing other pesticides with **Mesotrione 40% SC** post-emergence may increase the risk of injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to **Mesotrione 40% SC** for applications made post-emergence to the crop.

Oat Restrictions:

- DO NOT graze or feed forage from treated areas within 30 days following an application of Mesotrione 40% SC
- DO NOT harvest oats within 50 days following the application of Mesotrione 40% SC.
- **DO NOT** make more than 1 application of **Mesotrione 40% SC** per year.
- **DO NOT** apply **Mesotrione 40% SC** pre-emergence (prior to oat emergence) at more than 6 fl. oz./A (0.19 lb. a.i./A) per year.
- DO NOT apply Mesotrione 40% SC post-emergence at more than 3 fl. oz./A (0.094 lb. a.i./A) per year.
- If the oat crop treated with Mesotrione 40% SC is lost or destroyed, oats may be replanted immediately. If
 Mesotrione 40% SC was applied to the lost oat crop, no additional Mesotrione 40% SC can be applied to the replanted
 oat crop.

OKRA

Mesotrione 40% SC can be applied as a row-middle or a hooded post-direct treatment (but not both) for weed control in okra.

Pre-Emergence Row-Middle Applications

Apply Mesotrione 40% SC at a rate of 6 fl. oz./A (0.19 lb. a.i./A) as a banded application to the row middles prior to weed

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emergence. For this banded application, leave 1 ft. of untreated area over the okra row or 6" to each side of the planted row. For banded applications, the application must be made to account for band width, i.e., to deliver 6 fl. oz. (0.19 lb. a.i.) per treated acre. **DO NOT** apply **Mesotrione 40% SC** directly over the planted okra row or severe crop injury may occur. Injury risk is greatest on coarse-textured soils (sand, sandy loam or loamy sand).

Post-Emergence Hooded Applications

Apply Mesotrione 40% SC at a rate of 3 fl. oz./A (0.094 lb. a.i./A) as a post-emergence directed application using a hooded sprayer for control or partial control of the weeds listed in Table 1. Okra must be at least 3" tall at the time of this application. It is advised that a non-ionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v be added to the spray solution. For post-emergence hooded applications, the spray equipment must be set up to minimize the amount of Mesotrione 40% SC that contacts the okra foliage or crop injury will occur. For best post-emergence results, Mesotrione 40% SC must be applied to actively growing weeds.

Okra Restrictions:

- DO NOT harvest okra within 28 days following the application of Mesotrione 40% SC.
- **DO NOT** make more than 1 application of **Mesotrione 40% SC** per year.
- DO NOT apply Mesotrione 40% SC as a row-middle application at more than 6 fl. oz. (0.19 lb. a.i.) per acre per year.
- **DO NOT** apply **Mesotrione 40% SC** as a post-directed application at more than 3 fl. oz. (0.094 lb. a.i.) per acre per year.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) in a single application.
- **DO NOT** apply **Mesotrione 40% SC** as a broadcast pre-emergence or broadcast post-emergence application to okra or severe injury will occur.
- If the okra crop treated with **Mesotrione 40% SC** is lost or destroyed, okra can be replanted only in the soil band that was not treated with **Mesotrione 40% SC**.

PEARL MILLET

Mesotrione 40% SC may be applied pre-emergence in pearl millet, i.e., after planting but before crop emergence, at a rate up to 6 fl. oz./A (0.19 lb. a.i./A). For a list of weeds controlled see Table 2. If weeds are emerged at the time of application, the use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is advised. In addition, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% (v/v) or AMS at the rate of 8.5 lbs./100 gals. of spray solution may be added to improve the burndown of existing weeds. Applications of **Mesotrione 40% SC** to emerged pearl millet can result in severe crop injury.

Pearl Millet Restrictions:

- DO NOT make more than 1 application of Mesotrione 40% SC per year.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) in a single application.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) per year.

RHUBARB

Mesotrione 40% SC can be applied prior to crop emergence for weed control in established rhubarb.

Apply **Mesotrione 40% SC** at a rate of 6 fl. oz./A (0.19 lb. a.i./A) to dormant (prior to any spring green-up) rhubarb for control or partial control of the weeds listed in Table 2. If weeds are emerged at the time of application, it is advised that a crop oil concentrate (COC) type adjuvant at 1% v/v or a non-ionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v be added to the spray solution. Applications of **Mesotrione 40% SC** to rhubarb that is not dormant may result in a temporary bleaching symptomology. Rainfall or irrigation after the **Mesotrione 40% SC** application may increase the risk of injury to emerging rhubarb.

Rhubarb Restrictions:

- DO NOT harvest rhubarb within 21 days following the application of Mesotrione 40% SC.
- **DO NOT** make more than 1 application of **Mesotrione 40% SC** per year.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) in a single application.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) per year.

SORGHUM (GRAIN and SWEET)

Pre-Emergence Applications

Make pre-emergence application of **Mesotrione 40% SC** or pre-plant non-incorporated applications up to 21 days before planting sorghum for control or partial control of the weeds listed in Table 2.

Apply 6 - 6.4 fl. oz./A (0.19 - 0.2 lb. a.i./A) broadcast non-incorporated application prior to sorghum emergence. Making the application less than 7 days before planting will increase the risk of plant injury, especially if rainfall or irrigation occurs after the application. Injury symptoms include temporary bleaching of newly emerged leaves. Making application

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of this product 8 - 21 days prior to planting will decrease risk of crop injury.

If **Mesotrione 40% SC** is applied prior to planting, minimize disturbance of soil treated with herbicide during the planting process in order to reduce the potential for weed emergence.

If emerged weeds are present at the time of pre-emergence application, use 0.25% v/v of a non-ionic surfactant (NIS) adjuvant or 1% v/v of crop oil concentrate (COC) and add it to the spray solution. A spray-grade UAN applied at a rate of 2.5% v/v or 8.5 lbs./100 gals. of spray solution of ammonium sulfate (AMS) can be added to the spray solution in addition to the COC or NIS.

Pre-Emergence Application Restrictions:

- **DO NOT** make more than 1 application of **Mesotrione 40% SC** per year.
- **DO NOT** apply more than 6.4 fl. oz./A (0.2 lb. a.i./A) in a single application.
- **DO NOT** apply more than 6.4 fl. oz./A (0.2 lb. a.i./A) per year.
- **DO NOT** apply to emerged sorghum or severe crop injury can occur.
- **DO NOT** use **Mesotrione 40% SC** in the production of forage sorghum, sudangrass, sorghum-sudangrass hybrids, or dual-purpose sorghum.
- **DO NOT** apply to sorghum that is grown on coarse-textured soils (e.g., sandy loam, loamy sand, sand).
- Texas Restriction: DO NOT apply to sorghum grown south of Interstate 20 (I-20) or east of Highway 277.

Post-Emergence Applications

Apply **Mesotrione 40% SC** post-directed to grain sorghum to control and/or partially control weeds listed in Table 1. Apply to actively growing weeds for optimal control.

Apply 3 fl. oz./A (0.094 lb. a.i./A) post-directed application when sorghum is at least 8" tall. Make the application by directing the spray between crop rows, and toward the base of the plant. Direct application of **Mesotrione 40% SC** onto foliage can result in crop injury including temporary bleaching. If leaves do bleach, newly emerged leaves following application will not be affected.

Use 0.25% v/v of a non-ionic surfactant (NIS) adjuvant or 1% v/v of crop oil concentrate (COC) and add it to the spray solution. A spray-grade UAN applied at a rate of 2.5% v/v or 8.5 lbs./100 gals. of spray solution of ammonium sulfate (AMS) can be added to the spray solution in addition to the COC or NIS.

Mesotrione 40% SC can be tank-mixed with herbicides registered for use on sorghum to improve weed control. These tank-mixtures can also include a herbicide with a different mode of action to help control or manage the development of resistant weed biotypes.

Post-Directed Restrictions:

- **DO NOT** make more than 1 post-directed application per year.
- DO NOT apply more than 3 fl. oz./A (0.094 lb. a.i./A) in a single post-directed application.
- **DO NOT** apply more than 6.4 fl. oz./A (0.2 lb. a.i./A) per year.
- **DO NOT** apply broadcast over-the-top to emerged sorghum or severe crop injury can occur.
- **DO NOT** harvest sorghum for forage for 30 days following application.
- **DO NOT** harvest for grain or stover for 60 days following application.
- **DO NOT** apply after the sorghum seedhead emerges.
- DO NOT use in the production of forage sorghum, sudangrass, or sorghum-sudangrass hybrids.

SOYBEAN

Mesotrione 40% SC can be applied pre-emergence to mesotrione resistant soybeans. Applications to soybeans that are not designated as mesotrione resistant will result in significant crop injury.

Pre-Emergence Applications

For pre-emergence control of the weeds listed in Table 2, apply **Mesotrione 40% SC** prior to soybean emergence at a rate of 6.0 fl. oz./A (0.19 lb. a.i./A). Apply the higher rate for longer residual control. **Mesotrione 40% SC** may be tank mixed with other registered soybean herbicides including S-Metolachlor and S-Metolachlor + Sodium salt of fomesafen. Refer to the tank mix partner label and follow all precautions and restrictions.

If weeds are emerged at the time of application, add either a non-ionic surfactant (NIS) at 1 qt./100 gals. (0.25% v/v) or a crop oil concentrate (COC) at 1 gal./100 gals. (1% v/v). In addition to NIS or COC, it is also advised to add either ammonium sulfate (AMS) at 8.5 - 17 lbs./100 gals. (or equivalent).

Soybean Restrictions:

- Apply no more than 6.0 fl. oz./A (0.19 lb. a.i./A) per year.
- **DO NOT** apply more than 6 fl. oz./A (0.19 lb. a.i./A) in a single application.
- Make no more than 1 pre-emergence application per year.
- DO NOT apply to emerged soybeans.
- DO NOT graze or feed soybean forage or hay to livestock.

SUGARCANE

Apply **Mesotrione 40% SC** by ground for pre-emergence, post-emergence over-the-top or post-emergence direct weed control in sugarcane.

Apply **Mesotrione 40% SC** aerially for pre-emergence and post-emergence weed control in the states of: Florida, Louisiana, and Texas.

Pre-Emergence Applications

Apply 6 - 7.7 fl. oz./A (0.19 - 0.24 lb. a.i./A) of **Mesotrione 40% SC** to control weeds listed in Table 2. Make application after the planting of plant-cane or after harvest of ratoon-cane. If weeds are emerged at the time of application, add a crop oil concentrate (COC) type adjuvant at 1% v/v OR a non-ionic surfactant (NIS) type adjuvant at 0.25% v/v to the spray solution. In addition to the COC or NIS, a spray grade UAN at a rate of 2.5% v/v OR ammonium sulfate (AMS) at a rate of 8.5 lbs./100 gals. of spray solution can be added to the spray solution. Tank mix Atrazine or Ametryn with **Mesotrione 40% SC** to improve weed control. Refer to the tank mix partner label for specific rates and use directions.

Post-Emergence Applications

Apply 3 fl. oz./A (0.94 lb. a.i./A) of **Mesotrione 40% SC** to control weeds listed in Table 1. Apply as a post-over-the-top or as a post-directed spray to the base of the sugarcane. If a pre-emergence application was made earlier in the season, only 1 single post-emergence application can be made. If no pre-emergence application was made earlier in the season, then both a post-over-the-top and a post-directed spray application can be made. For optimum weed control, apply to actively growing weeds.

Add either a crop oil concentrate (COC) adjuvant at 1% v/v OR a non-ionic surfactant (NIS) adjuvant to the spray solution. In addition to the COC or NIS, use a spray grade UAN (e.g., 28-0-0) at 2.5% v/v OR ammonium sulfate (AMS) at 8.5 lbs./100 gals. of spray solution to improve weed control.

For additional post-emergence weed control, tank mix **Mesotrione 40% SC** with atrazine, Sodium salt of asulam and/or Trifloxysulfuron-Sodium. Refer to the tank mix product label for specific rate and use directions.

Sugarcane Restrictions:

- **DO NOT** apply more than 7.7 fl. oz./A (0.24 lb. a.i./A) in a pre-emergence application.
- **DO NOT** apply more than 3 fl. oz./A (0.94 lb. a.i./A) in a post-emergence application.
- **DO NOT** make more than 2 applications per year. If a pre-emergence application is made, only 1 post-emergence application can be made.
- Minimum retreatment interval is 14 days.
- **DO NOT** apply more than 10.7 fl. oz./A (0.33 lb. a.i./A) per year.
- DO NOT harvest sugarcane within 114 days following a post-over-the-top treatment (114-day PHI).
- **DO NOT** harvest sugarcane with 100 days following a post-directed application (100-day PHI).

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep container tightly closed when not in use. Keep away from heat and flame. **DO NOT** store near seed, fertilizers, or foodstuffs. Can be stored at temperatures as low as minus 20°F. Keep away from heat and flame.

PESTICIDE DISPOSAL: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited.

CONTAINER HANDLING:

[Containers 5 gallons or less:] [Nonrefillable container. DO NOT reuse or refill container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10

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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. Once cleaned, offer for recycling 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 cut or weld metal containers.]

[Containers larger than 5 gallons:] [Nonrefillable container. DO NOT reuse or refill container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip 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. Once cleaned, offer for recycling or reconditioning if appropriate. If recycling is not available, puncture or dispose of in a sanitary-landfill or incineration or if allowed by State and local authorities, by burning. If burned, stay out of smoke.] [Containers larger than 5 gallons & Bulk:] [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 refiling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.]

WARRANTY AND DISCLAIMER STATEMENT

NOTICE: Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of RedEagle International LLC. To the extent allowable under State law, all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, REDEAGLE INTERNATIONAL LLC MAKES NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of RedEagle International LLC is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, REDEAGLE INTERNATIONAL LLC DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT REDEAGLE INTERNATIONAL LLC'S ELECTION, THE REPLACEMENT OF PRODUCT.

[All trademarks are the property of their respective owners.]

[Sub-Label B]

MESOTRIONE GROUP 27 HERBICIDE



Mesotrione 40% SC ABN: MESOTRIONE TURF

Provides Selective and Residual Control of Weeds in Ornamental Turfgrasses.

[Not registered for sale or use in Arizona]

Active Ingredient:	% By Wt.
Mesotrione: (CAS No. 104206-82-8)	40.0%
Other Ingredients:	<u>60.0%</u>
Total:	
Contains 4 pounds of active ingredient per gallon.	

CAUTION

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

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

Manufactured For: RedEagle International LLC 5143 S. Lakeland Dr., Suite 4 Lakeland, FL 33813 EPA Reg. No.: 85678-XX EPA Est. No.:_____

Net Contents: [Gallons/Liters]

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation.

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

PERSONAL PROTECTION EQUIPMENT (PPE)

Applicators and Other Handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
 - Chemical-resistant gloves made of Barrier Laminate, Butyl Rubber \geq 14 mils, Nitrile Rubber \geq 14 mils, Neoprene Rubber \geq 14 mils, Polyvinyl Chloride (PVC) \geq 14 mils, and Viton \geq 14 mils.

User Safety Requirements:

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

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:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove and wash contaminated clothing before reuse.
- 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.

SURFACE WATER ADVISORY

This product may contaminate water through drift or spray in wind. This product has a high potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. 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.

PHYSICAL AND CHEMICAL HAZARDS

DO NOT use or store near heat or open flame. **DO NOT** use with or store near any oxidizing or reducing agents. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and 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 over long-sleeved shirt and long pants
- shoes plus socks
- chemical-resistant gloves made of Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Polyvinyl Chloride (PVC) ≥ 14 mils, and Viton ≥ 14 mils.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard, 40 CFR Part 170. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, and greenhouses.

DO NOT enter treated areas without protection clothing until sprays have dried.

Mesotrione 40% SC is applied pre- and post-emergence to provide selective contact and residual control of turfgrass weeds. If applied pre-emergence, it is absorbed when emerging from the soil. Pre-emergence activity and control is reduced under dry conditions. Activate **Mesotrione 40% SC** with 0.15 inch of irrigation if rain hasn't fallen within 10 days of application. Post-emergent control is obtained by absorption into the soil and contact with foliage. Growth ceases post-application, weeds turn white from chlorophyll loss, and will die within 3 weeks. Make a repeat application after 2 - 3 weeks to improve post-emergence weed control. Add a non-ionic surfactant when making post-emergence applications.

Turfgrass color can temporarily become white during treatment. Whitening typically occurs 5 - 7 days post-application and lasts for several weeks. A second application to the same site will cause less whitening of plant tissue.

Mesotrione 40% SC controls weeds prior to and during seeding of certain turfgrasses during turf renovation (see New Seedings). If making pre-emergence application to established turf, tank mix Mesotrione 40% SC with other pre-emergence herbicides including Barricade® 65WG (EPA Reg. No. 100-834, prodiamine) for longer residual and broad-spectrum control.

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Applications:

- Apply with the nozzle height specified by the manufacturer, but no more than 3 ft. above the ground or crop canopy.
- For all applications, applicators are required to use a coarse 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.

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 specified 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

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground

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

Shielded Sprayers

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

Temperature and Humidity

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

Temperature Inversions

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

Wind

Drift potential 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.

Windblown Soil Particles

Mesotrione 40% SC 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 **Mesotrione 40% SC** if prevailing local conditions may be expected to result in off-site movement.

APPROVED USE SITES

Mesotrione 40% SC can be applied to commercial and residential turfgrasses. Non-crop area use sites include golf courses, sod farms, athletic fields, parks, residential and commercial properties, cemeteries, airports, and lawns.

Turfgrass Use Precautions:

Apply **Mesotrione 40% SC** at reduced rates of 4 fl. oz./A (0.125 lb. a.i./A) or less if tank mixing with atrazine, bentazon, or simazine. Before tank mixing **Mesotrione 40% SC** with other herbicides, conduct a compatibility, safety, and efficacy test before treating larger areas. See tank mix partner labels for directions and precautions. The most restrictive directions apply.

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.

Thoroughly clean application equipment after use to avoid injury to sensitive plants.

To avoid injury to sensitive species, keep traffic out of treated areas until sprays have dried; irrigate soil lightly to move **Mesotrione 40% SC** from turf foliage before resuming normal irrigation.

Turfgrass - Use Restrictions:

- **DO NOT** overspray or allow spray to drift to ornamentals or flower beds and gardens. Roses and daylilies are particularly sensitive to **Mesotrione 40% SC**.
- **DO NOT** apply more than 8 fl. oz./A (0.125 lb. a.i./A) in a single application.
- **DO NOT** apply more than 16 fl. oz. (0.50 lb. a.i.) per acre per year.
- DO NOT make more than 4 applications of Mesotrione 40% SC per year when using reduced application rates.
- If multiple applications are made, they must be made no closer than 14 days apart.
- **DO NOT** plant any crop other than turfgrass for 18 months post-application of **Mesotrione 40% SC** to avoid turfgrass injury.
- DO NOT apply organophosphate or carbamate insecticides within 7 days of applying Mesotrione 40% SC.
- **DO NOT** apply **Mesotrione 40% SC** through any type of irrigation system.
- **DO NOT** make aerial applications.
- **DO NOT** use treated clippings to mulch trees or vegetable/flower gardens.

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- **DO NOT** apply this product on Bentgrass, Poa annua, kikuyugrass, zoysiagrass seashore paspalum, and bermudagrass plant injury is unacceptable. Maintain a 5 ft. buffer between treated areas and bentgrass or Poa annua greens.
- **DO NOT** apply over the top of exposed roots of trees and ornamentals.
- **DO NOT** use on golf course putting greens; maintain a minimum of a 5-foot buffer between putting greens and treated areas.
- **Residential Lawns: DO NOT** make broadcast applications for pre- and post-emergent weed control unless the home lawn is being reseeded and/or renovated as whitening of some turfgrasses may occur.
- [Not registered for sale or use in Arizona]

Tolerant Turfgrass Species

The grasses listed below are tolerant to **Mesotrione 40% SC** at the specified rates.

Species	Application Rate - Fl. Oz. per Acre
Kentucky bluegrass (<i>Poa pertensis</i>)	
Centipedegrass (Eremochloa ophiuroides)	5 - 8
Buffalograss (Buchloe dactyloides)	(0.155-0.25 lb. a.i./A)
Tall fescue (Festuca arundinacea)	
Perennial ryegrass* (Lolium perenne)	5
Fine fescue* (creeping red, chewings and hard) (Festuca spp.)	(0.155 lb. a.i./A)
St. Augustinegrass* (grown for sod) (Stenotaphrum secundatum)	4
	(0.125 lb. a.i./A)
*See additional rate instructions below.	

RESISTANCE MANAGEMENT

For resistance management, **Mesotrione 40% SC** is a Group 27 herbicide. Any weed population may contain or develop plants naturally resistant to **Mesotrione 40% SC** and other Group 27 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

There is no known resistance to **Mesotrione 40% SC** and no known instances of cross-resistance between the active ingredient in **Mesotrione 40% SC** (mesotrione, a Group 27 HPPD inhibitor) and other classes of herbicides. **DO NOT** apply less than the specified label instructions and rotate to a herbicide product with a different mode of action to prevent the occurrence of weed resistance, and the maximum number of applications and/or rate of product has been met and weeds are not controlled.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

To minimize the occurrence of resistant biotypes, observe the following weed management practices:

- Scout application site before and after herbicide applications.
- Start with a clean application site, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g., a selective and/or a residual herbicide) and cultural practices (e.g. tillage or crop rotation) where appropriate.
- Utilize the specified label rate for the most difficult to control weed in your field. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture directions that encourage application rates of this product below the label directions.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Report any incidence of repeated non-performance of this product on a particular weed to local extension specialists, certified crop advisors, or your RedEagle International LLC representative.
- Contact your local sales representative, crop advisor, or extension agent 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 actions for each target weed.

APPLICATION INSTRUCTIONS

Pre-Emergence Applications

Apply 4 - 8 fl. oz. (0.155 - 0.25 lb. a.i.) of **Mesotrione 40% SC** per acre in at least 30 gallons of water per acre before seeds germinate and as close to seed germination as possible. Combine this product with another pre-emergence herbicide including Barricade 65WG (EPA Reg. No. 100-834, prodiamine) for extended control of crabgrass and foxtail.

Pre-Emergence Application Precaution:

• **Mesotrione 40% SC** is most effective on established turf when applied post-emergence unless it is combined with another soil active herbicide.

Pre-Emergence Application Restrictions:

- **DO NOT** exceed 5 fl. oz. (0.155 lb. a.i.) per acre per application to perennial ryegrass, fine fescues, or mixed stands that consist of >50% perennial ryegrass and/or fine fescue.
- St. Augustinegrass sod: DO NOT exceed 4 fl. oz. (0.125 lb. a.i.) per acre.

Application to New Seedings/New Lawns

Apply 5 - 8 fl. oz. (0.155 - 0.25 lb. a.i.) **Mesotrione 40% SC** per acre in at least 30 gals. of water per acre before seeding or after seeding of turfgrass species listed below, except fine fescue, as application to fine fescue can reduce grass density. **Mesotrione 40% SC** can be effectively used on grass seed blends that contain <20% by weight hard/fine fescue. For optimal control, apply at grass seeding or as close to seeding as possible.

New Seedings/New Lawns Restriction:

• **DO NOT** spray on newly germinated turfgrass. Delay treatment until grass has been mowed 2 - 4 times and/or 4 weeks after emergence (whichever is longer).

Post-Emergence Application

Apply 4 - 8 fl. oz. (0.125 - 0.25 lb. a.i.) of **Mesotrione 40% SC** per acre in at least 30 gals. of water per acre with a NIS surfactant. Make a repeat application 2 - 3 weeks later for optimal weed control. Apply to young, actively growing weeds.

Post-Emergence Application Precaution:

Moisture stress and application to mature weeds can reduce herbicide efficacy.

Bentgrass (Agrostis spp.)/Nimbleweed (Muhlenbergia schreberi) Treatment

Apply 5 fl. oz. (0.155 lb. a.i.) **Mesotrione 40% SC** per acre in at least 30 gals. of water per acre combined with a NIS surfactant at 2- to 3-week intervals for a maximum of 3 applications. For optimal weed control, apply in late summer/early fall just prior to new growth.

St. Augustinegrass (Sod uses only) and Centipedegrass Treatment

Apply to established turf ONLY.

St. Augustinegrass (Sod uses only) and Centipedegrass Restrictions:

- **DO NOT** exceed 4 fl. oz. (0.125 lb. a.i.) **Mesotrione 40% SC** per application if tank mixing with Atrazine or Simazine.
- **DO NOT** exceed 0.5 lb. atrazine or simazine active ingredient. See atrazine/simazine labels for precautions and restrictions.

Dormant Bermudagrass Application only:

Apply 5 fl. oz. (0.155 lb. a.i.) per acre of **Mesotrione 40% SC** to control winter weeds listed in the **WEEDS CONTROLLED** table below. Make a repeat application 2 - 3 weeks later. Application of **Mesotrione 40% SC** to semi-dormant turf will cause bermudagrass whitening.

Spot Applications of Mesotrione 40% SC

Spray Mix	Application Rate	Rate of Mesotrione 40% SC	Rate of NIS adjuvant
2 gallons	1 gallon per 1,000 sq. ft.	1 teaspoon	3 teaspoons

Spot Application Restriction:

• DO NOT apply more than 16 fl. oz. (0.25 lb. a.i.) of Mesotrione 40% SC per acre per year.

WEEDS CONTROLLED USING PRE-EMERGENCE APPLICATION

Apply Mesotrione 40% SC with a grass pre-emergence herbicide including Barricade 65WG Herbicide (EPA Reg. No. 100-834, prodiamine), except when used to control weeds in new seedings. Mesotrione 40% SC will control the following

weeds using pre-emergence application:

Common Name	Scientific Name
Barnyardgrass	Echinochloa crusgalli
Bentgrass (Creeping)	Agrostis stolonifera
Bluegrass (Annual)*	Poa annua*
Buckhorn Plantain	Plantago Ianceloata
Carpetweed	Mollugo verticillata
Chickweed (Common)	Stellaria media
Chickweed (Mouseear)	Cerastium vulgatum
Clover (Large Hop)	Trifolium aureum
Clover (White)	Trifolium repens
Crabgrass (Large)	Digitaria sanguinalis
Crabgrass (Smooth)	Digitaria ischaemum
Crabgrass (Southern)	Digitaria ciliaris
Foxtail (Yellow)	Setaria glauca
Galinsoga	Galinsoga ciliate
Lambsquarters	Chenopodium album
Pigweed (Redroot)	Amaranthus retroflexus
Pigweed (Smooth)	Amaranthus hybridus
Purslane (Common)	Portulaca oleracea
Shepherd's Purse	Capsella bursa-pastoris
Smartweed (Pale)	Polygonum lapathifolium
Smartweed (Pennsylvania)	Polygonum pensylvanicum
Speedwell (Persian)	Veronica persica
Speedwell (Purslane)	Veronica peregrine
Wild Carrot	Daucus carota
*Suppression only.	

WEEDS CONTROLLED USING POST-EMERGENCE APPLICATION

Make a second application of **Mesotrione 40% SC** 2 - 3 weeks after initial treatment. For optimal control add a NIS-type surfactant and apply to young, actively growing weeds. **Mesotrione 40% SC** will control the following weeds using post-emergence application:

emergence application:	
Common Name	Scientific Name
Barnyardgrass	Echinochloa crusgalli
Bentgrass (Creeping)	Agrostis stolonifera
Buckhorn Plantain	Plantago Ianceloata
Carpetweed	Mollugo verticillata
Chickweed (Common)	Stellaria media
Chickweed (Mouseear)	Cerastium vulgatum
Clover (Large Hop)	Trifolium aureum
Clover (White)	Trifolium repens
Crabgrass (Large)*	Digitaria sanguinalis*
Crabgrass (Smooth)*	Digitaria ischaemum*
Crabgrass (Southern)*	Digitaria ciliaris*
Curly Dock	Rumex crispus
Dandelion (Catsear)	Hypochoeris radicata
Dandelion (Common)	Taraxacum officinale
Florida Betony	Stachys floridana
Florida Pusley	Richardia scabra
Foxtail (Yellow)	Setaria glauca
Galinsoga	Galinsoga ciliate
Goosegrass*	Eleusine indica*
Ground Ivy	Glechoma hederacea
Heal-All	Prunella vulgaris
Henbit	Lamium amplexicaule
Lambsquarters (Common)	Chenopodium album
Lawn Burweed	Soliva sessilis
Lovegrass (Tufted)	Eragrostis pectinacea
Marestail	Conyza Canadensis
Nimblewill	Muhlenbergia schreberi

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Common Name	Scientific Name
Nutsedge (Yellow)	Cyperus esculentus
Oxalis	Oxalis stricta
Pigweed (Redroot)	Amaranthus retroflexus
Pigweed (Smooth)	Amaranthus hybridus
Purslane (Common)	Portulaca oleracea
Shepherd's Purse	Capsella bursa-pastoris
Smartweed (Pale)	Polygonum lapathifolium
Smartweed (Pennsylvania)	Polygonum pensylvanicum
Sowthistle	Sonchus oleraceus
Swinecress	Coronopus didymus
Thistle (Canada)	Cirsium arvense
Verbena	Verbena hastate
Wild Carrot	Daucus carota
Wild Violet	Viola pratincola
Windmillgrass	Chloris verticillata
*For optimal control, apply to less than 4-tiller crabgrass and goosegrass.	

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep container tightly closed when not in use. Keep away from heat and flame. **DO NOT** store near seed, fertilizers, or foodstuffs. Can be stored at temperatures as low as minus 20°F. Keep away from heat and flame.

PESTICIDE DISPOSAL: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited.

CONTAINER HANDLING:

[Containers 5 gallons or less:] [Nonrefillable container. DO NOT reuse or refill container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment and 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 or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Once cleaned, offer for recycling 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 cut or weld metal containers.]

[Containers larger than 5 gallons:] [Nonrefillable container. DO NOT reuse or refill container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip 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. Once cleaned, offer for recycling or reconditioning if appropriate. If recycling is not available, puncture or dispose of in a sanitary-landfill or incineration or if allowed by State and local authorities, by burning. If burned, stay out of smoke.] [Containers larger than 5 gallons & Bulk:] [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 refiling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.]

WARRANTY AND DISCLAIMER STATEMENT

NOTICE: Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of RedEagle International LLC. To the extent allowable under State law, all such risks shall be assumed by the user or buyer.

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