



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

February 6, 2026

Tasha Lott  
Product Registration Manager  
Prime Source, A Division of Albaugh, LLC  
1525 NE 36th Street  
Ankeny, IA 50021

Subject: Label Amendment – Adding Mixing Directions for Hydroseeding.  
Product Name: MESO 4 SC SELECT  
EPA Registration Number: 89442-33  
Application Date: January 27, 2022  
Case Number: 479455

Dear Ms. Lott:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

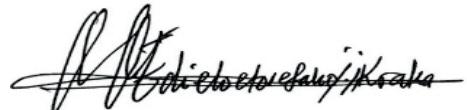
A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Ernest Kraka at 202-566-2822 or at [kraka.ernest@epa.gov](mailto:kraka.ernest@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Ernest Kraka". Below the signature, the name is written in a smaller, printed font: "Ernest Kraka, Ph.D., Biologist/Risk Manager".

Ernest Kraka, Ph.D., Biologist/Risk Manager  
Fungicide and Herbicide Branch  
Registration Division 7505T  
Office of Pesticide Programs

Enclosure

**ACCEPTED****02/06/2026**

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under  
EPA Reg. No.  
89442-33

**MESOTRIONE****GROUP****27****HERBICIDE**

## **Meso 4 SC Select [ABN: Meso 4SC Prime]**

Sublabel A (Pages 1-20) ABN: Meso 4SC Prime: Controls annual broadleaf weeds in Soybean, Corn (field, seed, yellow pop, sweet), and other listed crops

Sublabel B (Pages 21-27) Meso 4 SC Select: Provides selective and residual control of weeds in Ornamental Turfgrasses

**Active Ingredient:**

Mesotrione: 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione..... 40.0%

**Other Ingredients:**..... 60.0%

**TOTAL:** ..... 100.0%

Contains 4 lbs. Mesotrione per gallon.

**By Weight****KEEP OUT OF REACH OF CHILDREN****CAUTION****FIRST AID****IF ON SKIN**

- 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**HOT LINE NUMBER**

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 inside label booklet for additional Precautionary Statements and complete Directions for Use.]

[See inside booklet for additional Precautionary Statements, complete Directions For Use, & Storage And Disposal.]

**EPA Reg. No.: 89442-33****EPA Est. No.: \_\_\_\_\_****Net Contents: \_\_\_\_\_****Manufactured (For)(By):**

Prime Source, a Division of Albaugh, LLC  
1525 NE 36<sup>th</sup> Street  
Ankeny, IA 50021

**PRECAUTIONARY STATEMENTS**  
**Hazards to Humans and Domestic Animals**  
**CAUTION**

Harmful if absorbed through skin. 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 (barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, poly-ethylene, polyvinyl chloride (PVC)  $\geq$  14 mils, and viton  $\geq$  14 mils)

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.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove 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.

**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.

**ENVIRONMENTAL HAZARDS**

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

**Non-Target Organism Advisory**

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

**Groundwater Advisory**

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

**Surface Water Advisory**

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

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

## 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
- shoes plus socks
- chemical-resistant gloves (barrier laminate, butyl rubber  $\geq$ 14 mils, nitrile rubber  $\geq$ 14 mils, poly-ethylene, polyvinyl chloride (PVC)  $\geq$ 14 mils, and viton  $\geq$ 14 mils)

### PRODUCT INFORMATION

**Meso 4 SC Select [Alternate Brand Name]** is a systemic pre-emergence and post-emergence herbicide for selective contact and residual control of broadleaf weeds in labeled crops. In pre-emergence applications, weeds take up the product through the soil during weed emergence. Dry weather conditions reduce pre-emergent effectiveness of **Meso 4 SC Select [Alternate Brand Name]**. At least  $\frac{1}{4}$ -inch of rainfall must occur within 7-10 days of application; rotary hoeing activates **Meso 4 SC Select**. In post- emergence applications, vulnerable weeds take up the product through treated foliage and stop growing soon after application. It can take up to two weeks for weeds to die. **Meso 4 SC Select [Alternate Brand Name]** is absorbed by soil and/or through foliage of emerged weeds.

**Meso 4 SC Select [Alternate Brand Name]** does not control most species of grass weeds. **Meso 4 SC Select [Alternate Brand Name]** can be tank-mixed with other herbicides registered to control grass weeds (see tank-mix information in this label for additional information). 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. **Meso 4 SC Select [Alternate Brand Name]** 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.

### WEED RESISTANCE MANAGEMENT FOR MESO 4 SC SELECT [ALTERNATE BRAND NAME]

MESOTRIONE	GROUP	27	HERBICIDE
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For resistance management, please note that **Meso 4 SC Select [Alternate Brand Name]** is a Group 27 herbicide (pigment synthesis inhibitor). Any weed population may contain or develop plants naturally resistant to **MESOTRIONE 4L** and other Group 27 herbicides. The resistant individuals 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 **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** 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. per acre per year of **Meso 4 SC Select [Alternate Brand Name]**). If additional herbicide is needed, use an herbicide product other than a HPPD inhibitor (Group 27 Herbicide). Use specified label rates of **Meso 4 SC Select [Alternate Brand Name]** to prevent selection for, or population shifts toward, marginally tolerant weed species and/or species biotypes.

Contact your local sales representative 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 action for each target weed.

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.

Report any incidence of non-performance of this product against a particular weed species to your Albaugh representative or call 1-800-247-8013 or at [www.albaughLLC.com](http://www.albaughLLC.com). If resistance is suspected, treat weed escapes with an herbicide having a different mode of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

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

- **Diversified approach.** To the extent possible, use a diversified approach towards weed management. Whenever possible, incorporate multiple weed-control practices.
- **Know your weeds.** Identify weeds present by scouting and understand their biology. A weed-control program should consider all of the weeds present.
- **Rotate mechanisms of action.** Difficult to control weeds may require applications of herbicides with differing mechanisms of action.
- **Apply herbicide correctly.** Apply this herbicide at the correct timing and rate to control the most difficult weed in the field.

Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management directions for specific weed biotypes.

#### **INTEGRATED WEED PEST MANAGEMENT**

Integrate **Meso 4 SC Select [Alternate Brand Name]** 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) must 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 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators must select nozzle and pressure that deliver coarse to very coarse droplets in accordance with American Society of Agricultural & Biological Engineers Standard 641 (ASABE S641). If the windspeed is 10 miles per hour or less, applicators must use  $\frac{1}{2}$  swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use  $\frac{3}{4}$  swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed-wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

**Airblast Applications:**

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

**Ground Boom Applications:**

- Do not release spray at a height greater than 3 feet above the ground or crop canopy.
- Applicators must select nozzle and pressure that deliver coarse to very coarse droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

**Boomless Ground Applications:**

- Applicators must select nozzle and pressure that deliver coarse to very coarse droplets in accordance with American Society of Agricultural & Biological Engineers Standard (ASABE S572).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

**SPRAY DRIFT ADVISORIES****IMPORTANCE OF DROPLET SIZE**

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

**Controlling Droplet Size – Ground Boom**

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

**Controlling Droplet Size – Aircraft**

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

**BOOM HEIGHT – Ground Boom**

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.

**SHIELDED SPRAYERS**

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

**TEMPERATURE AND HUMIDITY**

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

**TEMPERATURE INVERSIONS**

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

**WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

**Handheld Technology Applications:**

- Take precautions to minimize spray drift.

**USE PRECAUTIONS - MESO 4 SC SELECT [Alternate Brand Name]**

Severe corn injury and/or yield loss can occur:

- From post-emergent application of **Meso 4 SC Select [Alternate Brand Name]** to corn treated with Counter® or Lorsban®.
- If foliar post-emergent applications of **Meso 4 SC Select [Alternate Brand Name]** are made to corn in a tank mix with any organophosphate or carbamate insecticide.
- If an organophosphate or carbamate insecticide is applied foliar post-emergence within 7 days before or 7 days after **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** is made following label directions when weeds are actively growing.
- **Meso 4 SC Select [Alternate Brand Name]** may be applied with pyrethroid type insecticides (e.g., Lambda cyhalothrin).

**USE RESTRICTIONS - MESO 4 SC SELECT**

- **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 one 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.

**AERIAL APPLICATION INSTRUCTIONS FOR CORN AND SUGARCANE**

**Aerial application of Meso 4 SC Select [Alternate Brand Name]** is permitted only on corn and sugarcane. Make aerial applications with nozzles that produce coarse to very coarse droplets. **DO NOT** use nozzles producing fine to medium size droplets.

**CORN**

**Meso 4 SC Select [Alternate Brand Name]** is approved for aerial application for pre-emergence and post-emergence control in corn in the states of: 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.

**SUGARCANE**

**Meso 4 SC Select [Alternate Brand Name]** is approved for aerial application for pre-emergence and post-emergence control in sugarcane in the states of: Florida, Louisiana, and Texas. Make aerial applications in a minimum of 2 gallons water per acre.

**PRE-EMERGENCE GROUND APPLICATION INSTRUCTIONS**

Apply **Meso 4 SC Select [Alternate Brand Name]** pre-emergence with a carrier volume of 10-60 gals./A.

Space spray nozzles of the same size and type uniformly to provide accurate and uniform coverage. Use medium to coarse droplet size nozzles to ensure coverage and avoid drift. Apply in a spray volume of 10-60 gals./A with water or liquid fertilizer (NOT suspension fertilizer) as the carrier. Use a pump that will maintain pump pressure of 35-40 psi at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures can be used with extended range or drift reduction nozzles.

Maintain constant agitation until spraying is complete, even if stopping for brief periods of time. If agitation is stopped for longer than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying.

## POST-EMERGENCE GROUND APPLICATION INSTRUCTIONS

Space spray nozzles of the same size and type uniformly to provide accurate and uniform coverage. Use medium to coarse droplet size nozzles to ensure coverage and avoid drift. Complete 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 inches above the crop canopy.

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

Apply with flat fan nozzles 80°-100° for optimum post-emergent coverage. **DO NOT** use flood jet nozzles or controlled droplet application equipment for post-emergence applications.

Angle nozzles forward 45° to enhance product penetration and provide better coverage. In-line strainers and nozzle screens must be a minimum of 50-mesh or coarser.

Maintain constant agitation until spraying is complete, even if stopping for brief periods of time. If agitation is stopped for longer than 5 minutes, resuspend the spray solution by running on full agitation prior to spraying.

## USE DIRECTIONS WITH SPRAY ADDITIVES

### Post-Emergence Adjuvants

**DO NOT** use methylated seed oil (MSO) or MSO adjuvant blends for post-emergence applications of **Meso 4 SC Select [Alternate Brand Name]** or severe crop injury can occur. **DO NOT** use MSO adjuvants unless it is specifically permitted in the **Tank Mixtures for Corn** section of this label, or if permitted by a state-specific supplemental label.

In addition to COC, add 2.5% (v/v) a spray grade UAN (e.g., 28-0-0) to the spray solution, or 8.5 lbs./100 gallons of ammonium sulfate (AMS), except if precluded elsewhere on this label or a state-specific supplemental label.

### Adjuvant Use Post-Emergence to Sweet and Yellow Corn

**DO NOT** use UAN or AMS on sweet and yellow corn as severe crop injury can occur.

Use a NIS instead of a COC to reduce the likelihood of crop injury. COCs will maximize weed control under dry growing conditions, but will significantly injure crops under lush growing conditions. To optimize weed control, add atrazine wherever rotational or local atrazine restrictions allow.

### Pre-Emergence Adjuvant Use

Any adjuvant approved for use on agriculture is permitted when making **Meso 4 SC Select [Alternate Brand Name]** pre-plant or pre- emergence applications. MSO adjuvants perform better than COC and NIS adjuvants under pre-plant/pre-emergence conditions. UAN and AMS adjuvants will provide better weed control than not using any adjuvant. If **Meso 4 SC Select [Alternate Brand Name]** is being tank-mixed with another registered herbicide, refer to the tank mix partner label for adjuvant precautions and restrictions.

## 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 **Crop Use Directions** sections 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 **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]**. 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 **Meso 4 SC Select [Alternate Brand Name]** slowly and agitate until completely dissolved. Wait at least 1 minute after the last of the **Meso 4 SC Select [Alternate Brand Name]** 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.
7. Add the adjuvant and UAN, if needed, and continue to fill tank to desired level with water.

## MESO 4 SC SELECT [ALTERNATE BRAND NAME] WEED CONTROL TABLES

**Meso 4 SC Select [Alternate Brand Name]** 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 generally regarded as acceptable control for commercial weed control.

For best post-emergence results, apply **Meso 4 SC Select [Alternate Brand Name]** to actively growing weeds.

Dry weather following pre-emergence applications may reduce efficacy of residual weed control. If irrigation is available, apply ½-1-inch water after pre-emergence application. If irrigation is not available, make a uniform shallow cultivation as soon as weeds emerge.

**Meso 4 SC Select [Alternate Brand Name]** 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 Meso 4 SC Select [Alternate Brand Name]**

Common Name	Scientific Name	Meso 4SC Select [Alternate Brand Name] 3 Fl. Oz./A (0.094 lb ai/A) Applied Alone	Meso 4SC Select <sup>1</sup> [Alternate Brand Name] 2.5-3.0 Fl. Oz./A (0.078-0.094 lb ai/A) + Atrazine
		Apply to Weeds <5" Tall <sup>2</sup>	
Amaranth, palmer	<i>Amaranthus palmeri</i>	PC+	C+
Amaranth, powell	<i>Amaranthus powelli</i>	C	C
Amaranth, spiny	<i>Amaranthus spinosus</i>	C	C
Atriplex	<i>Chenopodium orach</i>	C	C
Broadleaf signalgrass	<i>Urochloa platyphylla</i>	C+	C+
Buckwheat, wild	<i>Polygonum convolvulus</i>	PC	PC
Buffalobur	<i>Solanum rostratum</i>	C	C
Burcucumber	<i>Sicyos angulatus</i>	PC	C+
Carpetweed	<i>Mollugo verticillata</i>	C	C
Carrot, wild	<i>Daucus carota</i>	PC	C
Chickweed, common	<i>Stellaria media</i>	C	C
Cocklebur, common	<i>Xanthium strumarium</i>	C	C
Crabgrass, large	<i>Digitaria sanguinalis</i>	C+	C+
Dandelion	<i>Taraxacum officinale</i>	NC	PC
Dock, curly	<i>Rumex crispus</i>	PC	PC
Galinsoga	<i>Galinsoga parviflora</i>	C	C
Hemp	<i>Cannabis sativa</i>	C	C
Horsenettle	<i>Solanum carolinense</i>	PC	C
Jimsonweed	<i>Datura stramonium</i>	C	C
Horseweed (maretail)	<i>Conyza canadensis</i>	PC	C
Knotweed, prostrate	<i>Polygonum aviculare</i>	PC	PC
Kochia	<i>Kochia scoparia</i>	PC+	C+
Lambsquarters, common	<i>Chenopodium album</i>	C	C
Mallow, Venice	<i>Hibiscus trionum</i>	NC	C
Morningglory, entireleaf	<i>Ipomoea hederacea</i>	PC	C
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>	PC	C
Morningglory, pitted	<i>Ipomoea lacunosa</i>	PC	C
Mustard, wild	<i>Brassica kaber</i>	C	C
Nightshade, black	<i>Solanum nigrum</i>	C	C
Nightshade, Eastern black	<i>Solanum ptychanthum</i>	C	C
Nightshade, hairy	<i>Solanum sarachoides</i>	C	C
Nutsedge, yellow	<i>Cyperus esculentus</i>	PC	PC
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C	C
Pigweed, smooth	<i>Amaranthus hybridus</i>	C	C
Pigweed, tumble	<i>Amaranthus albus</i>	C	C
Pokeweed, common	<i>Phytolacca americana</i>	PC	PC
Potatoes, volunteer	<i>Solanum spp.</i>	C	C
Pusley, Florida	<i>Richardia scabra</i>	C+	C+
Ragweed, common	<i>Ambrosia artemisiifolia</i>	PC	C
Ragweed, giant	<i>Ambrosia trifida</i>	C+	C
Sesbania, hemp	<i>Sesbania exaltata</i>	C	C
Sida, prickly (teaweed)	<i>Sida spinosa</i>	NC	C+
Smartweed, ladysthumb	<i>Polygonum persicaria</i>	C+	C
Smartweed, pale	<i>Polygonum lapathifolium</i>	C+	C
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>	C+	C
Sunflower, common	<i>Helianthus annuus</i>	C	C
Thistle, Canada	<i>Cirsium arvense</i>	NC	PC
Velvetleaf	<i>Abutilon theophrasti</i>	C	C
Waterhemp, common	<i>Amaranthus rudis</i>	C+	C
Waterhemp, tall	<i>Amaranthus tuberculatus</i>	C+	C

<sup>1</sup>Meso 4 SC Select [Alternate Brand Name] tank mixture with atrazine is approved only for use on corn and sugarcane.<sup>2</sup>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 Meso 4 SC Select [Alternate Brand Name]**

Common Name	Scientific Name	Meso 4 SC Select <u>Alternate Brand Name</u> Applied Alone	Meso 4 SC Select <u>Alternate Brand Name</u> + Atrazine <sup>1</sup>
Amaranth, palmer	<i>Amaranthus palmeri</i>	C	C
Amaranth, powell	<i>Amaranthus powellii</i>	C	C
Amaranth, spiny	<i>Amaranthus spinosus</i>	C	C
Broadleaf signalgrass	<i>Urochloa platyphylla</i>	PC	PC
Buffalobur	<i>Solanum rostratum</i>	C	C
Carpetweed	<i>Mollugo verticillata</i>	C	C
Chickweed, common	<i>Stellaria media</i>	C	C
Cocklebur, common	<i>Xanthium strumarium</i>	PC	C
Crabgrass, large	<i>Digitaria sanguinalis</i>	PC	PC
Galinsoga	<i>Galinsoga parviflora</i>	C	C
Jimsonweed	<i>Datura stramonium</i>	C	C
Kochia	<i>Kochia scoparia</i>	PC	C
Lambsquarters, common	<i>Chenopodium album</i>	C	C
Morningglory, entireleaf	<i>Ipomoea hederacea</i>	PC	C
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>	PC	C
Morningglory, pitted	<i>Ipomoea lacunosa</i>	PC	C
Nightshade, Eastern black	<i>Solanum ptychanthum</i>	C	C
Nightshade, hairy	<i>Solanum sarachoides</i>	C	C
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C	C
Pigweed, smooth	<i>Amaranthus hybridus</i>	C	C
Pigweed, tumble	<i>Amaranthus albus</i>	C	C
Ragweed, common	<i>Ambrosia artemisiifolia</i>	C	C
Ragweed, giant	<i>Ambrosia trifida</i>	PC	C
Smartweed, ladysthumb	<i>Polygonum persicaria</i>	C	C
Smartweed, pale	<i>Polygonum lapathifolium</i>	C	C
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>	C	C
Sunflower, common	<i>Helianthus annuus</i>	PC	C
Velvetleaf	<i>Abutilon theophrasti</i>	C	C
Waterhemp, common	<i>Amaranthus rudis</i>	C	C
Waterhemp, tall	<i>Amaranthus tuberculatus</i>	C	C

<sup>1</sup>**Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** is applied alone, follow the crop rotation intervals listed below in Table 3. If **Meso 4 SC Select [Alternate Brand Name]** is tank-mixed with other products, then follow the most restrictive product's crop rotation interval.

**Table 3. Time Interval between Meso 4 SC Select [Alternate Brand Name] Application and Replanting/Planting of Rotational Crop**

Replant/Rotational Interval	Crop
Anytime	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), Sugarcane, Tall fescue grown for seed
4 Months	Small grain cereals (wheat, barley, rye)
10 Months	Alfalfa, Blueberry, Canola, Cotton, Currant, Lingonberry, Okra, Peanuts, Peas*, Potato, Rice, Snap Beans*, Soybeans, Sunflowers, Tobacco
18 Months	Cucurbits, Dry beans, Red Clover, Sugar Beets, All other crops

**\*Peas and Snap Beans:** Plant these rotation crops at a 10 month interval 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 **Meso 4 SC Select [Alternate Brand Name]** application.

- A minimum of 20 inches 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 ai/A) or less of this product has been applied no later than June 30<sup>th</sup> the year preceding rotational crop planting.
- No other HPPD herbicides (e.g., Callisto®, Halex® GT, Lexar® EZ, Lumax® EZ, Zemax®, Armezon™, Balance® Flexx, Capreno®, Corvus®, Impact®, or Laudis®) were applied the year prior to planting peas and snap beans.
- **DO NOT** plant peas or snap beans on sand, sandy loam, or loamy sand soils in Minnesota or Wisconsin.

#### CROP USE DIRECTIONS – CORN

Apply **Meso 4 SC Select [Alternate Brand Name]** by ground for pre-emergence or post-emergence weed control in field corn, seed corn, yellow popcorn, and sweet corn. Apply **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** in yellow popcorn or sweet corn (see the **Spray Additives** section of this label).

Post-emergence application of **Meso 4 SC Select [Alternate Brand Name]** 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 instructions before making a post-emergence application of **Meso 4 SC Select [Alternate Brand Name]** to yellow popcorn or sweet corn.

Temporary transient bleaching may occur in field corn treated with **Meso 4 SC Select [Alternate Brand Name]** 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. (0.24 lb. mesotrione AI) of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** exceed 3.0 fl. oz. (0.094 lb. AI/A) in a single post-emergence application.
- **DO NOT** make a second application of **Meso 4 SC Select [Alternate Brand Name]** within 14 days of the first application.
- **DO NOT** feed or harvest forage, grain, or stover within 45 days after application.
- **DO NOT** apply **Meso 4 SC Select [Alternate Brand Name]** to white popcorn or ornamental (Indian) corn.
- **DO NOT** include nitrogen based adjuvants (UAN or AMS) when making post-emergence applications of **Meso 4 SC Select [Alternate Brand Name]** to yellow popcorn or sweet corn.

#### **Meso 4 SC Select [Alternate Brand Name] Used Alone – Post-Emergence**

Apply 3.0 fl. oz./A (0.094 lb ai/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. **Meso 4 SC Select [Alternate Brand Name]** will not control most grass weeds.

Two post-emergence applications of **Meso 4 SC Select [Alternate Brand Name]** may be made under the following restrictions:

- Only one post-emergence application may be made if **Meso 4 SC Select [Alternate Brand Name]** has been applied pre-emergence.
- **DO NOT** exceed a total of 7.7 fl. oz./A (0.24 lb. AI/A) per year.
- **DO NOT** make a second application within 14 days of the first application.

- Applications made at rates lower than 3.0 fl. oz./A. (0.094 lb. AI/A) post-emergence may not provide adequate weed control and may result in reduced residual control.
- **DO NOT** exceed a total of 6.0 fl. oz./A (0.19 lb. AI/A) for the two post-emergence applications.
- If a post-emergence application of **Meso 4 SC Select [Alternate Brand Name]** was made to ground that received pre-emergence treatment of another mesotrione-containing herbicide, atrazine must be tank mixed with **Meso 4 SC Select [Alternate Brand Name]**.
- If mixing **Meso 4 SC Select [Alternate Brand Name]** 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.

#### **Meso 4 SC Select [Alternate Brand Name] Used Alone – Pre-Emergence**

Apply 6.0-7.7 fl. oz./A (0.188-0.24 lb. AI/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. **Meso 4 SC Select [Alternate Brand Name]** 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.

#### **Meso 4 SC Select [Alternate Brand Name] Tank Mixtures for Corn**

Apply **Meso 4 SC Select [Alternate Brand Name]** 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.

#### **Burndown Tank Mixtures in Corn**

Apply **Meso 4 SC Select [Alternate Brand Name]** in tank mixture with other registered herbicides for burndown and residual weed control.

Apply 3.0 fl. oz./A (0.094 lb ai/A) **Meso 4 SC Select [Alternate Brand Name]** with Sharda Paraquat Concentrate, Shypo 41% SL, and/or DiCash DGA-4 for improved broadleaf weed control with limited residual control before planting corn and before corn emergence. For better residual control, apply 6.0-7.7 fl. oz./A (0.188-0.24 lb ai/A) **Meso 4 SC Select [Alternate Brand Name]** (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 (0.166-0.24 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** applied pre- emergence.

**Table 4. Meso 4 SC Select [Alternate Brand Name] 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.

Product Name	Active Ingredient	EPA Reg. No.
AAtrex	Atrazine	100-497
Bicep Lite II Magnum®	Atrazine + S-Metolachlor	100-827
Bicep II Magnum®	Atrazine + S-Metolachlor	100-817
Cinch®	S-Metolachlor	352-625
Cinch® ATZ	Atrazine + S-Metolachlor	352-623
Cinch® ATZ Lite	Atrazine + S-Metolachlor	352-623
Degree Xtra®	Acetochlor + Atrazine	524-511
Dual II Magnum®	S-Metolachlor	100-818
Fultime®	Acetochlor + Atrazine	62719-371
Harness®	Acetochlor	524-473
Harness Xtra®	Acetochlor + Atrazine	524-480
Harness Xtra® 5.6L	Acetochlor + Atrazine	524-485
Keystone®	Acetochlor + Atrazine	62719-368
Keystone® LA	Acetochlor + Atrazine	62719-368
Outlook®	Dimethenamid-P	7969-156
Prowl®	Pendimethalin	241-337
Surpass® EC	Acetochlor	62719-367
TopNotch®	Acetochlor	62719-369

## Post-Emergence Tank Mixtures in Corn

See Table 5 below for a list of tank mixtures that can be applied after corn has emerged.

**Restriction:** **DO NOT** apply less than 3.0 fl. oz./A (0.094 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** unless specified on this label or on a state-specific supplemental label, as a loss of residual control can occur.

Always add an appropriate adjuvant to the spray tank (See the **Spray Additives** section of this label). 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. Meso 4 SC Select [Alternate Brand Name] 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.

Use Directions
Atrazine: AAtrex® 4L (EPA Reg. No. 100-497); AAtrex® Nine-O® (EPA Reg. No. 100-585) See Table 1 for application rates and list of weeds controlled.
Nicosulfuron: Accent® Q (EPA Reg. No. 352-773) This mixture will provide additional grass control. Refer to the product label for a list of weeds controlled.
Bentazon: Basagran® (EPA Reg. No. 7969-45) This mixture will provide additional broadleaf weed control. Refer to the product label for a list of weeds controlled.
Rimsulfuron + Thifensulfuron Methyl: Basis® (EPA Reg. No. 352-571) This mixture will provide additional weed control. Refer to the product label for a list of weeds controlled.
Atrazine + S-Metolachlor: Bicep II Magnum (100-817); Bicep Lite II Magnum (EPA Reg. No. 100-827) <b>DO NOT</b> use nitrogen based adjuvants (UAN or AMS); apply as post-directed spray. <b>DO NOT</b> 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: Buctril® (EPA Reg. No. 264-437); Moxy® (EPA Reg. No. 9779-346) This mixture will provide additional broadleaf weed control. Add 2 lb/gal Buctril or Moxy at up to 6 fl oz/A (0.094 lb ai/A). Add 4 lb/gal Buctril at up to 3 fl oz/A (0.094 lb ai/A).
Atrazine + Glyphosate-isopropylammonium + S-Metolachlor: Expert (EPA Reg. No. 100-1161) Use only on glyphosate tolerant corn (e.g., Agrisure® GT, Roundup Ready®). Crop death will occur if this mixture is applied to a corn hybrid that is not glyphosate tolerant. <b>DO NOT</b> add urea ammonium nitrate (UAN) or methylated seed oil (MSO) adjuvants to this mixture or crop injury can occur.
Glufosinate: Willowood Glufosinate 280SL (EPA Reg. No. 87290-41); Ignite® 280 SL (EPA Reg. No. 7969-448) Use only on corn designated as LibertyLink® or warranted as tolerant to glufosinate. Use of this mixture on corn hybrids not tolerant to glufosinate will result in severe crop injury or death. <b>DO NOT</b> use crop oil concentrate (COC) as an adjuvant or crop injury can occur.
Imazapyr + Imazethapy: Lightning® (EPA Reg. No. 241-377) Use only on corn designated at Clearfield® corn or warranted by BASF as tolerant to Lightning®. Use of this mixture on corn hybrids not tolerant to Lightning will result in severe crop injury or death. <b>DO NOT</b> use Methylated Seed Oil (MSO) or any MSO blend with this mixture or severe crop injury can occur.
Dicamba + Rimsulfuron-methyl: Northstar® (EPA Reg. No. 100-923) This mixture will control additional weeds. See product label for list of weeds controlled.
Prosulfuron: Peak® (EPA Reg. No. 10163-380) This mixture will control additional weeds. See product label for list of weeds controlled.
Primisulfuron-methyl + Prosulfuron: Spirit® (EPA Reg. No. 10163-381) This mixture will control additional weeds. See product label for list of weeds controlled.
Nicosulfuron + Rimsulfuron: Steadfast® Q (EPA Reg. No. 352-774) This mixture will control additional weeds. See product label for list of weeds controlled.
Nicosulfuron + Thifensulfuron methyl: Stout® (EPA Reg. No. 352-721) This mixture will control additional weeds. See product label for list of weeds controlled.
Glyphosate + S-Metolachlor: Touchdown® (EPA Reg. No. 100-1185) Glyphosate: Roundup® Glyphosate-Only Products (EPA Reg. No. 524-343, 524-659, 524-549, 524-537, 524-529, 524-475, 524-579) Use only on glyphosate tolerant corn (e.g., Agrisure GT, Roundup Ready). Use of this mixture on corn hybrids that are not glyphosate tolerant 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 quarts/100 gallons) of a non-ionic surfactant (NIS). <b>DO NOT</b> add urea ammonium nitrate (UAN), crop oil concentrate (COC) or methylated seed oil (MSO) adjuvants to this tank mixture or crop injury can occur.

### CROP USE DIRECTIONS – ASPARAGUS

**Meso 4 SC Select [Alternate Brand Name]** can be applied broadcast or banded at a rate of 3.0-7.7 fl. oz./A (0.094-0.24 lb ai/A) to asparagus as a spring application prior to spear emergence, as a post-harvest application (after final harvest), or both.

Use the 3.0 fl. oz./A (0.094 lb ai/A) rate for post-emergence control or partial control of the emerged weeds listed in Table 1. Use the 6.0-7.7 fl. oz./A (0.188-0.24 lb ai/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 3.0-7.7 fl. oz. (0.094-0.24 lb ai) per treated acre. For the best pre- emergence weed control with spring applications, **Meso 4 SC Select [Alternate Brand Name]** must be applied after fern mowing, diskng 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 ai/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 **Meso 4 SC Select [Alternate Brand Name]** 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 needed. 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 gallons of spray solution may be added for improved burndown of emerged weeds. If weeds have not yet emerged, no adjuvant is required.

#### Asparagus Restrictions:

- **Do not** apply more than 7.7 fl. oz./A (0.24 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **Do not** make more than two **Meso 4 SC Select [Alternate Brand Name]** applications per year.

### CROP USE DIRECTIONS - BLUEGRASS, RYEGRASS (ANNUAL AND PERENNIAL), AND TALL FESCUE GROWN FOR SEED

**Meso 4 SC Select [Alternate Brand Name]** can be applied to bluegrass, annual ryegrass, perennial ryegrass, or tall fescue which is grown for seed. **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** as a broadcast, surface spray at a rate of 6.0 fl. oz./A (0.188 lb ai/A) to a newly seeded crop. The **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]**. 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, **Meso 4 SC Select [Alternate Brand Name]** applied pre-emergence will control mannagrass.

#### Post-Emergence Application

Apply **Meso 4 SC Select [Alternate Brand Name]** as a broadcast post-emergence spray at a rate of 3.0-6.0 fl. oz./A (0.094-0.188 lb ai/A) to emerged bluegrass, perennial ryegrass or tall fescue grown for seed. Use the 3.0 fl. oz./A (0.094 lb ai/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, **Meso 4 SC Select [Alternate Brand Name]** applied post-emergence will control mannagrass (up to 3 tillers).

Use the 6.0 fl. oz./A (0.188 lb ai/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 **Meso 4 SC Select [Alternate Brand Name]** 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 gallons 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 **Meso 4 SC Select [Alternate Brand Name]** rates greater than 3.0 fl. oz./A. If grass crop injury is a concern, **DO NOT** add UAN or AMS to the spray solution.

Tank mixing other pesticides with **Meso 4 SC Select [Alternate Brand Name]** post-emergence may increase the risk of crop injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]**.
- **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 **Meso 4 SC Select [Alternate Brand Name]**.
- **DO NOT** make more than two applications of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** apply more than 6 fl. oz./A (0.188 lb ai/A) in a single application and not more than 9 fl. oz./A (0.28 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** per year.
- Applications of **Meso 4 SC Select [Alternate Brand Name]** to grasses grown for seed species not listed on this label may result in severe injury.

**CROP USE DIRECTIONS – 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 **Meso 4 SC Select [Alternate Brand Name]** is used on bush or caneberries not listed below, severe crop injury may occur.

**Meso 4 SC Select [Alternate Brand Name]** 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. **Meso 4 SC Select [Alternate Brand Name]** may be applied in bush or caneberries at a rate up to 6 fl. oz./A (0.188 lb ai/A). If a split application weed control program is desired, 3 fl. oz./A (0.094 lb ai/A) followed by 3 fl. oz./A (0.094 lb ai/A) may be used, but no more than two applications per crop per year are allowed and not more than 6 fl. oz./A (0.188 lb ai/A) in total per year. If two 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 needed, but avoid using COC adjuvants that are injurious to bush or caneberry leaves. **DO NOT** apply **Meso 4 SC Select [Alternate Brand Name]** to bush or caneberries after the onset of the bloom stage or illegal residues may occur.

In low bush blueberries, **Meso 4 SC Select [Alternate Brand Name]** may only be applied in the non-bearing year. This application may be a broadcast application. Up to 6 fl. oz./A (0.188 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** may be applied in a single application, or 3 fl. oz./A (0.094 lb ai/A) followed by 3 fl. oz./A (0.094 lb ai/A) if used in a split application program. No more than two applications per year are allowed and not more than 6 fl. oz./A in total per year. If two 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 needed. Applications of **Meso 4 SC Select [Alternate Brand Name]** during dry weather conditions and/or temperatures above 85° can cause injury to low bush blueberries. Applications of **Meso 4 SC Select [Alternate Brand Name]** can cause yellowing or necrosis of leaves and under severe conditions, leaf drop may occur especially on "Sourtop" variety blueberries.

**Bush & Caneberry Restrictions:**

- **DO NOT** make more than two applications of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** apply more than 6.0 fl. oz./A (0.188 lb ai/A) per year.

**CROP USE DIRECTIONS – CRANBERRY**

Apply **Meso 4 SC Select [Alternate Brand Name]** 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. effusus*, *J. bufonulus*, *J. tenuis*)
- sedges spp. (*Carex* spp.)
- silverleaf (*Potentilla pacifica*)
- yellow loosestrife (*Lysimachia terrestris*)

**Bearing/Non-Bearing Application Rates:**

- Apply up to 8 fl. oz./A (0.25 lb ai/A), but **DO NOT** apply more than 16 fl. oz./A (0.50 lb ai/A) in total per year.
- Make no more than two 8 fl. oz./A (0.25 lb ai/A) applications per crop per year.

- If two 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).
- **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.

**Meso 4 SC Select [Alternate Brand Name]** can be applied through irrigation systems (chemigation) including center pivot or solid set.

**Cranberry Restrictions:**

- **DO NOT** make more than two applications of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** apply more than 16.0 fl. oz./A (0.50 lb ai/A) per year.
- **DO NOT** use COC adjuvants that are known to injure cranberry leaves.

**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 **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** for the area covered must 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 should the need arise.

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 feet of surface water outside the bog system.
- **DO NOT** spray to runoff.

#### CROP USE DIRECTIONS – FLAX

**Meso 4 SC Select [Alternate Brand Name]** may be applied pre-emergence in flax, i.e., after planting but before crop emergence, at a rate up to 6 fl. oz./A (0.188 lb ai/A). For a list of weeds controlled see Tables 1 and 2. **DO NOT** apply more than one application, and not more than 6 fl. oz./A (0.188 lb ai/A), per crop or 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 needed. 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 **Meso 4 SC Select [Alternate Brand Name]** to emerged flax can result in severe crop injury.

#### Flax Restrictions:

- **DO NOT** make more than one application of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** apply **Meso 4 SC Select [Alternate Brand Name]** more than 6.0 fl. oz./A (0.188 lb ai/A) per year.

#### CROP USE DIRECTIONS – OATS

**Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** broadcast at a rate of 6.0 fl. oz./A (0.188 lb ai/A) prior to oat emergence. For best pre-emergence weed control, the **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** at a rate of 3.0 fl. oz./A (0.094 lb ai/A). For best results, **Meso 4 SC Select [Alternate Brand Name]** must be applied to emerged weeds that are less than 5" tall. Post-emergence applications of **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** 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 gallons of spray solution may be added for improved weed control. If emerged weeds are not present at the time of the **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** post-emergence may increase the risk of injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to **Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]**.
- **DO NOT** harvest oats within 50 days following the application of **Meso 4 SC Select [Alternate Brand Name]**.
- **DO NOT** make more than one application of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** apply **Meso 4 SC Select [Alternate Brand Name]** pre-emergence (prior to oat emergence) at more than 6.0 fl. oz./A (0.188 lb ai/A) per year.
- **DO NOT** apply **Meso 4 SC Select [Alternate Brand Name]** post-emergence at more than 3.0 fl. oz./A (0.094 lb ai/A) per year.
- If the oat crop treated with **Meso 4 SC Select [Alternate Brand Name]** is lost or destroyed, oats may be replanted immediately. If **Meso 4 SC Select [Alternate Brand Name]** was applied to the lost oat crop, no additional **Meso 4 SC Select [Alternate Brand Name]** can be applied to the replanted oat crop.

### CROP USE DIRECTIONS – OKRA

**Meso 4 SC Select [Alternate Brand Name]** 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 **Meso 4 SC Select [Alternate Brand Name]** at a rate of 6.0 fl. oz./A (0.188 lb ai/A) as a banded application to the row middles prior to weed emergence. For this banded application, leave one foot 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 6.0 fl. oz. (0.188 lb ai) per treated acre.

#### Post-Emergence Hooded Applications

Apply **Meso 4 SC Select [Alternate Brand Name]** at a rate of 3.0 fl. oz./A (0.094 lb ai/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. A non-ionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v must be added to the spray solution. For post-emergence hooded applications, the spray equipment must be set up to minimize the amount of **Meso 4 SC Select [Alternate Brand Name]** that contacts the okra foliage or crop injury will occur. For best post-emergence results, **Meso 4 SC Select [Alternate Brand Name]** must be applied to actively growing weeds.

#### Okra Restrictions:

- **DO NOT** harvest okra within 28 days following the application of **Meso 4 SC Select [Alternate Brand Name]**.
- **DO NOT** make more than one application of **Meso 4 SC Select [Alternate Brand Name]** per okra crop.
- **DO NOT** apply **Meso 4 SC Select [Alternate Brand Name]** as a row-middle application at more than 6.0 fl. oz. (0.188 lb ai) per treated acre per year.
- **DO NOT** apply **Meso 4 SC Select [Alternate Brand Name]** as a post-directed application at more than 3.0 fl. oz. (0.094 lb ai) per acre per year.
- **DO NOT** apply **Meso 4 SC Select [Alternate Brand Name]** as a broadcast pre-emergence or broadcast post-emergence application to okra or severe injury will occur.
- If the okra crop treated with **Meso 4 SC Select [Alternate Brand Name]** is lost or destroyed, okra can be replanted only in the soil band that was not treated with **Meso 4 SC Select [Alternate Brand Name]**.
- **DO NOT** apply **Meso 4 SC Select [Alternate Brand Name]** 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).

### CROP USE DIRECTIONS - PEARL MILLET

**Meso 4 SC Select [Alternate Brand Name]** 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 (0.188 lb ai/A). For a list of weeds controlled see Table 2. **DO NOT** apply more than one application, and not more than 6 fl. oz./A (0.188 lb ai/A) per crop or per year in pearl millet. 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 needed. 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 **Meso 4 SC Select [Alternate Brand Name]** to emerged pearl millet can result in severe crop injury.

#### Pearl Millet Restrictions:

- **DO NOT** make more than one application of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** apply more than 6.0 fl. oz./A (0.188 lb ai/A) per year.

### CROP USE DIRECTIONS – RHUBARB

**Meso 4 SC Select [Alternate Brand Name]** can be applied prior to crop emergence for weed control in established rhubarb.

Apply **Meso 4 SC Select [Alternate Brand Name]** at a rate of 6.0 fl. oz./A (0.188 lb ai/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 required 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 **Meso 4 SC Select [Alternate Brand Name]** to rhubarb that is not dormant may result in a temporary bleaching symptomology. Rainfall or irrigation after the **Meso 4 SC Select [Alternate Brand Name]** application may increase the risk of injury to emerging rhubarb.

#### Rhubarb Restrictions:

- **DO NOT** harvest rhubarb within 21 days following the application of **Meso 4 SC Select [Alternate Brand Name]**.
- **DO NOT** make more than one application of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** apply more than 6.0 fl. oz./A (0.188 lb ai/A) per year.

## CROP USE DIRECTIONS – SORGHUM (GRAIN and SWEET)

### Pre-Emergence Applications

Make pre-emergence application of **Meso 4 SC Select [Alternate Brand Name]** 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 6.0-6.4 fl. oz./A (0.188-0.20 lb ai/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 **Meso 4 SC Select [Alternate Brand Name]** 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 gallons 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 one pre-emergence application of **Meso 4 SC Select [Alternate Brand Name]**.
- **DO NOT** apply more than 6.4 fl. oz./A (0.20 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** apply to emerged sorghum or severe crop injury can occur.
- **DO NOT** use **Meso 4 SC Select [Alternate Brand Name]** 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-Directed Applications

Apply **Meso 4 SC Select [Alternate Brand Name]** 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 3.0 fl. oz./A (0.094 lb ai/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 **Meso 4 SC Select [Alternate Brand Name]** 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 gallons of spray solution of ammonium sulfate (AMS) can be added to the spray solution in addition to the COC or NIS.

**Meso 4 SC Select [Alternate Brand Name]** 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 one post-directed application of **Meso 4 SC Select [Alternate Brand Name]**.
- **DO NOT** apply more than 3.0 fl. oz./A (0.094 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** post-directed and not more than 6.4 fl. oz./A (0.20 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** per grain sorghum crop 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.

## CROP USE DIRECTIONS – SOYBEAN

**Meso 4 SC Select [Alternate Brand Name]** can be applied pre-emergence to soybeans that are identified as mesotrione tolerant. Applications to soybeans that are not mesotrione tolerant will result in significant crop injury.

### Pre-Emergence Applications

For pre-emergence control of the weeds listed in Table 2, apply **Meso 4 SC Select [Alternate Brand Name]** prior to soybean emergence at a rate of 6.0 fl. oz./A (0.188 lb ai/A). Apply the higher rate for longer residual control. **Meso 4 SC Select [Alternate Brand Name]** may be tank mixed with other registered soybean herbicides including Dual Magnum®, Dual II Magnum, and Prefix®. 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 gallons (0.25% v/v) or a crop oil concentrate (COC) at 1 gallon/100 gallons (1% v/v). In addition to NIS or COC, also add either ammonium sulfate (AMS) at 8.5-17 lbs./100 gallons (or equivalent).

### Soybean Restrictions:

- Apply no more than 6.0 fl. oz./A (0.188 lb ai/A) per soybean crop per year.
- **DO NOT** make more than one application of **Meso 4 SC Select [Alternate Brand Name]** per year.
- **DO NOT** apply to emerged soybeans.
- **DO NOT** graze or feed soybean forage or hay to livestock.

### CROP USE DIRECTIONS – SUGARCANE

Apply **Meso 4 SC Select [Alternate Brand Name]** by ground for pre-emergence, post-emergence over-the-top or post-emergence direct weed control in sugarcane.

Apply **Meso 4 SC Select [Alternate Brand Name]** aerially for pre-emergence and post-emergence weed control in the states of: **Florida, Louisiana, and Texas**.

### Pre-Emergence Applications

Apply 6.0-7.7 fl. oz./A (0.188-0.24 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** 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 AAatrex® or Evik® with **Meso 4 SC Select [Alternate Brand Name]** to improve weed control. Refer to the tank mix partner label for specific rates and use directions.

### Post-Emergence Applications

Apply 3.0 fl. oz./A (0.094 lb ai/A) of **Meso 4 SC Select [Alternate Brand Name]** 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 one 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 **Meso 4 SC Select [Alternate Brand Name]** with atrazine, Asulox® and/or Evoke®. 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 ai/A) in a pre-emergence application.
- **DO NOT** apply more than 3.0 fl. oz./A (0.094 lb ai/A) in a post-emergence application.
- **DO NOT** make more than 2 applications per year. If a pre-emergence application is made, only one post-emergence application can be made.
- **DO NOT** make two applications less than 14 days apart.
- **DO NOT** apply more than 10.7 fl. oz./A (0.335 lb ai/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 < 5 Gallons:** Non-refillable container. **DO NOT** reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into formulation equipment. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into formulation equipment or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Container Handling > 5 Gallons:** Refillable container. Refill this container with pesticide only. **DO NOT** use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Container Handling [Greater Than 5 Gallons]:** Non-refillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

### **CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Prime Source, a Division of Albaugh, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Prime Source, a Division of Albaugh, LLC and Seller harmless for any claims relating to such factors.

Prime Source, a Division of Albaugh, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Prime Source, a Division of Albaugh, LLC, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, PRIME SOURCE, A DIVISION OF ALBAUGH, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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MESOTRIONE	GROUP	27	HERBICIDE
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## Meso 4 SC Select

Sublabel B (Pages 24-32): Provides Selective and Residual Control of Weeds in Ornamental Turfgrasses

**Active Ingredient:**

**By Weight**

Mesotrione: 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione .....40.0%

**Other Ingredients:** ..... 60.0%

**TOTAL:** ..... 100.0%

Contains 4 lbs. Mesotrione per gallon.

### KEEP OUT OF REACH OF CHILDREN CAUTION

<b>FIRST AID</b>	
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything to an unconscious person.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOT LINE NUMBER</b>	
For 24-Hour Medical Emergency Assistance (Human or Animal), call: <b>1-800-222-1222</b> . For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), call CHEMTREC: <b>1-800-424-9300</b> .	

[See inside label booklet for additional Precautionary Statements and complete Directions for Use.]

[See inside booklet for additional Precautionary Statements, complete Directions For Use, & Storage And Disposal.]

**EPA Reg. No.: 89442-33**

**EPA Est. No.:** \_\_\_\_\_

**Net Contents:** \_\_\_\_\_

**Manufactured (For)(By):**

Prime Source, a Division of Albaugh, LLC

1525 NE 36<sup>th</sup> Street

Ankeny, IA 50021

**PRECAUTIONARY STATEMENTS**  
**Hazards to Humans and Domestic Animals**  
**CAUTION**

Harmful if absorbed through skin. 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 (barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC), or Viton)

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.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove 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.

**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.

**Environmental Hazards**

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

**Non-Target Organism Advisory**

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

**Groundwater Advisory**

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

**Surface Water Advisory**

This product may impact surface water quality due to runoff rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application.

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

## 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
- shoes plus socks
- chemical-resistant gloves (barrier laminate, butyl rubber  $\geq$ 14 mils, nitrile rubber  $\geq$ 14 mils, poly-ethylene, polyvinyl chloride (PVC)  $>$ 14 mils, and viton  $\geq$ 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 protective clothing until sprays have dried.**

**Meso 4 SC Select** 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 **Meso 4 SC Select** with 0.15 inches 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 three 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.

**Meso 4 SC Select** 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 **Meso 4 SC Select** with other pre-emergence herbicides including Barricade® 65WG for longer residual and broad spectrum control.

#### **Approved Use Sites**

**Meso 4 SC Select** 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.

Apply **Meso 4 SC Select** at reduced rates of 4 fl. oz./A (0.125 lb ai/A) or less if tank mixing with atrazine, bentazon, or simazine. Before tank mixing **Meso 4 SC Select** 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.

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 **Meso 4 SC Select** 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 **Meso 4 SC Select**.
- **DO NOT** apply more than 16 fl. oz. (or 0.50 lb. mesotrione per acre per year) per acre per year.
- **DO NOT** plant any crop other than turfgrass for 18 months post-application of **Meso 4 SC Select** to avoid turfgrass injury.
- **DO NOT** apply organophosphate or carbamate insecticides within 7 days of applying **Meso 4 SC Select**.
- **DO NOT** apply **Meso 4 SC Select** through any type of irrigation system.
- **DO NOT** make aerial applications.
- **DO NOT** use treated clippings to mulch trees or vegetable/flower gardens.
- **DO NOT** apply this product on Bentgrass, *Poa annua*, kikuyugrass, zoysiagrass, seashore paspalum, and bermudagrass; plant injury is unacceptable. Maintain a 5-foot 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.
- **DO NOT** make broadcast applications on residential lawns for pre- and post-emergent weed control unless the home lawn is being reseeded and/or renovated as whitening of some turfgrasses may occur.

#### Turfgrass Species

Species	Application Rate (Fl. Oz. per Acre)
Kentucky bluegrass ( <i>Poa pratensis</i> )	5-8
Centipedegrass ( <i>Eremochloa ophiuroides</i> )	
Buffalograss ( <i>Buchloe dactyloides</i> )	
Tall fescue ( <i>Festuca arundinacea</i> )	
Perennial ryegrass* ( <i>Lolium perenne</i> )	5
Fine fescue* (creeping red, chewings and hard) <i>Festuca</i> spp.	
St. Augustinegrass* (grown for sod) ( <i>Stenotaphrum secundatum</i> )	4

\*See additional rate instructions below.

#### RESISTANCE MANAGEMENT

There is no known resistance to **Meso 4 SC Select** and no known instances of cross-resistance between the active ingredient in **Meso 4 SC Select** (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 if the maximum number of applications and/or rate of product has been met and weeds are not controlled.

#### APPLICATION INSTRUCTIONS

##### Pre-Emergence Applications:

**Apply 4-8 fl. oz. of Meso 4 SC Select (0.125-0.25 lb ai) 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 for extended control of crabgrass and foxtail.**

##### Pre-Emergence Application Precautions:

**Meso 4 SC Select** 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. (0.157 lb ai) 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 ai) per acre.

##### Application to New Seedings/New Lawns

Apply 5-8 fl. oz. **Meso 4 SC Select** (0.157-0.25 lb ai) per acre in at least 30 gallons of water per acre before seeding or after seeding of tolerance turfgrass species listed below, except fine fescue, as application to fine fescue can reduce grass density. **Meso 4 SC Select** 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 Restrictions:**

- **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 Instructions:**

Apply 4-8 fl. oz. of **Meso 4 SC Select** (0.125-0.25 lb ai) per acre in at least 30 gallons 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 Precautions:**

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

**Bentgrass (*Agrostis spp.*)/Nimbleweed (*Muhlenbergia schreberi*) Control:**

Apply 5 fl. oz. **Meso 4 SC Select** (0.157 lb ai) per acre in at least 30 gallons of water per acre combined with a NIS surfactant at 2-3 week intervals for a maximum of 3 applications. For optimal Bentgrass 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. **Meso 4 SC Select** (0.125 lb ai) 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. per acre of **Meso 4 SC Select** (0.157 lb ai) to control winter weeds listed in the **Weeds Controlled** table below. Make a repeat application 2-3 weeks later. Application of **Meso 4 SC Select** to semi-dormant turf will cause bermudagrass whitening.

**Spot Applications of this product**

Spray Mix	Application Rate	Rate of this product	Rate of NIS adjuvant
2 gallons	1 gallon per 1,000 sq. ft.	1 teaspoon	3 teaspoons

**Spot Application Restrictions:**

- **DO NOT** apply more than 16 fl. oz. of **Meso 4 SC Select** (0.50 lb ai) per acre per year.

**Hydroseeding:**

**Meso 4SC Select** may be used in hydroseeding mixtures using the following rates:

Species	Application Rate (Fl. Oz. per 1,000 sq. ft.)	Application Rate (Fl. Oz. per Acre)	Application Rate (lb ai/A)
Kentucky bluegrass ( <i>Poa pratensis</i> )			
Centipedegrass ( <i>Eremochloa ophiuroides</i> )	0.12-0.18	5-8	0.157-0.25
Buffalograss ( <i>Buchloe dactyloides</i> )			
Tall fescue ( <i>Festuca arundinacea</i> )			
Perennial ryegrass* ( <i>Lolium perenne</i> )			
Fine fescue* (creeping red, chewings and hard) ( <i>Festuca spp.</i> )	0.12	5	0.157
St. Augustinegrass* (grown for sod) ( <i>Stenotaphrum secundatum</i> )		4	0.125

**Meso 4SC Select** must be added while the tank is being filled with water. NEVER add **Meso 4SC Select** to the tank after loading seed, fertilizer, mulch and tackifier. It will bind to the mulch, resulting in uneven coverage. The specified mixing order is as follows: 1. Water, 2. Meso 4SC Select (while filling with water), 3. Grass Seed, 4. Fertilizer, 5. Mulch, 6. Tackifier.

### WEEDS CONTROLLED USING PRE-EMERGENCE APPLICATION

Apply **Meso 4 SC Select** with a grass pre-emergence herbicide including Barricade 65WG Herbicide, except when used to control weeds in new seedings. **Meso 4 SC Select** will control the following weeds using pre-emergence application:

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

\*Suppression only.

### WEEDS CONTROLLED USING POST-EMERGENCE APPLICATION

Make a second application of **Meso 4 SC Select** 2-3 weeks after initial treatment. For optimal control, add a NIS-type surfactant and apply to young, actively growing weeds. **Meso 4 SC Select** will control the following weeds using post-emergence application:

Common Name	Scientific Name
Barnyardgrass	<i>Echinochloa crusgalli</i>
Bentgrass (Creeping)	<i>Agrostis stolonifera</i>
Buckhorn Plantain	<i>Plantago lanceolata</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed (Common)	<i>Stellaria media</i>
Chickweed (Mouseear)	<i>Cerastium vulgatum</i>
Clover (Large Hop)	<i>Trifolium aureum</i>
Clover (White)	<i>Trifolium repens</i>
Crabgrass (Large)*	<i>Digitaria sanguinalis*</i>
Crabgrass (Smooth)*	<i>Digitaria ischaemum*</i>
Crabgrass (Southern)*	<i>Digitaria ciliaris*</i>
Curly dock	<i>Rumex crispus</i>
Dandelion (Catsear)	<i>Hypochoeris radicata</i>
Dandelion (Common)	<i>Taraxacum officinale</i>
Florida Betony	<i>Stachys floridana</i>
Florida Pusley	<i>Richardia scabra</i>
Foxtail (Yellow)	<i>Setaria glauca</i>
Galinsoga	<i>Galinsoga ciliata</i>
Goosegrass*	<i>Eleusine indica*</i>
Ground Ivy	<i>Glechoma hederacea</i>
Heal-All	<i>Prunella vulgaris</i>
Henbit	<i>Lamium amplexicaule</i>
Lambsquarters (Common)	<i>Chenopodium album</i>

Lawn Burweed	<i>Soliva sessilis</i>
Lovegrass (Tufted)	<i>Eragrostis pectinacea</i>
Marestail	<i>Conyza Canadensis</i>
Nimblewill	<i>Muhlenbergia schreberi</i>
Nutsedge (Yellow)	<i>Cyperus esculentus</i>
Oxalis	<i>Oxalis stricta</i>
Pigweed (Redroot)	<i>Amaranthus retroflexus</i>
Pigweed (Smooth)	<i>Amaranthus hybridus</i>
Purslane (Common)	<i>Portulaca oleracea</i>
Shepherd's Purse	<i>Capsella bursa-pastoris</i>
Smartweed (Pale)	<i>Polygonum lapathifolium</i>
Smartweed (Pennsylvania)	<i>Polygonum pensylvanicum</i>
Sowthistle	<i>Sonchus oleraceus</i>
Swinecress	<i>Coronopus didymus</i>
Thistle (Canada)	<i>Cirsium arvense</i>
Verbena	<i>Verbena hastate</i>
Wild Carrot	<i>Daucus carota</i>
Wild Violet	<i>Viola pratincola</i>
Windmill-grass	<i>Chloris verticillata</i>

\*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 < 5 Gallons:** Non-refillable container. **DO NOT** reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into formulation equipment. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into formulation equipment or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Container Handling > 5 Gallons:** Refillable container. Refill this container with pesticide only. **DO NOT** use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Container Handling [Greater Than 5 Gallons]:** Non-refillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Prime Source, a Division of Albaugh, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Prime Source, a Division of Albaugh, LLC and Seller harmless for any claims relating to such factors.

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Barricade is a trademark of Syngenta Group Company.

**LABEL HISTORY**  
(Not included in final printed label)

File Name	Version Mark	Comment
089442-33.20220401.DRAFT	040122	Label Amendment – Mesotrione PID
NOTE: Pending label amendment to add hydroseeding with RD submitted Jan 26, 2022 – does not include these changes. This label does not include hydroseeding.		
089442-00033.20221214.DRAFT	121422	(e) Label Revisions
December 14, 2022 label combines Mesotrione label mitigation submitted April 1, 2022 with pending label amendment to add hydroseeding submitted January 26, 2022.		