AGRICULTURAL RED EAGLE CHEMICALS

MESOTRIONE | GROUP 27 | HERBICIDE

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.

KEEP OUT OF REACH OF CHILDREN
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 do so by a 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 to 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 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes. • 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**

SEE LABEL BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, AND STORAGE AND DISPOSAL.

Manufactured For:
RedEagle International, LLC
5143 S. Lakeland Drive Suite 4
Lakeland, FL 33813

EPA Reg. No. 85678-77

NET CONTENTS: 2.5 Gallons (9.46L)

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 PROTECTIVE 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 ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Polyvinyl Chloride (PVC) ≥ 14 mils, and Viton ≥ 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 a pplication. 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 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) 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, g) 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, age 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, 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 in- line 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 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 previous steps.
8. 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 ure adequate dispersing.
6. If tank mixing, add the tank mix product.
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

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]	
Amaranth, Palmer	*Amaranthus palmeri*	PC*	C*
Amaranth, Powell	*Amaranthus powellii*	C	C
Amaranth, Spiny	*Amaranthus spinosus*	C	C
Atriplex	*Chenopodium orach*	C	C
Buckwheat, Wild	*Polygonum convolvulus*	PC	PC
Buffalobur	*Solanum rostratum*	C	C
Burcucumber	*Sicyos angulatus*	PC	C*
Carpetweed	*Mollugo verticillata*	C	C
Carrot, Wild	*Daucus carota*	PC	C
Chickweed, Common	*Stellaria media*	C	C
Cocklebur, Common	*Xanthum strumarium*	C	C
Crabgrass, Large	*Digitaria sanguinalis*	C*	C*
Dandelion	*Taraxacum officinale*	NC	PC
Dock, Curly	*Rumex crispus*	PC	PC
Galinsoga	*Galinsoga parviflora*	C	C
Hemp	*Cannabis sativa*	C	C
Horsenettle	*Solanum carolinense*	PC	C
Jimsonweed	*Datura stramonium*	C	C
Horseweed	*(Marestail) Conyza canadensis*	PC	C
Knotweed, Prostrate	*Polygonum aviculare*	PC	PC
Kochia	*Kochia scoparia*	PC*	C*
Lambsquarters, Common	*Chenopodium album*	C	C
Mallow, Venice	*Hibiscus trionum*	NC	C
Morningglory, Entireleaf	*Ipomoea hederacea*	PC	C
Morningglory, Ivyleaf	*Ipomoea hederacea*	PC	C
Morningglory, Pitted	*Ipomoea lacunosa*	PC	C
Mustard, Wild	*Brassica kaber*	C	C
Nightshade, Black	*Solanum nigrum*	C	C
Nightshade, Eastern Black	*Solanum ptychanthum*	C	C
Nightshade, Hairy	*Solanum sarrachoides*	C	C
Nutsedge, Yellow	*Cyperus esculentus*	PC	PC

Pigweed, Redroot	*Amaranthus retroflexus*	C	C
Pigweed, Smooth	*Amaranthus hybridus*	C	C
Pigweed, Tumble	*Amaranthus albus*	C	C
Pokeweed, Common	*Phytolacca americana*	PC	PC
Potatoes, Volunteer	*Solanum spp.*	C	C
Pusley, Florida	*Richardia scabra*	C*	C*
Ragweed, Common	*Ambrosia artemisiifolia*	PC	C
Ragweed, Giant	*Ambrosia trifida*	C*	C
Sesbania, Hemp	*Sesbania exaltata*	C	C
Sida, Prickly (Teaweed)	*Sida spinosa*	NC	C*
Signalgrass, Broadleaf	*Urochloa platyphylla*	C*	C*
Smartweed, Ladysthumb	*Polygonum persicaria*	C*	C
Smartweed, Pale	*Polygonum lapathifolium*	C*	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C*	C
Sunflower, Common	*Helianthus annuus*	C	C
Thistle, Canada	*Circium arvense*	NC	PC
Velvetleaf	*Abutilon theophrasti*	C	C
Waterhemp, Common	*Amaranthus rudis*	C*	C
Waterhemp, Tall	*Amaranthus tuberculatus*	C*	C

[1]**Mesotrione 40% SC** tank mixture with atrazine is approved only for use on corn and sugarcane.
[2]Weeds 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.

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** 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]	
Amaranth, Palmer	*Amaranthus palmeri*	C	C
Amaranth, Powell	*Amaranthus powellii*	C	C
Amaranth, Spiny	*Amaranthus spinosus*	C	C
Buffalobur	*Solanum rostratum*	C	C
Carpetweed	*Mollugo verticillata*	C	C
Chickweed, Common	*Stellaria media*	C	C
Cocklebur, Common	*Xanthum strumarium*	PC	C
Crabgrass, Large	*Digitaria sanguinalis*	PC	PC
Galinsoga	*Galinsoga parviflora*	C	C
Jimsonweed	*Datura stramonium*	C	C
Kochia	*Kochia scoparia*	PC	C
Lambsquarters, Common	*Chenopodium album*	C	C
Morningglory, Entireleaf	*Ipomoea hederacea*	PC	C
Morningglory, Ivyleaf	*Ipomoea hederacea*	PC	C
Morningglory, Pitted	*Ipomoea lacunosa*	PC	C
Nightshade, Eastern Black	*Solanum ptychanthum*	C	C

Nightshade, Hairy	*Solanum sarrachoides*	C	C
Pigweed, Redroot	*Amaranthus retroflexus*	C	C
Pigweed, Smooth	*Amaranthus hybridus*	C	C
Pigweed, Tumble	*Amaranthus albus*	C	C
Ragweed, Common	*Ambrosia artemisiifolia*	C	C
Ragweed, Giant	*Ambrosia trifida*	PC	C
Signalgrass, Broadleaf	*Urochloa platyphylla*	PC	PC
Smartweed, Ladysthumb	*Polygonum persicaria*	C	C
Smartweed, Pale	*Polygonum lapathifolium*	C	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C	C
Sunflower, Common	*Helianthus annuus*	PC	C
Velvetleaf	*Abutilon theophrasti*	C	C
Waterhemp, Common	*Amaranthus rudis*	C	C
Waterhemp, Tall	*Amaranthus tuberculatus*	C	C

*__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

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 Atrazine + Nicosulfuron + Rimsulfuron	This mixture will provide additional weed control. Refer to the product label for a list of weeds controlled.
Atrazine + S-Metolachlor Citric acid	**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 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 Nicosulfuron + Rimsulfuron + Atrazine	This mixture will control additional weeds. See product label for list of weeds controlled.
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 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 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 pre- emergence 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 at **Mesotrione 40% SC**C rates greater than 3 fl. oz./A (0.094 lb. a.i./A). If grass crop injury is a conce 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 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 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:

$$\frac{\text{Band Width in Inches} \times \text{Broadcast Rate Per Acre}}{\text{Row Width in Inches}} = \text{Amount Needed per Acre of Field}$$

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 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

Program	Application Rate (fl. oz./A)			Application Interval (weeks)
	1st Application	2nd Application	3rd Application	
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 pre- emergence 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 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 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 al./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 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.

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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