

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

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

94144-2

Date of Issuance:

6/3/20

# NOTICE OF PESTICIDE:

X Registration
Reregistration
(under FIFRA, as amended)

Term of Issuance:
Unconditional

EPA Reg. Number:

Name of Pesticide Product:

Mesotrione 480 SC

Name and Address of Registrant (include ZIP Code):

INFINICROP, LLC c/o Pyxis Regulatory Consulting Inc. 4110 136<sup>th</sup> St. Ct. NW Gig Harbor, WA 98332

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

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

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

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

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

Signature of Approving Official:

Date:

Erik Kraft, Product Manager 24

Fungicide & Herbicide, Registration Division (7505P)

6/3/20

- 2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 94144-2."
- 3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

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

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

• Basic CSF dated 07/19/2019

If you have any questions, please contact Francisco Llarena-Arias by phone at 703-347-0459, or via email at llarena-arias.francisco@epa.gov

Enclosure

[Note to reviewer: {Text} in braces denotes where in the final label text will appear.]

# **{BOOKLET FRONT PANEL}**



MESOTRIONE GROUP 27 HERBICIDE

# **Mesotrione 480SC**

For Control of Annual Broadleaf Weeds in Field Corn, Seed Corn, Sweet Corn, Yellow Popcorn, Soybeans, Other Listed Crops and Turfgrass

#### **ACTIVE INGREDIENT:**

Mesotrione	40.0%
OTHER INGREDIENTS:	00.00/
TOTAL:	100.0%

This product contains 4 pounds of mesotrione per gallon.

# KEEP OUT OF REACH OF CHILDREN CAUTION

[See] [inside] [label] [booklet] [for] [additional] [Precautionary Statements][,] [and] [Directions for Use] [including] [Storage and Disposal] [instructions][.]

EPA Reg. No.: 94144-XX

**EPA Est. No.:** 

# Manufactured for:

INFINICROP, LLC 266 Reservation Road, F#202 Marina, CA 93933

**Net Contents:** 

SHAKE WELL BEFORE USING [RECIRCULATE CONTENTS BEFORE USE]

# {LANGUAGE INSIDE BOOKLET}

# **FIRST AID**

#### IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- DO NOT induce vomiting unless told to do so by a poison control center or doctor.
- DO NOT give anything by mouth to an unconscious person.

#### IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for treatment advice.

#### IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

#### IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

#### **HOTLINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including general health concerns or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, Monday through Friday, 8:00 AM to 12 PM Pacific Standard Time. In the event of a medical emergency, call your poison control center at 1-800-222-1222.

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, shoes plus socks and chemical-resistant gloves.

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

### **ENGINEERING CONTROLS**

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

# **USER SAFETY RECOMMENDATIONS**

#### Users should:

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

#### **ENVIRONMENTAL HAZARDS**

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

#### **Surface Water Advisory**

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

#### PHYSICAL AND CHEMICAL HAZARDS

**DO NOT** use with or store near any oxidizing or reducing agents. **DO NOT** mix or allow coming in contact with oxidizing agents or reducing agents. Hazardous chemical reaction may occur.

#### PRODUCT INFORMATION

MESOTRIONE 480SC is a systemic pre-emergence and post-emergence herbicide for the selective contact and residual control of broadleaf weeds in Field corn, Seed corn, Yellow popcorn, Sweet corn and other listed crops. When used pre-emergence, weeds take up the product through the soil during emergence. Dry conditions following application may reduce the pre-emergence activity of this product. If an activating rain (0.25 inches) is not received within 7 to 10 days after a pre-emergence application, where appropriate, rotary hoeing is suggested to activate the herbicide. When used post-emergence, susceptible weeds take up the herbicide through the treated foliage and cease growth soon after application. Complete death of the weeds may take up to 2 weeks. The product is absorbed through the soil and/or by the foliage of emerged weeds.

This product is not effective for the control of most grass weeds. Pre-emergence grass herbicides or post-emergence grass herbicides can be tank-mixed with this product to provide broad spectrum weed control in corn (see appropriate section of label for this information). This product can be applied post-emergence following a pre-emergence grass herbicide application. This product can also be used in combination with a burndown herbicide prior to planting to provide added burndown and residual weed control in Field corn, Seed corn, Sweet corn and Yellow popcorn.

#### **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 with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

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 WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves and shoes plus socks.

#### 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 until sprays have dried.

## **RESISTANCE MANAGEMENT**

Naturally occurring biotypes of certain broadleaf weed species with resistance to triazines, glyphosate, PPO, HPPD and ALS inhibiting herbicides are known to exist. Performance of this product is not affected by the presence of biotypes resistant to triazines, glyphosate, PPO or ALS inhibiting herbicides.

To prevent the risk of weeds developing resistance to this product in corn, always use full labeled rates. If applying this product post-emergence after a mesotrione containing pre-emergence herbicide, always add atrazine as a tank-mix

partner. No more than 0.24 lb. of mesotrione active ingredient may be applied per acre of corn per year (equivalent of 7.7 fl. oz. of this product per acre per year). If additional herbicide must be applied, use a herbicide with a different mode of action, i.e., other than an HPPD inhibitor (Group 27 Herbicide). Apply this product at full label rates to help prevent selection for or population shifts toward marginally resistant weed species and/or species biotypes.

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

- Rotate the use of Mesotrione 480SC or other Group 27 herbicides within a growing season sequence or among
  growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance
  in target weed species is available, use the less resistance-prone partner at a rate that will control the target
  weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified
  crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical
  information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control
  methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the
  crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method like hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact an INFINICROP, LLC representative.

# **INTEGRATED PEST (WEED) MANAGEMENT**

Integrate this product into an overall weed and pest management strategy whenever the use of a herbicide is required. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

### **RESTRICTIONS**

- **DO NOT** apply this product to White popcorn or Ornamental (Indian) corn.
- DO NOT cultivate corn within 7 days before or after application of this product as weed control may be reduced.
- **DO NOT** apply this product through any type of irrigation system unless specified otherwise under the specific crop section on the label.
- DO NOT apply this product with suspension fertilizers as the carrier.
- DO NOT use aerial application to apply this product unless specified otherwise under the specific crop section on the label.

# **USE PRECAUTIONS**

- Post-emergence applications of this product in tank-mixes with emulsifiable concentrate grass herbicides may cause severe corn injury or yield loss under adverse weather conditions.
- Severe corn injury resulting in yield loss may occur if this product is applied post-emergence to corn that was treated with terbufos or chlorpyrifos.
- Severe corn injury resulting in yield loss may occur if this product is applied foliar post-emergence to corn in a tank mix with any organophosphate or carbamate insecticide.
- Severe corn injury resulting in yield loss may occur if any organophosphate or carbamate insecticide is applied foliar post-emergence within 7 days before or 7 days after application of this product.
- 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
  this product is made following label directions when weeds are actively growing.
- This product may be applied with pyrethroid type insecticides (e.g., lambda-cyhalothrin).

#### MANDATORY SPRAY DRIFT

# **Aerial Applications**

- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a Coarse or coarser spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- DO NOT apply when wind speeds exceed 10 miles per hour at the application site.
- DO NOT apply during temperature inversions.

# **Ground Applications**

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- DO NOT apply when wind speeds exceed 10 miles per hour at the application site.
- DO NOT apply during temperature inversions.

## **Boom-less Ground Applications**

- Applicators are required to use a coarse droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- DO NOT apply during temperature inversions.

# **Spray Drift Advisories**

- THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
- BE AWARE OF NEARBY NON-TARGET SIDES AND ENVIRONMENAL CONDITIONS.

#### • IMPORTANCE OF DROPLET SIZE:

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

#### **Controlling Droplet Size – Ground Boom**

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

#### **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

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

### • RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 feet above the crop canopy, unless a greater application height is necessary for pilot safety.

# • SHIELDED SPRAYERS

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

### • TEMPERATURE AND HUMIDITY

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

#### • TEMPERATURE INVERSIONS

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

#### WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

- Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.
- Boom-less Ground Applications:
  - Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.
- Handheld Technology Applications:
  - Take precautions to minimize spray drift.

#### WINDBLOWN SOIL PARTICLES

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

# AERIAL APPLICATION INSTRUCTIONS FOR CORN AND SUGARCANE RESTRICTIONS:

- This product can be applied aerially only to corn and sugarcane.
- Applications must be made in a minimum of 2 gallons of water per acre.

This product may be applied aerially for pre-emergence or post-emergence weed control in corn only in the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Nebraska, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming.

This product may be applied aerially for pre-emergence or post-emergence weed control in Sugarcane only in the following states: Florida, Louisiana and Texas.

#### ADDITIONAL SPRAY DRIFT DIRECTIONS FOR AERIAL APPLICATIONS

• For best results, ensure that each specific aerial application vehicle used is quantifiably pattern tested for aerial application of this product initially and every year thereafter.

#### **APPLICATION INFORMATION**

# PRE-EMERGENCE GROUND APPLICATION

Apply this product pre-emergence with a carrier volume of 10 to 60 gallons per acre.

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

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

#### POST-EMERGENCE GROUND APPLICATION

Spray nozzles must be uniformly spaced, the same size and type, and must provide accurate and uniform application. Good weed coverage is essential for optimum weed control.

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

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

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

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

#### **SPRAY ADDITIVES**

#### POST-EMERGENCE ADJUVANTS

The following directions for adjuvant are intended primarily for use of this product in corn. Refer to the use directions section of each crop section for specific adjuvant directions.

# POST-EMERGENCE APPLICATIONS TO FIELD CORN AND SEED CORN

For post-emergence applications made after the crop has emerged, add Crop Oil Concentrate (COC) to the spray solution at the rate of 1 gallon per 100 gallons of water (1.0% v/v). The use of a Nonionic Surfactant (NIS) at 1 quart per 100 gallons of water (0.25% v/v) instead of COC is allowed, but the weed control achieved with COC is consistently better than NIS.

The use of Methylated Seed Oil (MSO) adjuvants or MSO blend adjuvants for post-emergence applications of this product may cause severe crop injury to occur. DO NOT use MSO adjuvants for post-emergence use unless directed for a specific tank-mix under the "THIS PRODUCT IN TANK-MIXTURES FOR CORN" section of this label or unless permitted by a supplemental label for this product. In addition to COC, always add spray grade Urea Ammonium Nitrate (UAN) (e.g., 28-0-0) to the spray solution at a rate of 2.5% (v/v) or Ammonium Sulfate (AMS) at 8.5 pounds per 100 gallons of spray solution, except if precluded elsewhere on this label or by a supplemental label for this product.

#### POST-EMERGENCE APPLICATIONS TO SWEET CORN AND YELLOW POPCORN

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

Restriction: DO NOT add UAN or AMS when making post-emergence applications of this product to Sweet corn and Yellow popcorn or severe crop injury may occur.

#### PRE-EMERGENCE ADJUVANTS

For pre-plant or pre-emergence applications of this product and where weeds are present, the use of any adjuvant for agricultural use is permitted. In these situations, MSO type adjuvants are typically better than COC type adjuvants, which are typically better than NIS type adjuvants for enhancing weed control. UAN or AMS can be added and typically provides better weed control than not adding one of these. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### **SPRAY EQUIPMENT**

# **Cleaning Equipment After Application of this Product**

Special attention must be given to cleaning equipment before spraying a crop other than corn. Mix only as much spray solution as needed.

- 1. Flush tank, hoses, boom and nozzles with clean water.
- 2. Prepare a cleaning solution of 1 gallon of household ammonia per 25 gallons of water. Many commercial spray tank cleaners may be used.
- 3. Use a pressure washer to clean the inside of the spray tank with this solution. Take care to wash all parts of the tank, including the inside top surface. If a pressure washer is not available, completely 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 sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
- 4. Flush hoses, spray lines and nozzles for at least 1 minute with the cleaning solution.
- 5. Dispose of rinsate from steps 1 to 3 in an appropriate manner.
- 6. Repeat steps 2 to 5.
- 7. Remove nozzles, screens and strainers and clean separately in the ammonia solution after completing the above procedures.
- 8. Rinse the complete spraying system with clean water.

### **MIXING PROCEDURES**

Refer to the "CROP USE DIRECTIONS" sections of this label for tank-mixes.

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 of label limitations and precautions. No label dosage rates may be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. **DO NOT** tank-mix this product with any other insecticide, fungicide, fertilizer solution or adjuvant not listed on the label without testing compatibility as poor mixing may result. Test the compatibility of any tank-mix combination on a small scale for example when a jar test is done before actual tank-mixing.

Follow the mixing instructions for adding this product to the spray tank:

- 1. Only use sprayers in good running condition with good agitation. Ensure the sprayer is cleaned according to instructions on the label of the product used prior to this product. For post-emergence applications, use only clean water for the spray solution. Ensure that all in-line strainer and nozzle screens in the sprayer are 50 mesh or coarser. **DO NOT** use screens finer than 50 mesh.
- 2. Liquid fertilizer (excluding suspension fertilizers) may be used as the carrier for pre-emergence applications.
- 3. Begin to fill sprayer tank or premix tank with clean water and engage agitator. Agitation must be continued throughout the entire mixing and spraying procedure.
- 4. When the sprayer or premix tank is half full of water, add AMS and agitate until completely dispersed.
- 5. Next, add this product slowly and agitate until completely dissolved. Wait at least 1 minute after the last of this product has been added to the tank to allow for complete dispersion. A longer agitation period may be required to disperse this product when using cold water from sources, for example, deep drilled wells.
- 6. If tank-mixing, add the tank-mix product next.
- 7. Finally, add adjuvant and UAN if needed and then continue to fill tank to desired level with water.

#### **WEEDS CONTROLLED**

This product applied as directed in this label will control or partially control the weeds listed in **Tables 1** and **2**. Where reference is made to weeds partially controlled, partial control can either mean erratic control (good to poor) or consistent control at a level below what is considered acceptable for commercial weed control.

For best post-emergence results, apply this product to actively growing weeds. Dry weather following pre-emergence application of this product may reduce residual weed control effectiveness. If irrigation is available, apply 0.5 to 1 inch of water after pre-emergence application. If irrigation is not available, make a uniform shallow cultivation as soon as weeds emerge.

This product applied alone or in mixture with atrazine will not provide consistent or effective control of weeds identified as resistant to post-emergence HPPD inhibiting herbicides.

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

Table 1. Weeds Controlled With Post-emergence Applications of This Product

Common Name	Scientific Name	This Product 3 fl. oz./A (0.094 lb. Al/A) Applied Alone	This Product 2.5 to 3 fl. oz./A (0.078- 0.094 lb. Al/A) + Atrazine <sup>1</sup>
			Inches Tall <sup>2</sup>
Amaranth, palmer	Amaranthus palmeri	PC <sup>3</sup>	C <sup>3</sup>
Amaranth, powell	Amaranthus powellii	С	С
Amaranth, spiny	Amaranthus spinosus	С	С
Atriplex	Chenopodium orach	С	С
Broadleaf signalgrass	Urochloa platyphylla	C <sub>3</sub>	C <sub>3</sub>
Buckwheat, wild	Polygonum convolvulus	PC	PC
Buffalobur	Solanum rostratum	С	С
Burcucumber	Sicyos angulatus	PC	C <sub>3</sub>
Carpetweed	Mollugo verticillata	С	С
Carrot, wild	Daucus carota	PC	С
Chickweed, common	Stellaria media	С	С
Cocklebur, common	Xanthium strumarium	С	С
Crabgrass, large	Digitaria sanguinalis	C <sub>3</sub>	C <sub>3</sub>
Dandelion, common (Seedling)	Taraxacum officinale	NC	PC
Dock, curly	Rumex crispus	PC	PC
Galinsoga	Galinsoga parviflora	С	С
Hemp	Cannabis sativa	С	С
Horsenettle	Solanum carolinense	PC	С
Horseweed/Marestail	Conyza canadensis	PC	С
Jimsonweed	Datura stramonium	С	С

Common Name	Scientific Name	This Product 3 fl. oz./A (0.094 lb. Al/A) Applied Alone	This Product 2.5 to 3 fl. oz./A (0.078- 0.094 lb. Al/A) + Atrazine <sup>1</sup> Inches Tall <sup>2</sup>
Knotweed, prostrate	Polygonum aviculare	PC PC	PC
Knotweed, prostrate  Kochia	Kochia scoparia	PC <sup>3</sup>	_
Lambsquarters, common	Chenopodium album	C	C <sup>3</sup>
	Hibiscus trionum	NC NC	С
Mallow, Venice			
Morningglory, entireleaf	Ipomoea hederacea	PC	С
Morningglory, ivyleaf	Ipomoea hederacea	PC	С
Morningglory, pitted	Ipomoea lacunosa	PC	С
Mustard, wild	Brassica kaber	С	С
Nightshade, black	Solanum nigrum	С	С
Nightshade, Eastern black	Solanum ptycanthum	С	С
Nightshade, hairy	Solanum sarrachoides	С	С
Nutsedge, yellow	Cyperus esculentus	PC	PC
Pigweed, redroot	Amaranthus retroflexus	С	С
Pigweed, smooth	Amaranthus hybridus	С	С
Pigweed, tumble	Amaranthus albus	С	С
Pokeweed, common	Phytolacca americana	PC	PC
Potatoes, volunteer	Solanum spp.	С	С
Pusley, Florida	Richardia scabra	C <sup>3</sup>	C <sup>3</sup>
Ragweed, common	Ambrosia artemisiifolia	PC	С
Ragweed, giant	Ambrosia trifida	C <sup>3</sup>	С
Sesbania, hemp	Sesbania exaltata	С	С
Sida, prickly (teaweed)	Sida spinosa	NC	C <sup>3</sup>
Smartweed, ladysthumb	Polygonum persicaria	C <sup>3</sup>	С
Smartweed, pale	Polygonum lapathifolium	C <sup>3</sup>	С
Smartweed, Pennsylvania	Polygonum pensylvanicum	C <sup>3</sup>	С
Sunflower, common	Helianthus annuus	С	С
Thistle, Canada	Circium arvense	NC	PC
Velvetleaf	Abutilon theophrasti	С	С
Waterhemp, common	Amaranthus rudis	C <sup>3</sup>	С
Waterhemp, tall	Amaranthus tuberculatus	C <sup>3</sup>	С

<sup>&</sup>lt;sup>1</sup>This product in tank mixture with atrazine is approved only for use on corn and sugarcane.

<sup>2</sup>Under certain situations, weeds can be controlled at larger than listed sizes. However, to protect crop yield, manage weed resistance and provide consistent control, treat weeds before they exceed 5 inches in height.

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

C = Control; PC = Partial Control; NC = Not Controlled

Table 2. Weeds Controlled With Pre-emergence Applications of This Product

Common Name	Scientific Name	This Product Applied Alone	This Product + Atrazine*
Amaranth, palmer	Amaranthus palmeri	С	С
Amaranth, powell	Amaranthus powellii	С	С
Amaranth, spiny	Amaranthus spinosus	С	С
Broadleaf signalgrass	Urochloa platyphylla	PC	PC
Buffalobur	Solanum rostratum	С	С
Burclover, California	Medicago polymorpha	С	-
Carpetweed	Mollugo verticillata	С	С
Carrot, wild	Daucus carota	С	-
Chickweed, common	Stellaria media	С	С
Chickweed, mouseear	Cerastium vulgatum	С	-
Cocklebur, common	Xanthium strumarium	PC	С
Crabgrass, large	Digitaria sanguinalis	PC	PC
Dandelion, common (Seedling)	Taraxacum officinale	C	-
Deadnettle, purple	Lamium purpureum	C	_
Dock, curly	Rumex crispus	C	_
Eveningprimrose, cutleaf	Oenothera laciniata	C	
Fiddleneck, coast	Amsinckia intermedia	C	-
Filaree, redstem	Erodium cicutarium	C	-
Filaree, whitestem	Erodium moschatum	C	<u> </u>
Fleabane, hairy	Conyza bonariensis	C	<u>-</u>
Galinsoga	Galinsoga parviflora	C	
		C	
Geranium, Carolina	Geranium carolinianum		-
Groundcherry, smooth	Physalis subglabrata	С	-
Groundsel, common	Senecio vulgaris	С	-
Henbit	Lamium amplexicaule	С	-
Horsenettle	Solanum carolinense	PC	-
Horseweed/Marestail	Conyza canadensis	С	<u>-</u>
Jimsonweed	Datura stramonium	С	С
Kochia	Kochia scoparia	PC	С
Lambsquarters, common	Chenopodium album	С	С
Lettuce, prickly	Lactuca serriola	С	-
Mallow, common	Malva neglecta	С	-
Mayweed, chamomile	Anthemis cotula	С	-
Morningglory, entireleaf	Ipomoea hederacea	PC	С
Morningglory, ivyleaf	Ipomoea hederacea	PC	С
Morningglory, pitted	Ipomoea lacunosa	PC	С
Nettle, burning	Urtica urens	С	-
Nightshade, eastern black	Solanum ptycanthum	С	С
Nightshade, hairy	Solanum sarrachoides	С	С
Pansy	Viola tricolor	С	-
Pigweed, redroot	Amaranthus retroflexus	С	С
Pigweed, smooth	Amaranthus hybridus	С	С
Pigweed, tumble	Amaranthus albus	С	С
Pineappleweed	Matricaria matricariodes	C	-
Puncturevine, common	Tribulus terrestris	C	-
Purslane, common	Portulaca oleracea	C	_
Pusley, common	Richardia scabra	PC	-
Ragweed, common	Ambrosia artemisiifolia	C	C
Ragweed, common Ragweed, giant	Ambrosia trifida	PC	C
Ragweed, giant Redmaids	Calandria caulescens	C	
Rocket, London	Sisymbrium irio	C	<u>-</u>
		C	-
Shepherd's purse	Capsella bursa-pastoris		
Smartweed, ladysthumb	Polygonum persicaria	С	
Smartweed, pale	Polygonum lapathifolium	С	C
Smartweed, Pennsylvania	Polygonum pensylvanicum	С	С
Sowthistle, annual	Sonchus oleraceus	С	-
Spanishneedles	Bidens bipinnata	С	-
Sunflower, common	Helianthus annuus	PC	С
Swinecress	Coronopus didymus	C	-

Common Name	Scientific Name	This Product Applied Alone	This Product + Atrazine*
Tasselflower, red	Emilia sonchifolia	С	-
Velvetleaf	Abutilon theophrasti	С	С
Vetch, common	Vicia sativa	С	-
Vetch, purple	Vicia benghalensis	PC	-
Waterhemp, common	Amaranthus rudis	С	С
Waterhemp, tall	Amaranthus tuberculatus	С	C
Willowherb, panicle	Epilobium brachycarpum	С	-

<sup>\*</sup>This product in 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.

#### **ROTATIONAL CROPS**

When this product is applied as directed on this label, follow the crop rotation intervals in **Table 3**. If this product is tank-mixed with other products, follow the most restrictive product's crop rotation interval.

Table 3. Time Interval Between Application of This Product and Replanting or Planting of Rotational Crop

Сгор		Replant/Rotational Interval
Asparagus Corn (all types) Cranberry Flax Kentucky bluegrass grown for seed Millet, pearl Oats	Rhubarb Ryegrass (perennial and annual) grown for seed Sorghum (Grain and Sweet) Sugarcane Tall fescue grown for seed	Anytime
Small grain cereals including Barley, I	Rye and Wheat	4 mos.
Alfalfa Blueberry Canola Cotton Currant Lingonberry Okra Peanuts	Peas <sup>1,2</sup> Potato Rice Snap beans <sup>1,2</sup> Soybeans Sunflowers Tobacco	10 mos.
Cucurbits Dry beans Red clover	Sugar beets All other rotational crops	18 mos.

<sup>1</sup>Plant these rotational crops only if the following criteria below have been met. If all criteria are not met, plant peas and snap beans a minimum of 18 months following application of this product.

- A minimum of 20" of rainfall plus irrigation has been received between application and planting of the rotational crop.
- Soil pH is 6.0 or greater.
- Application of this product at 3 fl. oz./Ac. (0.094 lb. a.i./A) or less applied no later than June 30th the year preceding rotational crop planting.
- No other HPPD herbicides (for example products containing mesotrione, isoxaflutole, tembotrione, or topramezone) were applied the year prior to planting peas and snap beans.

### **CROP USE DIRECTIONS**

#### **ASPARAGUS**

This product can be applied broadcast or banded at a rate of 3.0 to 7.7 fluid ounces per acre (0.094 to 0.24 lb. a.i. per acre) to asparagus as a Spring application prior to spear emergence, as a post-harvest application (after final harvest) or both.

Use the 3.0 fluid ounces per acre rate (0.094 lb. a.i. per acre) for post-emergence control or partial control of the emerged weeds listed in **Table 1**. Use the 6.0 to 7.7 fluid ounces per acre rate (0.188 to 0.24 lb. a.i. per acre) 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 to 7.7 fluid ounces per treated acre (0.094 to 0.24 lb. a.i. per treated acre). For best pre-emergence weed control with Spring applications, this product must be applied after fern mowing, disking or other tillage operation but prior to asparagus spear emergence.

C = Control; PC = Partial Control

<sup>&</sup>lt;sup>2</sup>Restriction: DO NOT plant peas or snap beans on sand, sandy loam or loamy sand soils in Minnesota or Wisconsin.

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 fluid ounces (0.24 lb. a.i.) per acre 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 application of this product, the addition of a Crop Oil Concentrate (COC) type adjuvant at the rate of 1% v/v or a Nonionic Surfactant (NIS) at the rate of 0.25% v/v is advised. In addition to COC or NIS, a spray grade Urea Ammonium Nitrate (UAN) (e.g., 28-0-0) at the rate of 2.5% v/v or Ammonium Sulfate (AMS) at the rate of 8.5 pounds per 100 gallons of spray solution may be added for improved burndown of emerged weeds. If weeds have not yet emerged, no adjuvant is advised.

#### Restrictions

- 1. DO NOT apply more than 7.7 fluid ounces (0.24 lb. a.i.) of this product per acre per year.
- 2. **DO NOT** apply more than 7.7 fluid ounces (0.24 lb. a.i.) of this product per acre per application.
- 3. DO NOT make more than two applications of this product per year when using reduced application rates.
- 4. Minimum retreatment interval is 14 days.
- 5. **DO NOT** harvest asparagus within 7 days of application.

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

This product can be applied to Bluegrass, Ryegrass (Annual and Perennial) or Tall fescue which is grown for seed. This product can be applied as a pre-emergence application to bare soil (new seeding) or as a post-emergence application to an emerged grass crop.

For a list of weeds controlled or partially controlled by pre-emergence or post-emergence applications of this product, see **Tables 1** and **2**. In addition to the weeds listed in **Tables 1** and **2**, this product applied pre-emergence or post-emergence will control Mannagrass (*Glyceria* spp.) up to 3 tillers.

In Idaho, Oregon and Washington, this product applied pre-emergence or post-emergence will also control Lesser-seeded bittercress (*Cardamine* spp.), Lowland cudweed (*Gnaphalium* spp.), Shepherd's purse (*Capsilla bursa-pastoris*) and Wild radish (*Raphanus* spp.). This product will also suppress Bentgrass (*Agrostis* spp.) seedlings, Toad rush (*Juncus* spp.) and Sharppoint fluevellin (*Kickxia elatine*).

#### PRE-EMERGENCE APPLICATION

Apply this product as a broadcast, surface spray at a rate of 6.0 fluid ounces (0.188 lb. a.i.) per acre to a newly seeded crop. Applications of this product must be made prior to crop and weed emergence. As the newly seeded grass crop emerges from the soil, rainfall or irrigation may increase the risk of injury from this product. Grass crop injury symptoms include temporary bleaching of newly emerged leaves or in extreme conditions, stunting.

# **POST-EMERGENCE APPLICATION**

Apply this product as a broadcast post-emergence spray at a rate of 3.0 to 6.0 fluid ounces (0.094 to 0.188 lb. a.i.) per acre to emerged Bluegrass, Perennial ryegrass or Tall fescue grown for seed. Use the 3.0 fluid ounces (0.094 lb. a.i.) per acre rate for post-emergence control or partial control of the weeds listed in **Table 1**.

Use the 6.0 fluid ounces (0.188 lb. a.i.) per acre rate for post-emergence weed control plus extended residual weed control of weeds listed in **Table 2**. The addition of a Crop Oil Concentrate (COC) type adjuvant at 1% v/v or a Nonionic Surfactant (NIS) type adjuvant at a rate of 0.25% v/v is advised. Post-emergence applications of this product may result in temporary bleaching of the grass crop.

In addition to COC or NIS, a spray grade Urea Ammonium Nitrate (UAN) (e.g., 28-0-0) at the rate of 2.5% v/v or Ammonium Sulfate (AMS) at the rate of 8.5 pounds per 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 rates this product greater than 3.0 fluid ounces (0.094 lb ai) per acre. If grass crop injury is a concern, **DO NOT** add UAN or AMS to the spray solution.

Tank-mixing other pesticides with this product for post-emergence use may increase the risk of crop injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to this product for applications made post-emergence to the crop.

#### Restrictions

- 1. DO NOT harvest the grass crop for seed or straw within 60 days following the application of this product.
- 2. **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 this product.
- 3. **DO NOT** make more than two applications of this product per year.

- 4. Minimum retreatment interval is 14 days.
- 5. **DO NOT** apply more than 6 fluid ounces (0.188 lb. a.i.) of this product per acre in a single application and not more than 9 fluid ounces (0.282 lb. a.i.) of this product per acre per year.
- 6. Applications of this product to grasses grown for seed species not listed on this label may result in severe injury.

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

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

This product may be applied as a pre-bloom post-directed spray in Blackberry, Currants (Black, Red), High bush blueberry, Lingonberry, Raspberry (Black, Red). For a list of weeds controlled see **Tables 1** and **2**.

This product may be applied in bush or caneberries at a rate up to 6 fluid ounces (0.188 lb. a.i.) per acre. If a split application weed control program is desired, 3 fluid ounces (0.094 lb. a.i.) per acre followed by another 3 fluid ounces (0.094 lb. a.i.) per acre, but no more than two applications per year are allowed. The use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is advised, but avoid using COC adjuvants that are injurious to bush or caneberry leaves.

#### **Restrictions:**

- DO NOT apply this product to bush or caneberries after the onset of the bloom stage or illegal residues may occur.
- 2. **DO NOT** apply more than a total of 6 fluid ounces of this product (0.188 lbs. a.i.) per acre per year.
- 3. **DO NOT** apply more than 6 fluid ounces of this product (0.188 lbs. a.i.) per application.
- 4. **DO NOT** make more than two applications per year when using reduced rates.
- 5. Minimum retreatment interval is 14 days.

In Low bush blueberries, this product may only be applied in the non-bearing year. This application may be a broadcast application. Up to 6 fluid ounces of this product (0.188 lb. a.i.) per acre may be applied in a single application or 3 fluid ounces (0.094 lb. a.i.) per acre followed by another 3 fluid ounces (0.094 lb a.i.) per acre used in a split application program. The use of a Crop Oil Concentrate (COC) type adjuvant at 1% v/v is advised. Applications of this product during dry weather conditions and/or temperatures above 85° can cause injury to Lowbush blueberries. Applications of this product can cause yellowing or necrosis of leaves and under severe conditions, leaf drop may occur especially on "Sourtop" variety Blueberries.

# **Restrictions:**

- 1. **DO NOT** apply more than a total of 6 fluid ounces of this product (0.188 lbs. a.i.) per acre per year.
- 2. **DO NOT** apply more than 6 fluid ounces of this product (0.188 lbs. a.i.) per application.
- 3. **DO NOT** make more than two applications per year when using reduced rates.
- 4. Minimum retreatment interval is 14 days.

In Maine, this product can be applied in Low bush berries prior to bloom as a broadcast spray before weed emergence or after weed emergence but before weeds reach 5 inches tall at the rate of 4.0 fluid ounces (0.125 lb ai) per acre for control or suppression of Blue violet, Common lambsquarters, Pigweed (Redroot), Sheep sorrel, Spreading dogbane, Ragweed (Common and Goldenrod), Velvetleaf and Wild mustard. Use nonionic (NIS) type adjuvant at 0.25% v/v (1 qt./100 gals. Of spray volume). Applications of this product during dry weather conditions and/or temperatures above 85° can cause injury to Lowbush blueberries. This product can cause yellowing or necrosis of leaves and under severe conditions, leaf drop may occur on "Sourtop variety" Blueberries.

#### **Restrictions:**

- 1. **DO NOT** make more than one application per year.
- 2. **DO NOT** harvest with 60 days of application of this product.
- 3. **DO NOT** apply by air.

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

This may be used for post-emergence and residual control of weeds listed in **Tables 1** and **2** in the following crops:

Citrus fruits (crop group 10-10): Australian desert lime, Australian finger lime, Australian round lime, Brown River finger lime, Calamondin, Citron, Citrus hybrids, Grapefruit, Japanese summer grapefruit, Kumquat, Lemon, Lime, Mediterranean mandarin, Pummelo, Russell River lime, Satsuma mandarin, Sour orange, Sweet lime, Sweet orange, Tachibana orange, Tahiti lime, Tangelo, Tangerine (Mandarin), Tangor, Trifoliate orange, Uniq fruit, cultivars, varieties and/or hybrids of these.

Pome fruits (crop group 11-10): Apple, Azarole, Crabapple, Loquat, Mayhaw, Medlar, Pear, Pear (Asian), Quince, Quince (Chinese, Japanese), tejocote, cultivars, varieties and/or hybrids of these.

**Stone fruits (crop group 12-12):** Apricot, Apricot (Japanese), Capulin, Cherry (Black, Nanking, Sweet, Tart), Chinese jujube, Nectarine, Peach, Plum, Plum (American, Beach, Canada, Cherry, Chickasaw, Damson, Japanese, Klamath, Prune), Plumcot, Sloe, cultivars, varieties and/or hybrids of these.

Tree nuts (crop group 14-12): African nut-tree, Almond, Almond (Tropical), Beech nut, Brazil nut, Brazilian pine, Bunya, Bur oak, Butternut, Cajou nut, Candlenut, Cashew, Chestnut, Chinquapin, Coconut, Coquito nut, Dika nut, Ginkgo, Guiana chestnut, Hazelnut (Filbert), Heartnut, Hickory nut, Japanese horse-chestnut, Macadamia nut, Mongongo nut, Monkey-pot, Monkey puzzle nut, Okari nut, Pachira nut, Peach palm nut, Pecan, Pequi, Pili nut, Pine nut, Pistachio, Sapucaia nut, Walnut (Black, English), Yellowhorn, cultivars, varieties and/or hybrids of these.

#### **Precautions**

- 1. To avoid crop injury, apply the spray to the grove or orchard floor and to the weeds, avoiding contact with crop foliage, stems or fruit. Contact of this product with the crop may result in bleaching injury that is typically temporary. Use trunk guards to protect plants until adequate bark has developed.
- Specified rates are based on broadcast treatment. For band applications around trees in fruit or nut plantings, reduce
  the broadcast rate of this product and carrier per acre in proportion to the area actually sprayed. (See "Banded
  Applications" section.)

#### Restrictions

- 1. This product can only be applied in Pome fruits, Stone fruits and Nut trees that have been established for a minimum of 12 months. This product can be applied in Citrus trees or plantings that are less than 12 months old and are exhibiting normal growth and vigor.
- 2. **DO NOT** apply in orchards that are stressed due to poor weather or other abiotic factors.
- 3. DO NOT exceed a total of 12 fluid ounces of this product (0.376 lb. a.i.) per acre per year or in a 12 month period.
- 4. **DO NOT** exceed 6 fluid ounces of this product (0.188 lb. a.i.) per acre for the first application.
- 5. **DO NOT** exceed 3 applications per year or in a 12 month period.
- 6. Allow at least 5 months between applications of this product at 6 fluid ounces (0.188 lb. a.i.) per acre and at least 6 weeks between applications of 6 fluid ounces (0.188 lb. a.i.) per acre and subsequent applications of 3 fluid ounces (0.094 lb. a.i.) per acre. (Applications must follow one of the four programs listed in **Table 4** below.)
- 7. **DO NOT** apply when nuts or fruits are on the ground at harvest.
- 8. **DO NOT** harvest Pome fruits, Stone fruits or Tree nuts within 30 days after application.
- 9. **DO NOT** harvest Citrus fruits within 1 day after application.
- 10. **DO NOT** use on soils with greater than 20% gravel.
- 11. **DO NOT** apply this product through any type of irrigation system.
- 12. DO NOT apply this product by air.

# **Spray Additives**

For application to emerged weeds, the use of Crop Oil Concentrate (COC) type adjuvant at 1% v/v or Nonionic Surfactant (NIS) at 0.25% v/v is advised. Addition of Ammonium Sulfate (AMS) or other nitrogen-based adjuvants will increase efficacy when used in combination with COC or NIS. For more information, see "SPRAY ADDITIVES" section of this label.

#### **Banded Applications**

When applying a row or banded treatment of this product, the following formula may be used to calculate the amount per acre:

<u>band width in inches</u> X broadcast rate per acre = Amount needed per acre of field row width in inches

#### **Tank-mix Instructions**

This product may be tank-mixed and applied in combination with most commonly used herbicides registered for use in the approved crops in order to expand the post-emergence (for example glyphosate, glufosinate, paraquat, or oxyfluorfen) or residual (for example bromacil, bromacil + diuron, diuron, indaziflam, norflurazon, oryzalin, oxyfluorfen, pendimethalin, rimsulfuron or simazine) weed control spectrum. These tank-mixtures can be used to help control or manage the development of resistant weeds. The application of mixtures or sequences of effective herbicides with different sites of action can provide the diversity needed for management of herbicide resistance.

If compatibility of the tank-mix combination is not known, test the compatibility of any tank-mix combination on a small scale including a jar test before actual tank-mixing.

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.

#### Weed Control (Tables 1 and 2)

This product provides both post-emergence and pre-emergence control of susceptible weeds. Best control is obtained if post-emergence applications are made before weeds reach 5 inches in height (**Table 1**) or before germination of seed for pre-emergence control (**Table 2**). Rainfall or irrigation soon after application will enhance pre-emergence activity.

#### **Use Directions**

Apply as a directed or shielded spray. Avoid contact with trunk surfaces, fruit or crop foliage. **DO NOT** apply when nuts or fruits are on the ground at harvest. Ensure that the soil is settled, firm and relatively free of debris at time of application. Also ensure that the soil is free of depressions around trees where rain or irrigation water can concentrate. Apply the first application of this product in late Fall/early Winter or Spring and subsequent applications utilizing one of the programs noted in **Table 4**.

Table 4. Application Programs for this Product, Rates and Intervals

Application Rate (Fl. oz./Ac.)			Application Interval	
Program	1 <sup>st</sup> Application	2 <sup>nd</sup> Application	3 <sup>rd</sup> Application	(Weeks)
1	6	6	-	20
2	6	3	-	6
3	6	3	3	6
4	3	3	3	6

<sup>3</sup> fluid ounces of product = 0.094 lb. a.i.

For optimum post-emergence weed control, apply this product to actively growing weeds in tank-mixture with burndown herbicides (for example glyphosate, glufosinate, oxyfluorfen or paraquat) before weeds exceed 5 inches in height.

For effective residual weed control, this product must be moved into the weed seed germination zone. For preemergence weed control, apply this product before rainfall or irrigation. For optimum residual control, this product can be tank-mixed with herbicides (for example bromacil, bromacil + diuron, diuron, indaziflam, norflurazon, oxyfluorfen, pendimethalin, rimsulfuron or simazine) where approved for use.

Subsequent application(s) of this product can be made alone or in tank-mixture with the herbicides noted above if weed emergence occurs.

Apply this product in a spray volume of 10 to 40 gallons per acre.

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.

#### **CORN**

This product may be applied by ground for pre-emergence or post-emergence weed control in Field corn, Seed corn, Sweet corn and Yellow popcorn.

This product may also be applied by air for pre-emergence or post-emergence weed control only 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.

Refer to seed company specifications for use on Field corn inbred lines. Special adjuvant restrictions must be followed for post-emergence applications of this product in Sweet corn and Yellow popcorn (see the "SPRAY ADDITIVES" section of this label). **DO NOT** apply this product this product to white popcorn or ornamental (Indian) corn.

Post-emergence applications (after crop emergence) of this product may cause crop bleaching in some Sweet corn and Yellow popcorn hybrids. Crop bleaching is typically transitory and has no effect on final yield or quality. However, herbicide sensitivity in Sweet corn and Yellow popcorn varies widely and all Sweet corn and Yellow popcorn hybrids have not been tested. Contact your Popcorn or Sweet corn seed dealer, field man or University Specialist about hybrid directions before making a post-emergence application of this product to Sweet corn and Yellow popcorn. **DO NOT** include nitrogen based adjuvants (UAN or AMS) when making post-emergence applications of this product to Sweet corn

<sup>6</sup> fluid ounces of product = 0.188 lb. a.i.

and Yellow popcorn.

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

#### **Restrictions:**

- 1. **DO NOT** apply more than a total of 7.7 fluid ounces of this product (0.24 lb. a.i.) per acre per year.
- DO NOT make more than 2 applications of this product per year when making reduced application rates.
- 3. **DO NOT** exceed 7.7 fluid ounces of this product (0.24 lb a.i.) in a single post-emergence application.
- 4. **DO NOT** exceed 3.0 fluid ounces of this product (0.094 lb. a.i.) per acre in a single post-emergence application.
- Minimum retreatment interval is 14 days.
- 6. Corn may be treated up to 30 inches tall or up to the 8 leaf stage of corn growth.
- 7. **DO NOT** feed or harvest forage, grain or stover within 45 days after application.
- 8. **DO NOT** apply to white popcorn or ornamental (Indian) corn.

Apply this product for the control of broadleaf and grass weeds listed in Tables 1 and 2.

#### THIS PRODUCT USED ALONE IN CORN - POST-EMERGENCE

Apply this product at 3.0 fluid ounces (0.094 lb. a.i.) per acre per application. Always add an appropriate adjuvant to the spray tank (see the "SPRAY ADDITIVES" section of this label).

For best results, apply this product this product to actively growing weeds. For a list of weeds controlled see **Table 1**. Susceptible weeds which emerge soon after application of this product may be controlled after they absorb the herbicide from the soil. This product will not control most grass weeds.

Two post-emergence applications of this product may be made with the following restrictions:

- 1.Only one post-emergence application may be made if this product has been applied pre-emergence.
- 2.DO NOT exceed a total of two applications per year.
- 3.DO NOT exceed a total of 7.7 fluid ounces (0.24 lb. a.i.) per acre of this product per year.
- 4. Minimum retreatment interval is 14 days.
- 5.Application of this product at rates less than 3.0 fluid ounces (0.094 lb. a.i.) per acre post-emergence may result in incomplete weed control and loss of residual control.
- 6.DO NOT exceed a total of 6.0 fluid ounces (0.188 lb. a.i.) per acre for the two post-emergence applications.
- 7.If this product is applied post-emergence to ground that received a pre-emergence application of a mesotrione containing herbicide, an appropriately labeled atrazine product must be tank-mixed with this product.
- 8.If atrazine is mixed with this product, DO NOT apply to corn that is more than 12 inches in height.
- 9. Corn may be treated up to 30 inches tall or up to the 8 leaf stage of corn growth.
- 10. **DO NOT** harvest forage, grain or stover within 45 days after application.

#### THIS PRODUCT USED ALONE IN CORN - PRE-EMERGENCE

Apply this product alone at 6.0 to 7.7 fluid ounces (0.188 to 0.24 lb. a.i.) per acre by ground sprayers in a spray volume of 10 to 30 gallons of water (up to 80 gals. if applied with liquid fertilizers) per acre for broadleaf weed control. For a list of weeds controlled, refer to **Table 2**. This product may be tank-mixed with pre-emergence grass herbicides for grass control. Refer to the tank-mix section for a list of partners.

# THIS PRODUCT IN TANK-MIXTURES FOR CORN

This product may be tank-mixed with other registered herbicides for improved spectrum of weed control in burndown, pre-emergence or post-emergence applications. Additionally, these tank mixtures can be used to include a different mode of action herbicide to help control or manage the development of resistant weed biotypes.

If compatibility of the tank-mix combination is not known, test the compatibility of any tank-mix combination on a small scale including a jar test before actual tank-mixing.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

#### **Burndown Tank-mixtures in Corn**

This product may be applied in tank-mixture with other registered herbicides for burndown plus residual weed control. For improved broadleaf weed control with limited residual control prior to planting corn and before corn emergence, apply this product at 3.0 fluid ounces (0.094 lb. a.i.) per acre in tank-mixes with paraquat, glyphosate, dicamba and/or 2,4-D. For greater residual control, use 6.0 to 7.7 fluid ounces of this product (0.188 to 0.24 lb. a.i.) (see **Table 2**) with the above products. Use the adjuvant system advised by the burndown herbicide.

# **Pre-emergence Tank-mixtures in Corn**

This product may be applied at a rate of 5.3 to 7.7 fluid ounces (0.166 to 0.24 lb. a.i.) per acre in tank-mixture with other registered herbicides (**Table 5**) for pre-emergence residual weed control. Refer to **Table 2** for list of weeds controlled by this product and this product plus atrazine applied pre-emergence.

Table 5. Tank-mixtures of this Product for Pre-emergence Application in Corn

Products containing:	Atrazine + Glyphosate + Metolachlor	Metolachlor
Acetochlor	Atrazine + Metolachlor	Pendimethalin
Acetochlor + Atrazine		
Atrazine		
Atrazine + Dimethenamid-P		

# Post-emergence Tank-mixtures in Corn

The tank-mixtures with this product listed in **Table 6** may be applied post-emergence to corn (i.e., after corn has emerged). Unless specified otherwise on this label or in a supplemental label, **DO NOT** apply this product at less than 3.0 fluid ounces (0.094 lb. a.i.) per acre. Application of this product at rates less than 3.0 fluid ounces (0.094 lb. a.i.) per acre post- emergence may result in a loss of residual control.

Always add an appropriate adjuvant to the spray tank (see the "SPRAY ADDITIVES" section of this label). Refer to individual product labels for precautionary statements, restrictions, rates, approved uses and list of weeds controlled. Not all of the tank-mix pesticides listed are registered for Field corn, Sweet corn or Yellow popcorn.

Table 6. Tank-mixtures of this Product for Post-emergence Application in Corn

Tank-mix Partner (Products Containing)	Instructions
Atrazine	Refer to <b>Table 1</b> on this label for application rates and weeds controlled.
Atrazine + Glyphosate +	For use only in glyphosate resistant corn.
Metolachlor	<ul> <li>Application of this mixture to corn hybrid that is not glyphosate resistant will result in crop death.</li> </ul>
	Restriction: DO NOT add Urea Ammonium Nitrate (UAN) or methylated seed oil (MSO) type adjuvants to this tank mixture or crop injury may occur.
Atrazine + Metolachlor	When using these tank mixtures, it is advised to leave the nitrogen based adjuvant (UAN or AMS) out of the mixture or apply as a post-directed spray to minimize contact with crop foliage.  The state of the mixture of the mixture or apply as a post-directed spray to minimize contact with crop foliage.
	<ul> <li>To further reduce the risk of crop injury, the user may also leave out the Crop Oil Concentrate (COC) or replace it with a Nonionic Surfactant (NIS).</li> <li>In all cases, the control of emerged weeds may be reduced somewhat due to less than optimum adjuvant effect or weed coverage.</li> </ul>
Atrazine + Nicosulfuron + Rimsulfuron	Use this mixture for additional broadleaf weed control. Refer to product label for list of weeds controlled.
Bentazone	Use this mixture for additional broadleaf weed control. Refer to product label for list of weeds controlled.
Bromoxynil	Use this mixture for additional broadleaf weed control.
	<ul> <li>Add bromoxynil (2 lbs./gal. formulation) at the labeled rate.</li> <li>Add bromoxynil (4 lbs./gal. formulation) at the labeled rate.</li> </ul>
Dicamba + Primisulfuron- methyl	Use this mixture for additional broadleaf weed control. Refer to product label for list of weeds controlled.

Glyphosate	<ul> <li>For use only in glyphosate resistant corn (e.g., Agrisure GT, Roundup Ready).</li> <li>Application of this mixture to corn hybrid that is not glyphosate resistant will result in crop death.</li> <li>Add spray-grade Ammonium Sulfate (AMS) at a rate that delivers 8.5 to 17.0 lbs. of AMS/100 gals. of water.</li> <li>If the glyphosate product label calls for an adjuvant in addition to AMS, add a nonionic surfactant (NIS) at 0.25 to 0.5% v/v (1 to 2 qts./100 gals.).</li> <li>Restriction: DO NOT add Urea Ammonium Nitrate (UAN), crop oil concentrate (COC) or Methylated Seed Oil (MSO) type adjuvants to this tank-mixture or crop injury may occur.</li> </ul>
Glufosinate	<ul> <li>Use this tank mixture only on corn designated as LibertyLink® or warranted as being resistant to glufosinate.</li> <li>Application of this mixture to corn hybrid that is not glufosinate resistant will result in severe crop injury or death.</li> <li>Restriction: DO NOT use Crop Oil Concentrate (COC) as an adjuvant for this mixture or severe crop injury may occur.</li> </ul>
Imazapyr + Imazethapyr	<ul> <li>For use only on corn designated as Clearfield® corn or warranted by manufacturer as being resistant to Imazapyr + Imazethapyr herbicide.</li> <li>Application of this mixture to corn hybrid that is not resistant to Imazapyr + Imazethapyr herbicide will result in severe crop injury or death.</li> <li>Restriction: DO NOT use a Methylated Seed Oil (MSO) or an MSO blend with this mixture or severe crop injury may result.</li> </ul>
Nicosulfuron	Use this mixture for additional grass control. Refer to product label for list of weeds controlled.
Nicosulfuron + Thifensulfuron- methyl	Use this mixture for additional grass control. Refer to product label for list of weeds controlled.
Nicosulfuron + Rimsulfuron	Use this mixture for additional grass control. Refer to product label for list of weeds controlled.
Primisulfuron-methyl + Prosulfuron	Use this mixture for additional broadleaf weed control. Refer to product label for list of weeds controlled.
Prosulfuron	Use this mixture for additional broadleaf weed control. Refer to product label for list of weeds controlled.
Rimsulfuron + Thifensulfuron- methyl	Use this mixture for additional weed control. Refer to product label for list of weeds controlled.

If compatibility of the tank-mix combination is not known, test the compatibility of any tank-mix combination on a small scale including a jar test before actual tank-mixing.

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.

# FIELD CORN, PRODUCTION SEED FIELD CORN AND FIELD CORN GROWN FOR SILAGE - AERIAL APPLICATION (MISSOURI AND NORTH DAKOTA)

This product can be applied by air post-emergence on Field corn, Production seed field corn and Field corn grown for silage in Missouri and North Dakota provided that the following criteria are met:

• A buffer zone must be established between the area to be sprayed and the sensitive plant species (e.g., broadleaf crops) as application of this product within 50 feet of the sensitive plant species may result in injury to sensitive plant species.

#### **Aerial Spray Equipment**

Apply this product in a minimum spray volume of 3 gallons of water per acre. When foliage is dense, use higher water volumes. Avoid application under conditions where uniform coverage cannot be obtained or where spray drift may

occur. Use sufficient spray volume to ensure complete dispersion of this product Herbicide in the spray tank when mixing and during applications to target broadleaf weeds.

#### **This Product Alone**

Apply this product post-emergence at a rate of 3 fluid ounces (0.094 lb. a.i.) per acre. Always add a Crop Oil Concentrate (COC) to the spray solution at a rate of 1 gallon per 100 gallons of water (1.0% v/v). In addition to COC, always add dry spray grade Ammonium Sulfate (AMS) at 8.5 pounds per 100 gallons of spray solution or a liquid AMS product that delivers a dry spray-grade AMS rate equivalent to 8.5 pounds per 100 gallons of spray solution. For best results, apply this product to actively growing weeds. For a list of weeds controlled, see **Table 1.** Susceptible weeds which emerge soon after an application of this product may be controlled after they absorb the herbicide from the soil. This product will not control most grass weeds. **Restriction: DO NOT use Methylated Seed Oil (MSO) or MSO blended adjuvants.** 

#### This Product in Tank-mixture with Glyphosate – Post-emergence

This product may be applied post-emergence at a rate of 3 fluid ounces (0.094 lb. a.i.) per acre in a tank-mixture with a solo glyphosate product that is registered for post-emergence use in glyphosate resistant Field corn. Application of the tank-mixture of this product with glyphosate to a Corn hybrid that is not glyphosate resistant will result in crop death.

Always add dry spray-grade Ammonium Sulfate (AMS) at 8.5 pounds per 100 gallons of spray solution to the tank-mixture. When using liquid AMS products, use a rate that delivers a dry spray-grade AMS rate equivalent to 8.5 pounds per 100 gallons of spray solution. **DO NOT** add Urea Ammonium Nitrate (UAN), Crop Oil Concentrate (COC) or Methylated Seed Oil (MSO) type adjuvants to the tank-mixture of this product with glyphosate or crop injury may occur.

If the glyphosate product has a built-in adjuvant system (i.e., the product label does not direct addition of adjuvant), add only AMS to the tank-mixture. If the glyphosate product label calls for an adjuvant in addition to AMS, refer to the glyphosate product label for proper adjuvant selection.

Read and follow the Roundup Ready Gene or Glyphosate Resistant Gene requirements on the glyphosate product label.

#### **CRANBERRY**

This product may be applied to bearing or non-bearing Cranberry beds for control or suppression of bog rushes (*Juncus canadensis*, *J. effuses*, *J. bufonlus*, *J. tenuis*), Sedges spp. (*Carex* spp.), St. John's wort (*Hypericum boreala*), Yellow loosestrife (*Lysimachia terrestris*) and Silverleaf (*Potentilla pacifica*) in addition to the weeds listed in **Tables 1** and **2**.

#### **USE DIRECTIONS**

This product may be applied in cranberries at a rate up to 8 fluid ounces (0.25 lb. a.i.) per acre.

#### Restrictions:

- 1. Apply no more than two applications per year.
- 2. **DO NOT** apply more than a total of 8 fluid ounces of this product (0.25 lb. a.i.) per acre per application.
- 3. **DO NOT** apply more than a total of 16 fluid ounces of this product (0.5 lb. a.i.) per acre per year.
- 4. Minimum retreatment interval is 14 days.
- 5. In non-bearing cranberries, make application(s) of this product after the bud break stage, but no less than 45 days before flooding in Fall or Winter.
- 6. In bearing Cranberries, make application(s) of this product after the bud break stage, but no less than 45 days prior to flooding or harvest.

Use Crop Oil Concentrate (COC) type adjuvant at 1% v/v or Nonionic Surfactant (NIS) at 0.25% v/v. Avoid using COC adjuvants that are injurious to Cranberry leaves.

#### **CHEMIGATION APPLICATION**

This product may be applied through irrigation systems (chemigation) including center pivot or solid set.

### Chemigation – Sprinkler Irrigation Application for Cranberry Only

Check the irrigation system to ensure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Good agitation in the pesticide supply tank must be maintained prior to and during the entire application period. Apply by injecting the specified rate of this product into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target areas in 0.1 to 0.2 acre-inch of water. Use the least amount of water in this range required for proper distribution and coverage.

Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system. In addition to the above, if application is being made during a normal irrigation set of a stationary sprinkler, the specified rate of this product for the area covered must be injected into the system only during the end of the irrigation

set for sufficient time to provide adequate coverage and product distribution.

A Nonionic Surfactant (NIS) or Crop Oil Concentrate (COC) may be added to the spray mixture for post-emergence applications at the rate of 1 to 4 pints per acre. Avoid using COC adjuvants that are injurious to Cranberry leaves.

# **Chemigation Use Precautions – Sprinkler Irrigation Application**

- 1. Apply this product only through sprinkler irrigation systems including center pivot or solid set. **DO NOT** apply this product through any other type of irrigation system.
- 2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- 3. If you have any questions about calibration, you must contact State Extension Service Specialists, equipment manufacturers or other experts.
- 4. DO NOT connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system. Public water system means a system for the 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.
- 5. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person shall shut the system down and make necessary adjustments if the need arises.
- 6. 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.
- 7. The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
- 8. 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.
- 9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 10. 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.
- 11. Systems must use a metering pump, like 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.
- 12. Any alternatives to the above required safety devices must conform to the list of EPA approved alternative devices.
- 13. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.

#### SPOT SPRAY APPLICATION (MASSACHUSETTS ONLY)

Spot treatment with this product may provide improved weed control in some situations.

The amount of this product per gallon of water for spot treatments are as follows:

This Product Per Gallon	Maximum Solution per Acre per Application	Solution Description
0.8 tsps. (0.004 lb ai)	30 to 60 gals.	Approximates 4 fl. oz./Ac. rate
1.6 tsps. (0.008 lb ai)	30 gals.	Approximates 8 fl. oz./Ac. rate
3 tbsp. (0.047 lb ai)	5.3 gals.	Very concentrated; For woody weeds including Poison ivy

#### RESTRICTIONS

- 1) DO NOT apply directly to water or areas where surface water is present outside the bog system.
- 2) DO NOT contaminate water when disposing of equipment wash water or rinsate.
- 3) **DO NOT** apply within 10 feet of surface water outside the bog system.
- 4) **DO NOT** spray to runoff.

#### **FLAX**

This product may be applied pre-emergence in flax, i.e., after planting but before crop emergence at a rate of up to 6 fluid ounces (0.188 lb. a.i.) per acre. For a list of weeds controlled, see **Tables 1** and **2**.

If weeds are emerged at the time of application, the use of a Crop Oil Concentrate (COC) type adjuvant at the rate of 1% v/v is advised. In addition, a spray grade Urea Ammonium Nitrate (UAN) (e.g., 28-0-0) at the rate of 2.5% (v/v) or Ammonium Sulfate (AMS) at the rate of 8.5 pounds per 100 gallons of spray solution may be added to improve the burndown of existing weeds.

#### Restrictions:

- 1. **DO NOT** apply more than one application per year in flax.
- 2. DO NOT apply more than 6 fluid ounces of this product (0.188 lb. a.i.) per application.
- 3. **DO NOT** apply more than 6 fluid ounces of this product (0.188 lb. a.i.) per acre per year in flax.

Applications of this product to emerged flax can result in severe crop injury.

#### **OATS**

This product 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 this product broadcast at a rate of 6.0 fluid ounces (0.188 lb. a.i.) per acre prior to oat emergence. For best pre-emergence weed control, application of this product 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 this product at a rate of 3.0 fluid ounces (0.094 lb. a.i.) per acre. For best results, this product must be applied to emerged weeds that are less than 5 inches tall. Post-emergence applications of this product 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 application of this product, the addition of a Crop Oil Concentrate (COC) type adjuvant at a rate of 1% v/v or a Nonionic Surfactant (NIS) type adjuvant at a rate of 0.25% v/v is advised. In addition to COC or NIS, a spray grade Urea Ammonium Nitrate (UAN) (e.g., 28-0-0) at the rate of 2.5% v/v or Ammonium Sulfate (AMS) at the rate of 8.5 pound per 100 gallons of spray solution may be added for improved weed control. If emerged weeds are not present at the time of application of this product, 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 this product for post-emergence use may increase the risk of injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to this product for applications made post-emergence to the crop.

#### Restrictions

- 1. DO NOT graze or feed forage from treated areas within 30 days following an application of this product.
- 2. **DO NOT** harvest oats within 50 days following the application of this product.
- 3. **DO NOT** make more than one application of this product per year.
- 4. **DO NOT** apply this product pre-emergence (prior to oat emergence) at more than 6.0 fluid ounces (0.188 lb. a.i.) per acre per year.
- 5. **DO NOT** apply this product pre-emergence (prior to oat emergence) at more than 6.0 fluid ounces (0.188 lb. a.i.) per application.
- 6. DO NOT apply this product post-emergence at more than 3.0 fluid ounces (0.094 lb. a.i.) per acre per year.
- 7. DO NOT apply this product post-emergence at more than 3.0 fluid ounces (0.094 lb. a.i.) per application.
- 8. If the oat crop treated with this product is lost or destroyed, oats may be replanted immediately. If this product was applied to the lost oat crop, no additional this product can be applied to the replanted oat crop.

#### **OKRA**

This product 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 Application**

Apply this product at a rate of 6.0 fluid ounces (0.188 lb. a.i.) per acre 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 inches 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 fluid ounces (0.188 lb. a.i.) per treated acre. **DO NOT** apply this product directly over the planted okra row or severe crop injury may occur. Injury risk is greatest on coarse textured soils (sand, sandy loam or loamy sand).

# **Post-emergence Hooded Application**

Apply this product at a rate of 3.0 fluid ounces (0.094 lb. a.i.) per acre 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 inches tall at the time of this application. It is advised that a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v be added to the spray solution. For post-emergence hooded applications, the spray equipment must be set up to minimize the amount of this product that contacts the okra foliage or crop injury will occur. For best post-emergence results, this product must be applied to actively growing weeds.

#### Restrictions

- 1. DO NOT harvest okra within 28 days following the application of this product.
- 2. **DO NOT** make more than one application of this product per okra crop.
- 3. **DO NOT** apply this product as a row middle application at more than 6.0 fluid ounces (0.188 lb. a.i.) per treated acre per year.
- 4. **DO NOT** apply this product as a row middle application at more than 6.0 fluid ounces (0.188 lb. a.i.) per application.
- 5. **DO NOT** apply this product as a post-directed application at more than 3.0 fluid ounces (0.094 lb. a.i.) per acre per vear.
- 6. **DO NOT** apply this product as a post-directed application at more than 3.0 fluid ounces (0.094 lb. a.i.) per application.
- 7. DO NOT apply this product as a broadcast pre-emergence or broadcast post-emergence application to okra or severe injury will occur.
- 8. If the okra crop treated with this product is lost or destroyed, Okra can be replanted only in the soil band that was not treated with this product.

#### **PEARL MILLET**

This product may be applied pre-emergence in pearl millet, i.e., after planting but before crop emergence at a rate of up to 6 fluid ounces (0.188 lb. a.i.) per acre. For a list of weeds controlled, see **Table 2**.

If weeds are emerged at the time of application, the use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is advised. In addition, a spray grade Urea Ammonium Nitrate (UAN) (e.g., 28-0-0) at the rate of 2.5% (v/v) or Ammonium Sulfate (AMS) at the rate of 8.5 pounds per 100 gallons of spray solution may be added to improve the burndown of existing weeds.

#### **Restrictions:**

- 1. **DO NOT** make more than one application.
- 2. DO NOT apply more than 6 fluid ounces of this product (0.188 lb. a.i.) per acre per year in pearl millet.
- 3. **DO NOT** apply more than 6 fluid ounces of this product (0.188 lb. a.i.) per application.
- 4. Applications of this product to emerged pearl millet can result in severe crop injury.

#### **RHUBARB**

This product can be applied prior to crop emergence for weed control in established rhubarb.

Apply this product at a rate of 6.0 fluid ounces (0.188 lb. a.i.) per acre to dormant (prior to any Spring green-up) rhubarb for control or partial control of the weeds listed in **Table 2**. If weeds are emerged at the time of application, it is advised that a crop oil concentrate (COC) type adjuvant at 1% v/v or a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v be added to the spray solution.

Applications of this product to rhubarb that is not dormant may result in a temporary bleaching symptomology. Rainfall or irrigation after application of this product may increase the risk of injury to emerging rhubarb.

#### Restrictions

- 1. **DO NOT** harvest rhubarb within 21 days following the application of this product.
- 2. **DO NOT** make more than one application of this product per year.
- 3. DO NOT apply this product at more than 6.0 fluid ounces (0.188 lb. a.i.) per acre per year.
- 4. **DO NOT** apply this product at more than 6.0 fluid ounces (0.188 lb. a.i.) per application.

## **SORGHUM (GRAIN AND SWEET)**

#### **Pre-emergence Application**

This product can be applied pre-emergence or pre-plant non-incorporated up to 21 days before planting sorghum for control or partial control of the weeds listed in **Table 2**.

Apply this product pre-emergence at a rate of 6.0 to 6.4 fluid ounces (0.188 lb. a.i. to 0.2 lb. a.i.) per acre as a broadcast non-incorporated application prior to sorghum emergence. Applying this product less than 7 days before sorghum planting will increase the risk of crop injury especially if irrigation or rainfall is received following the application. Injury symptoms include temporary bleaching of newly emerging sorghum leaves. Applying this product more than 7 days (but not more than 21) prior to planting will reduce the risk of crop injury.

If this product is applied prior to planting, minimize disturbance of the herbicide treated soil barrier during the planting process in order to lessen the potential for weed emergence. If emerged weeds are present at the time of the preemergence application, it is advised that a Nonionic Surfactant (NIS) type adjuvant at a rate of 0.25% v/v or a Crop Oil Concentrate (COC) type adjuvant at a rate of 1% v/v be added to the spray solution. In addition to COC or NIS, a spray grade Urea Ammonium Nitrate (UAN) at a rate of 2.5% v/v or Ammonium Sulfate (AMS) at a rate of 8.5 pounds per 100 gallons of spray solution can be added to the spray solution.

#### **Restrictions for Pre-emergence Application**

- 1. DO NOT apply more than 6.4 fluid ounces of this product (0.2 lb. a.i.) per acre per year.
- 2. DO NOT apply more than 6.4 fluid ounces of this product (0.2 lb. a.i.) per application.
- 3. **DO NOT** apply this product to emerged sorghum or severe crop injury may occur.
- 4. **DO NOT** use this product in the production of Forage sorghum, Sudangrass, Sorghum-Sudangrass hybrids or dual purpose sorghum.
- 5. DO NOT apply this product to sorghum that is grown on coarse textured soils (e.g., sandy loam, loamy sand, sand).
- 6. In the State of Texas, **DO NOT** apply this product to sorghum grown south of Interstate 20 (I-20) or east of Highway 277.

# **Post-directed Application**

This product can be applied post-directed to grain sorghum for control or partial control of the weeds listed in **Table 1**. For best results, apply this product to actively growing weeds.

Apply this product at a rate of 3 fluid ounces (0.094 lb. a.i.) per acre as a post-directed application when the grain sorghum is a minimum of 8 inches tall. Make the application by directing the spray between the crop rows and towards the base of the grain sorghum plant. Direct application of this product onto grain sorghum foliage can result in crop injury including temporary bleaching. If crop injury does occur, newly emerging leaves following application are typically unaffected.

Use a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v or a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v be added to the spray solution. In addition to COC or NIS, a spray grade Urea Ammonium Nitrate (UAN) at a rate of 2.5% v/v or ammonium sulfate (AMS) at a rate of 8.5 pounds per 100 gallons of spray solution can be added to the spray solution.

This product may be tank-mixed with other herbicides registered for grain sorghum for improved spectrum of weed control. Additionally, these tank-mixtures can be used to include a herbicide with a different mode of action to help control or manage the development of resistant weed biotypes. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

# **Restrictions for Post-directed Application**

- 1. DO NOT apply more than one post-directed application of this product.
- 2. **DO NOT** apply more than 3.0 fluid ounces (0.094 lb. a.i.) per acre of this product post-directed and not more than 6.4 fluid ounces of this product (0.2 lb. a.i.) per acre per grain sorghum crop year.
- 3. **DO NOT** apply this product broadcast over-the-top to emerged sorghum or severe crop injury may occur.
- 4. **DO NOT** harvest grain sorghum for forage for 30 days following application.
- 5. **DO NOT** harvest for grain or stover for 60 days following application.
- 6. **DO NOT** apply this product after the sorghum seedhead has begun to emerge.
- 7. DO NOT use this product in the production of Forage sorghum, Sudangrass or Sorghum-Sudangrass hybrids.

#### **SOYBEANS**

This product can be applied pre-emergence to soybeans that are identified as mesotrione resistant. Applications to soybeans that are not mesotrione resistant will result in significant crop injury. For a list of mesotrione resistant soybean varieties, contact your INFINICROP representative or your soybean seed dealer.

# **Pre-emergence Application**

For pre-emergence control of the weeds listed in **Table 2**, apply this product prior to soybean emergence at a rate of 6.0 fluid ounces (0.188 lb. a.i.) per acre. Apply the higher rate for longer residual control.

This product may be tank-mixed with other registered soybean herbicides including metolachlor and metolachlor + fomesafen. If compatibility of the tank-mix combination is not known, test the compatibility of any tank-mix combination on a small scale including a jar test before actual tank-mixing. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

If weeds are emerged at the time of application, add either a non-ionic surfactant (NIS) at 1 quart per 100 gallons (0.25% v/v) or a Crop Oil Concentrate (COC) at 1 gallon per 100 gallons (1% v/v). In addition to NIS or COC, you may also add either Ammonium Sulfate (AMS) at 8.5 to 17 pounds per 100 gallons (or equivalent).

#### Restrictions

- 1. Apply no more than 6.0 fluid ounces of this product (0.188 lb. a.i.) per acre per year.
- 2. Apply no more than 6.0 fluid ounces of this product (0.188 lb. a.i.) per application.
- 3. **DO NOT** make more than one application per year.

- 4. **DO NOT** apply this product to emerged soybeans.
- 5. **DO NOT** graze or feed soybean forage or hay to livestock.

#### **SUGARCANE**

This product can be applied by ground for pre-emergence, post-emergence over-the-top or post-emergence directed weed control in sugarcane.

This product may also be applied aerially for pre-emergence or post-emergence weed control only in the following states: Florida, Louisiana and Texas.

#### **Pre-emergence Applications**

Apply this product for pre-emergence weed control at 6.0 to 7.7 fluid ounces (0.188 to 0.24 lb. a.i.) per acre after the planting of plant cane or after harvest of ration cane. For a list of weeds controlled pre-emergence, refer to **Table 2**.

If some weeds are already emerged at the time of application, add a Crop Oil Concentrate (COC) type adjuvant at a rate of 1% v/v or a Nonionic Surfactant (NIS) type adjuvant at a rate of 0.25% v/v to the spray solution. In addition to COC or NIS, a spray grade Urea Ammonium Nitrate (UAN) at a rate of 2.5% v/v or Ammonium Sulfate (AMS) at a rate of 8.5 pounds per 100 gallons of spray solution can be added to the spray solution. For improved pre-emergence weed control, atrazine or ametryn can be tank-mixed with this product. Refer to the tank-mix partner label for specific rates and use directions.

# **Post-emergence Applications**

Apply this product post-emergence at 3.0 fluid ounces (0.094 lb. a.i.) per acre for control of the weeds listed in **Table 1**.

Post-emergence applications may be made 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 post-emergence application can be made. If no pre-emergence application was made earlier in the season, both a post-over-the-top and a post-directed application can be made. For best results, this product must be applied to actively growing weeds.

For post-emergence applications, it is advised that a Crop Oil Concentrate (COC) type adjuvant at a rate of 1% v/v or a nonionic surfactant (NIS) type adjuvant be added to the spray solution. In addition to COC or NIS, the use of a spray grade Urea Ammonium Nitrate (UAN) (e.g., 28-0-0) at 2.5% v/v or Ammonium Sulfate (AMS) at a rate of 8.5 pounds per 100 gallons of spray solution can be added for improved control of weeds.

For additional post-emergence weed control, this product can be tank-mixed with atrazine (e.g., Atrazine 4L of 90DF), asulam (e.g., Asulox®) and/or trifloxysulfuron-sodium (e.g., Envoke®). 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.

#### Restrictions

- 1. DO NOT apply more than 7.7 fluid ounces of this product (0.24 lb. a.i.) per acre as a pre-emergence application.
- 2. **DO NOT** apply more than 3.0 fluid ounces of this product (0.094 lb. a.i.) per acre in a post-emergence application.
- 3. **DO NOT** make more than two applications of this product per year. If a pre-emergence application of this product is made, only one post-emergence application of this product is allowed.
- 4. Minimum retreatment interval is 14 days.
- 5. **DO NOT** apply more than 10.7 fluid ounces of this product (0.334 lb. a.i.) per acre per year.
- 6. DO NOT harvest sugarcane within 114 days following a post-over-the-top application of this product (114 day PHI).
- 7. **DO NOT** harvest sugarcane within 100 days following a post-directed application of this product (100 day PHI).

### **TURFGRASS**

This product is applied pre-emergence and post-emergence to provide selective contact and residual control of turfgrass weeds. When applied pre-emergence, weeds absorb this product during emergence from the soil. Pre-emergence activity may be reduced under dry conditions. Activate this product with 0.15 inch of irrigation if rain has not occurred within 10 days of application. When used post-emergence, this product is absorbed by susceptible weeds through foliar contact and soil absorption. Foliage of treated weeds cease to grow after application of this product, then turn white from loss of chlorophyll and die within three weeks. Make a repeat application after 2 to 3 weeks to improve post-emergence weed control. Add a nonionic surfactant (NIS) when making post-emergence applications.

This product may cause temporary whitening of turfgrass foliage. Whitening typically occurs 5 to 7 days after application and lasts for several weeks. Repeat application to the same site causes less whitening of plant tissue.

This product controls weeds prior to and during seeding of certain turfgrasses during Turf renovation (see "NEW SEEDINGS" section). If applied pre-emergence to established turf, tank-mix this product with other pre-emergence herbicides including prodiamine or pendimethalin for longer residual and broad-spectrum control.

#### **PRECAUTIONS**

- Residential Lawn Applications: Unless renovating and/or reseeding home lawns, avoid broadcast application of this
  product for pre-emergence and post-emergence weed control as undesirable whitening of some turfgrasses may
  occur.
- Bentgrass, Bermudagrass, Kikuyugrass, *Poa annua*, Seashore paspalum and Zoysiagrass are sensitive to applications of this product. Avoid spraying these types of turf unless control and/or injury can be tolerated. Maintain a five foot buffer between treated areas and Bentgrass or *Poa annua* greens.
- To reduce movement into sensitive species including Bentgrass, keep people and pets off treated areas until spray has dried and irrigate lightly to move product from turf foliage before resuming normal irrigation.
- Clean sprayer thoroughly after an application of this product if the same equipment is used to apply products to Bentgrass/*Poa annua* turf areas.
- Avoid over-spray or drift of spray applications onto ornamentals or flower beds and gardens. Roses and Daylilies are sensitive to this product.
- Avoid applications over-the-top of exposed roots of trees and ornamentals.

#### **RESTRICTIONS**

- DO NOT apply more than 8 fluid ounces of this product (0.25 lb a.i.) per acre per application.
- DO NOT apply more than 16 fluid ounces of this product (0.5 lb. a.i.) per acre per year.
- DO NOT make more than 4 applications per year when using reduced application rates.
- · Minimum retreatment interval is 14 days.
- DO NOT use on golf course putting greens.
- DO NOT plant any crop other than turfgrass species for 18 months after the last application of this product or injury may occur.
- DO NOT apply by air.
- **DO NOT** apply through any type of irrigation system.
- DO NOT use grass clippings from treated turf as mulch around trees or in vegetable/flower gardens.
- DO NOT apply an organophosphate or carbamate insecticide within 7 days of application of this product as injury to turf may occur.

#### **TANK-MIXTURE**

This product has been tested in many tank-mixtures with products containing atrazine, bentazon, carfentrazone, dicamba, fluroxpyr, prodiamine, simazine and triclopyr for safety and efficacy on turfgrasses. Apply this product at reduced rates (4 fl. oz. of this product (0.125 lb a.i.) per acre) if tank-mixed with atrazine, bentazone or simazine. Other tank-mixtures may be safe but has not been tested. Test on a small scale for compatibility, safety and efficacy before treating large areas if wanting to tank-mix this product with other herbicides.

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.

#### **USE SITES**

This product may be used in turfgrasses species listed on this label in commercial and residential sites to control weeds. Use sites include noncrop areas for example golf course, sod farms, athletic fields, parks, residential and commercial properties, cemeteries, airports and lawns.

**DO NOT** use on golf course putting greens and maintain a five-foot buffer between treated areas and putting greens.

#### **TURFGRASS SPECIES**

This product has been tested on the following species of turfgrass and found to be safe under trial conditions:

Turfgrass Species	Scientific Name	Rate/Ac. (Fl. oz.)
Buffalograss	Buchloe dactyloides	5 to 8
Centipedegrass	Eremochloa ophiuroides	5 to 8
Fine fescue* (Creeping red, Chewings and Hard)	Festuca spp.	5
Kentucky bluegrass	Poa pratensis	5 to 8
Perennial ryegrass*	Lolium perenne	5
St. Augustinegrass (grown for sod)	Stenotaphrum secundatum	4
Tall Fescue	Festuca arundinacea	5 to 8

\*See additional instructions below.

4 fluid ounces of product = 0.125 lb. a.i. 5 fluid ounces of product = 0.156 lb. a.i. 8 fluid ounces of product = 0.25 lb. a.i.

# **WEEDS CONTROLLED**

Common Name	Scientific Name	Pre-emergence <sup>1</sup>	Post-emergence <sup>2</sup>
Barnyardgrass	Echinocloa crus-galli	Y	Υ
Bentgrass, Creeping	Agrostis stolonifera	Y	Y
Bluegrass, Annual	Poa annua	Suppression	N
Buckhorn plantain	Plantago lanceolata	Y	Υ
Buttercup	Ranunculus sardous	_3	Y
Carpetweed	Mollugo verticillata	Y	Υ
Chickweed, Common	Stellaria media	Y	Y
Chickweed, Mouseear	Cerastium vulgatum	Y	Y
Clover, Large hop	Trifolium aurem	Y	Y
Clover, White	Triflolium repens	Y	Υ
Crabgrass, Large	Digitaria sanguinalis	Y	<b>Y</b> 4
Crabgrass, Smooth	Digitaria ischaemum	Y	<b>Y</b> 4
Crabgrass, Southern	Digitaria ciliaris	Y	<b>Y</b> 4
Curly dock	Rumex crispus	-	Y
Dandelion, Catsear	Hypochoeris radicata	-	Y
Dandelion, Common	Tarazacum officinale	-	Y
Florida betony	Stachys floridana	-	Y
Florida pusley	Richardia scabra	-	Y
Foxtail, Yellow	Setaria glauca	Y	Y
Galinsoga	Galinsoga ciliata	Y	Y
Goosegrass	Eleusine indica	-	<b>Y</b> 4
Ground ivy	Glechoma hederacea	-	Ý
Healall	Prunella vulgaris	-	Y
Henbit	Lamium amplexicaule	-	Y
Lambsquarters, Common	Chenopodium album	Y	Y
Lawn burweed	Soliva sessilis	-	Y
Lovegrass, Tufted	Eragrostis pectinacea	-	Υ
Marestail	Conyza canadensis	-	Y
Nimblewill	Muhlenbergia schreberi	-	Υ
Nutsedge, Yellow	Cyperus esculentus	-	Y
Oxalis	Oxalis stricta	-	Υ
Pigweed, Redroot	Amaranthus retroflexus	Y	Υ
Pigweed, Smooth	Amaranthus hybridus	Y	Υ
Purslane, Common	Portulaca oleracea	Y	Υ
Shepherd's purse	Capsella bursa-pastoris	Y	Υ
Smartweed, Pale	Polygonum lapathifolium	Y	Υ
Smartweed, Pennsylvania	Polygonum pensylvanicum	Y	Υ
Speedwell, Persian	Veronica persica	Y	1
Speedwell, Purslane	Veronica peregrina	Y	-
Sowthistle	Sonchus oleraceus	-	Y
Swinecress	Coronopus didymus	-	Υ
Thistle, Canada	Cirsium arvense	-	Y
Verbena	Verbena hastata	-	Υ
Wild carrot	Daucus carota	Y	Y
Wild Violet	Viola pranticola	-	Y
Windmillgrass	Chloris verticillata	-	Y

<sup>&</sup>lt;sup>1</sup>For broad spectrum pre-emergence activity, apply with a grass pre-emergence herbicide including prodiamine except when used for weed control in new seedings.

<sup>&</sup>lt;sup>2</sup>Weed control with post-emergence applications require a second application after 2 to 3 weeks. Apply to young, actively growing weeds with nonionic type of surfactant.

<sup>&</sup>lt;sup>3</sup>Not tested. <sup>4</sup>For best post-emergence control, apply at less than 4 tiller Crabgrass and Goosegrass.

#### APPLICATION INSTRUCTIONS

#### PRE-EMERGENCE APPLICATION

Apply this product at 4 to 8 fluid ounces (0.125 to 0.25 lb. a.i.) per acre in at least 30 gallons of water prior to weed seed germination.

**DO NOT** exceed 5 fluid ounces (0.156 lb. a.i.) per acre per application to Perennial ryegrass or Fine fescues or mixed stands that contain greater than 50% Perennial ryegrass and/or Fine fescue.

**DO NOT** exceed 4 fluid ounces (0.125 lb. a.i.) per acre to St. Augustinegrass sod. Make application close to anticipated weed seed germination.

Combine this product with a pre-emergence herbicide for example prodiamine for extended control of key annual monocot weeds including Crabgrass and Foxtail. In established turf, this product is more effective as a post-emergence application unless combined with another soil active herbicide.

#### **NEW SEEDINGS / NEW LAWN ESTABLISHMENT**

Apply this product at 5 to 8 fluid ounces (0.156 to 0.025 lb. a.i.) per acre in at least 30 gallons of water prior to seeding or post seeding of non-sensitive turfgrass species listed on this label, except Fine fescue. This product may reduce density of Fine fescue seedings. This product can be used on grass seed blends that contain less than 20% by weight of Hard or Fine fescue. This product will control many monocot and dicot weeds that compete with and slow the establishment of the turfgrass stands. For best results, apply at grass seeding or close to seeding. Avoid spraying on newly germinated turfgrass plants. Before making a post-emergence application, wait until the newly germinated turf has been moved two times or four weeks after emergence (whichever is longer).

#### POST-EMERGENCE APPLICATION

Apply this product at 4 to 8 fluid ounces (0.125 to 0.25 lb. a.i.) per acre in at least 30 gallons of water. Apply with a nonionic type of surfactant. A repeat application at two to three weeks may be required for adequate weed control. Weed control is most effective on young, actively growing weeds. Efficacy will be reduced under moisture stress or from applications to mature weeds.

#### CONTROL OF BENTGRASS AND NIMBLEWILL

Apply this product at 5 fluid ounces (0.156 lb. a.i.) per acre in at least 30 gallons of water at two to three-week intervals for up to three applications. Apply with a nonionic type of surfactant.

Bentgrass control may be more effective in the late Summer/early Fall just before onset of renewed Bentgrass growth than Spring/early Summer applications.

On St. Augustinegrass (sod uses only) and Centipedegrass, if this product is tank-mixed with atrazine or simazine, **DO NOT** exceed 4 fluid ounces of this product (0.125 lb. a.i.) and 0.5 pound atrazine or simazine per acre. Apply the tank-mixture to established turf only. 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.

#### DORMANT BERMUDAGRASS APPLICATIONS ONLY

Apply this product at 5 fluid ounces (0.156 lb. a.i.) per acre to control Winter weeds listed in the "WEEDS CONTROLLED" table on dormant Bermudagrass. Repeat application in two to three weeks. Applications made to semi-dormant turf will cause whitening of the Bermudagrass.

#### SPOT APPLICATION OF THIS PRODUCT

Spray Mix	Rate of This Product	Nonionic Surfactant (NIS)
2 gals.	1 tsp.	3 tsps.

Apply the spray mix at 1 gallon per 1,000 square feet.

 $\textbf{DO NOT} \ \text{apply more than 16 fluid ounces of this product (0.5 lb. a.i.) per acre per year.}$ 

# STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container. Keep container tightly closed. Keep away from heat and flame. **PESTICIDE DISPOSAL:** To avoid waste, use all materials in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often, such programs are run by State or local governments or by industry).

#### **CONTAINER HANDLING:**

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration.

Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons): Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration.

Refillable Container (>250 gallons & Bulk): Refillable container. Refill this container with pesticide only. DO NOT reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

# WARRANTY—CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically directed and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable laws, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable laws, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

# { [LANGUAGE ON LABEL AFFIXED TO **CONTAINER!**

MESOTRIONE GROUP 27 HERBICIDE

# **Mesotrione 480SC**

#### **ACTIVE INGREDIENT:**

Mesotrione	40.0%
OTHER INGREDIENTS:	60.0%
TOTAL:	100.0%
This product contains 4 pounds of mesotrione pe	er gallon

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

#### FIRST AID

#### IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- DO NOT induce vomiting unless told to do so by a poison control center or doctor.
- DO NOT give anything by mouth to an unconscious person.

#### IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-tomouth, if possible.
- Call a poison control center or doctor for treatment advice.

#### IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

#### IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes
- Call a poison control center or doctor for treatment advice.

# **HOTLINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including general health concerns or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, Monday through Friday, 8:00 AM to 12 PM Pacific Standard Time. In the event of a medical emergency, call your poison control center at 1-800-222-1222.

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

# STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container. Keep container tightly closed. Keep away from heat and flame. PESTICIDE DISPOSAL: To avoid waste, use all materials in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often, such programs are run by State or local governments or by industry).

#### **CONTAINER HANDLING:**

Nonrefillable Container (rigid material; less than 5 gallons): Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration.

Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons): Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration.

Refillable Container (> 250 gallons & Bulk): Refillable container. Refill this container with pesticide only. DO NOT reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[See] [inside] [label] [booklet] [for] [additional] [Precautionary Statements][,] [and] [Directions for Use] [including] [Storage and Disposal] [instructions][.]

EPA Reg. No.: 94144-XX **EPA Est. No.:** 

# Manufactured for:

INFINICROP, LLC 266 Reservation Road, F#202 Marina, CA 93933

[Lot][Batch No.]\_ **Net Contents:**