UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

January 24, 2023

Anna Hale
Registration Manager
Drexel Chemical Company
P.O. Box 13327
Memphis, TN 38113-0327

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from the Interim Decisions for Metolachlor and Mesotrione and the National Marine Fisheries Services' (NMFS) Biological Opinion on the Effects of Metolachlor on Pacific Salmonids
Product Name: Drexel Mes-O-Sate Herbicide
EPA Registration Number: 19713-694
Application Date: March 24, 2021, July 12, 2021, and April 26, 2022
Decision Number: 572614, 577098, and 583991

Dear Anna Hale:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Metolachlor and Mesotrione Interim Decisions. The Agency has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

This letter also addresses the label mitigation resulting from the NMFS' Biological Opinion on the effects of Metolachlor on Pacific salmonids. The Agency has concluded that your submission is also acceptable.

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.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Jaclyn Pyne at pyne.jaclyn@epa.gov.

Sincerely,

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure

METOLACHLOR	GROUP	15	HERBICIDE
GLYPHOSATE	GROUP	9	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE

ACCEPTED

Jan 24, 2023

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 19713-694

Drexel®

Mes-O-Sate™

Herbicide

For post-emergence weed control in Glyphosate tolerant Corn and pre-emergence weed control in Grain Sorghum.

ACTIVE INGREDIENT:

Metolachlor	20.50%
Glyphosate, N-(phosphonomethyl) glycine	20.50%
Mesotrione	2.05%
OTHER INGREDIENTS:	56.95%
TOTAL:	100.00%

This product contains 2.09 pounds of metolachlor, 2.09 pounds of Glyphosate and 0.209 pound of mesotrione per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

[See FIRST AID Below]

[See Side (Back) Panel for FIRST AID]; [See Page ___ for FIRST AID]
[See Container Labeling for (FIRST AID and) Complete Directions for Use]
[See (Attached) Booklet (Container Labeling) for Complete Directions for Use]
[SHAKE WELL BEFORE USING]
[RECIRCULATE CONTENTS BEFORE USE]

EPA Reg. No. 19713-694
EPA Est. No. 19713-XX-XXX **Net Content:_____Gals. (_____L)**

FIRST AID
IF INHALED: • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
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 SWALLOWED: • Call a poison control center or doctor immediately for treatment advice. • Have a 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 to an unconscious person.
IF ON SKIN OR CLOTHING: • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency medical treatment information.

694SP-0220*

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals

CAUTION: Harmful if inhaled. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some people.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Coveralls over short-sleeved shirt and short pants, chemical-resistant gloves made of any waterproof material including barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride ≥ 14 mils or viton ≥ 14 mils, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure and chemical-resistant apron when cleaning equipment, mixing or loading.

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

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)]. When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the 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: 1) Wash hands thoroughly before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For terrestrial uses, 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.

Reporting Ecological Incidents:
To report ecological incidents, including mortality, injury, or harm to plants and animals, call (901)774-4370.

NON-TARGET ORGANISMS ADVISORY STATEMENT

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

Ground Water Advisory

The active ingredients, Metolachlor and Mesotrione, are known to leach through soil into ground water under certain conditions as a result of label use.

These chemicals may leach if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory

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

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

Mixing and Loading Instructions

Take care when using this product to prevent back siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures or rinsates.

Check valves or anti-siphoning devices must be used on mixing equipment.

This product may not be mixed/loaded or used within 50 feet of wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed

and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

Do not store, mix or apply this product or spray solutions of this product in unlined steel (except stainless steel), galvanized steel containers or sprayer tanks. This product or spray solutions of this product will react with these containers and tanks and produce hydrogen gas which may form a highly combustible mixture. This gas mixture could flash or explode causing serious personal injury if ignited by spark, open flame, lighted cigarette, welder torch or other ignition source.

Mix, store and apply spray solutions of this product using only stainless steel, fiberglass, plastic or plastic-lined steel containers.

PRODUCT INFORMATION

MES-O-SATE Herbicide is a systemic, post-emergence herbicide for contact followed by residual control of weeds in Glyphosate tolerant Corn. It is also a pre-emergence herbicide for control of weeds in Grain sorghum. Following a post-emergence application of this product, susceptible weeds take up the herbicide through the treated foliage and cease growth soon after application. This product is also absorbed through the soil and/or by the foliage of emerged weeds. Complete death of the weeds may take up to 2 weeks.

This product provides 3 to 4 weeks of residual control of newly emerging susceptible weeds (see **Table 1**) through root and shoot absorption.

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.
Endangered Species Protection Requirements:

It is a Federal offense to use any pesticide in a manner that results in an unauthorized “take” (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult **http://www.epa.gov/espp/**, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.”

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, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours. Exception: If the product is soil-injected or soil incorporated, the WPS, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 over short-sleeved shirt and short pants, chemical-resistant gloves made of any waterproof material including barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride ≥ 14 mils or viton ≥ 14 mils, chemical-resistant footwear plus socks and chemical-resistant headgear for overhead exposure.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY OR ILLEGAL RESIDUES.

Sale, use, and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

USE RESTRICTIONS

- 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.
- Do not apply this product with suspension fertilizers or urea ammonium nitrate (UAN) as carrier.
- Do not apply more than 4 pints of this product per acre per growing season.
- Do not apply more than 6 pints of this product per acre per growing season to Grain sorghum.

USE PRECAUTIONS

- This product can be applied post-emergence to Glyphosate tolerant Corn (Roundup Ready®). Application of this product to a Corn hybrid that is not Glyphosate tolerant will result in crop death.

- 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.

- If an activating rain (0.25 inch) or equivalent irrigation is not received within 7 to 10 days after the post-emergence application, residual weed control will be reduced.

- Avoid drift onto adjacent crops. Severe damage or destruction may be caused by contact of this product to any vegetation (including leaves, green stems, exposed non-woody roots or fruit) of crops, trees and other desirable plants to which treatment is not intended.

- Severe Corn injury resulting in yield loss may occur if this product is applied post-emergence to Corn crops that were treated with Terbufos, Chlorpyrifos or other organophosphate containing soil insecticides.

- Severe Corn injury resulting in yield loss may occur if this product is applied foliar post-emergence in a tank-mix with any organophosphate or carbamate insecticide.

- Severe Corn injury resulting in yield loss may occur if any foliar organophosphate or carbamate insecticide is applied post-emergence within 7 days before or 7 days after application of this product.

- Severe Corn injury may occur if this product is applied post-emergence in a tank-mix with emulsifiable concentrate (EC) products.

- This product may be applied with pyrethroid insecticides such as Lambda-cyhalothrin.

 Circulation before dispensing is required.

 To avoid contamination, ensure that the spray system is thoroughly cleaned with water and a commercial tank cleaner (e.g., Warsh-Out™) before and after each use.

MANDATORY SPRAY DRIFT MANAGEMENT

AERIAL APPLICATIONS:

- Do not release spray at a height greater than 10 feet above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 641 (ASABE S641). If the wind speed is 10 mph or less, applicators must use 1/2 swath displacement upwind at the downwind edge of the field. When the wind speed is between 11 to 15 mph, applicators must use 3/4 swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must not exceed 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

AIRBLAST APPLICATIONS:

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

GROUNDBOOM APPLICATIONS:

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

BOOMLESS GROUND APPLICATIONS:

- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

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

IMPORTANCE OF DROPLET SIZE

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

Controlling Droplet Size - Ground Boom

• Volume- Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

• Pressure- Use the lowest spray pressure 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 manufacturer's recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – GROUND BOOM

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

RELEASE HEIGHT - AIRCRAFT

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

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

TEMPERATURE AND HUMIDITY

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

TEMPERATURE INVERSIONS

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

WIND

Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

HANDHELD TECHNOLOGY APPLICATIONS

Take precautions to minimize spray drift.

Boomless Ground Applications:

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

WEED RESISTANCE MANAGEMENT

METOLACHLOR	GROUP	15	HERBICIDE
GLYPHOSATE	GROUP	9	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE

For resistance management, this product is a Group 15, 9 and 27 modes of action herbicides. Any weed population may contain or develop plants naturally resistant to this product and other Group 15, 9 and 27 modes of action herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

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

- Rotate the use of this product or other Group 15, 9 and 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 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 such as 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 Drexel Chemical Company representatives at (901) 774-4370.

Triazine and Acetolactate Synthase (ALS) Resistance

Naturally occurring biotypes of certain broadleaf and grass weed species with resistance to triazine or ALS herbicides are known to exist. If weed biotypes resistant to triazine or ALS inhibitors are present in the field, this product will control them if they are listed in **Table 1**.

Glyphosate Resistance

Some naturally occurring weed biotypes resistant to Glyphosate may exist through normal genetic variability in any weed population. The repeated use of herbicides with the same mode of action is known to lead under certain conditions to a selection of resistant weeds. Certain agronomic practices reduce the likelihood that resistant weed populations will develop and integrated strategies are known to manage such problem weeds.

Glyphosate is one of the active ingredients in this product, thus, Glyphosate resistance management is critical. This product will control broadleaf weeds that are showing increased tolerance or resistance to Glyphosate. When applying this product to broadleaf weeds that are suspected or known to be resistant to Glyphosate, tank-mix with Atrazine or Dicamba to provide an additional mode of action. 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.

This product will not provide control of emerged grasses that are resistant to Glyphosate. For control of Glyphosate resistant grass weeds, a weed control program that includes a pre-emergence grass herbicide will reduce the dependence on Glyphosate.

Best Weed Management practice includes the diversification of Glyphosate dependent weed control programs with alternative mode of action herbicides or cultural practices.

- In Roundup Ready Corn and Roundup Ready Soybeans systems, do not use more than two applications of a Glyphosate based herbicide over a two-year period. Diversify with alternative mode of action herbicides and/or cultural practices.
- In Roundup Ready Cotton, a maximum of three applications of a Glyphosate based herbicide may be used if employing in-crop cultivation and/or residual herbicides.
- Use alternative (non-Glyphosate) burndown and/or residual herbicides for Roundup Ready crops likely to require more than one application of Glyphosate.
- To help manage Roundup Ready resistant volunteers, rotate Roundup Ready crops with conventional or non-Roundup Ready crops.
- Use full labeled rates of Glyphosate and tank-mix partners. Minimize weed escapes.
- Monitor treated weed populations for any loss of field efficacy.
- Contact your local extension specialist, certified crop advisor and/or Crop Protection representative for herbicide resistance management and/or integrated weed management practices for specific crops and resistant weed biotypes.

WEEDS CONTROLLED

For best results, apply this product to actively growing weeds. For the best protection of the Corn crop's yield potential, apply this product before weeds exceed 4 inches in height or length. Susceptible weeds which emerge soon after an application of this product will be controlled for an additional 3 to 4 weeks.

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

Common Name	Scientific Name	Rate/Ac.	
		3.6 to 4 Pts. of This Product + NIS + AMS*	3.6 to 4 Pts. of This Product + Atrazine 4L + NIS + AMS**
GRASS WEEDS			
Barnyardgrass	*Echinocloa crus-galli*	C	C
Bluegrass, Annual	*Poa annua*	C	C
Brome, Downy	*Bromus tectorum*	C	C
Cheat	*Bromus secalinus*	C	C
Corn, Volunteer (non-Glyphosate tolerant)	*Zea mays*	C[1]	C[1]
Crabgrass, Large	*Digitaria sanguinalus*	C	C
Crabgrass, Smooth	*Digitaria ischaemum*	C	C
Crowfootgrass	*Dactyloctenium aegyptium*	C	C
Cupgrass, Wooly	*Eriochloa villosa*	C[2]	C[2]
Foxtail, Bristly	*Setaria verticillata*	C	C
Foxtail, Giant	*Setaria faberii*	C	C
Foxtail, Green	*Setaria viridis*	C	C
Foxtail, Yellow	*Setaria pumila*	C	C
Goosegrass	*Eleusine indica*	C	C
Johnsongrass	*Sorghum halepense*	C	C
Millet, Wild-proso	*Panicum miliaceum*	C	C
Oat, Wild	*Avena fatua*	C	C
Panicum, Fall	*Panicum dichotomiflorum*	C	C
Panicum, Texas	*Panicum texanum*	C	C
Sandbur, Field	*Cenchrus incertus*	C	C

Sandbur, Southern	*Cenchrus echinatus*	C	C
Shattercane	*Sorghum bicolor*	C	C
Signalgrass, Broadleaf	*Bracharia platyphylla*	C	C
Sorghum, Grain (Milo)	*Sorghum bicolor*	C	C
Starbur, Bristly	*Ancanthospornum hispidum*	C	C
Stinkgrass	*Eragrostis cilianensis*	C	C
Witchgrass	*Panicum capillare*	C	C
BROADLEAF WEEDS			
Amaranth, Palmer	*Amaranthus palmeri*	C[3]	C
Amaranth, Powell	*Amaranthus powellii*	C	C
Amaranth, Spiny	*Amaranthus spinosus*	C	C
Anoda, Spurred	*Anoda cristata*	C	C
Atriplex	*Chenopodium orach*	C	C
Beggarweed, Florida	*Desmodium tortuosum*	C	C
Buckwheat, Wild	*Polygonum convolvulus*	C[4]	PC
Buffalobur	*Solanum rostratum*	C	C
Burcucumber	*Sicyos angulatus*	C	PC
Carpetweed	*Mollugo verticillata*	C	C
Chickweed, Common	*Stellaria media*	C	C
Chickweed, Mouseear	*Cerastium vulgatum*	C	C
Cocklebur, Common	*Xanthium strumarium*	C	C
Copperleaf, Hophornbeam	*Acalypha ostryifolia*	C	C
Crotalaria, Showy	*Crotalaria spectabilis*	C	C
Croton, Tropic	*Croton glandulosus*	C	C
Dandelion, Common	*Taraxacum officinale*	C[5]	PC
Dock, Curly	*Rumex crispus*	C	PC
Eclipta	*Eclipta prostata*	C	C
Galinsoga	*Galinsoga parviflora*	C	C
Groundcherry, Smooth	*Physalis longifolia*	C	PC
Groundsel, common	*Senecio vulgaris*	C	C
Hemp	*Cannabis sativa*	C	C
Henbit	*Lamium amplexicaule*	C	C
Horsenettle	*Solanum carolinense*	C	C
Horseweed (Marestail)	*Conyza canadensis*	C[3]	C
Jimsonweed	*Datura stramonium*	C	C
Knotweed, Prostrate	*Polygonum aviculare*	C	C
Kochia	*Kochia scoparia*	C[6]	PC
Lambsquarters, Common	*Chenopodium album*	C	C
Mallow, Venice	*Hibiscus trionum*	C	C
Marshelder	*Iva xanthifolia*	C	C
Morningglory, Entireleaf	*Ipomoea hederacea*	C[4]	PC
Morningglory, Ivyleaf	*Ipomoea hederacea*	C[4]	PC
Morningglory, Pitted	*Ipomoea lacunose*	C[4]	PC
Morningglory, Tall	*Ipomoea purpurea*	C[4]	PC
Mustard, Wild	*Brassica kaber*	C	C
Nightshade, Black	*Solanum nigrum*	C	C
Nightshade, Eastern black	*Solanum ptycanthum*	C	C
Nightshade, Hairy	*Solanum sarrachoides*	C	C
Pennycress, Field	*Thlaspi arvense*	C	C
Pigweed, Prostrate	*Amaranthus blitoides*	C	C
Pigweed, Redroot	*Amaranthus retroflexus*	C	C
Pigweed, Smooth	*Amaranthus hybridus*	C	C
Pigweed, Tumble	*Amaranthus albus*	C	C
Pokeweed, Common	*Phytolacca americana*	C	C
Potatoes, Volunteer	*Solanum* spp.	C	C
Puncturevine	*Tribulus terrestris*	C	PC
Purslane, Common	*Portulaca oleracea*	C	C
Pusley, Florida	*Richardia scabra*	C	PC
Ragweed, Common	*Ambrosia artimisiifolia*	C[3]	C
Ragweed, Giant	*Ambrosia trifida*	C[3]	C
Senna, Coffee	*Senna occidentalis*	C	C
Sesbania, Hemp	*Sesbania exaltata*	C	C
Shepherd's purse	*Capsella bursa-pastoris*	C	C

Sicklepod	*Senna obtusifolia*	C[2]	C[2]
Sida, Prickly (Teaweed)	*Sida spinosa*	C	PC
Smartweed, Ladysthumb	*Polygonum persicaria*	C	C
Smartweed, Pale	*Polygonum lapathifolium*	C	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C	C
Spurge, Prostrate	*Euphorbia humistrata*	C	C
Spurge, Spotted	*Euphorbia maculata*	C	C
Sunflower, Common	*Helianthus annus*	C	C
Thistle, Canada	*Cirsium arvense*	C[6]	C
Velvetleaf	*Abutilon theophrasti*	C	C
Waterhemp, Common	*Amaranthus rudis*	C[3]	C
Waterhemp, Tall	*Amaranthus tuberculatus*	C[3]	C
SEDGE			
Nutsedge, Purple	*Cyperus rotundus*	C	PC
Nutsedge, Yellow	*Cyperus esculentus*	C	PC

*Apply to weeds less than 4 inches in height or length.
**Apply to weeds 4 to 10 inches in height or length.
[1]Will not control Glyphosate tolerant Volunteer corn.
[2]Will not provide residual control.
[3]For Glyphosate resistant weeds such as Common ragweed, Giant ragweed, Horseweed (Marestail), Palmer amaranth and Waterhemp, addition of atrazine will improve control.
[4]Maximum runner length of less than 4 inches.
[5]Plant diameter of less than 4 inches for control.
[6]Control may be reduced at the button stage or when less than 2 inches in height.
NIS = Nonionic Surfactant; AMS= Ammonium Sulfate; C = Control; PC = Partial Control

ROTATIONAL CROPS

If Corn or Grain sorghum crop is lost or destroyed following an application of this product, follow the rotational guidelines below. If this product is applied sequentially or in a tank-mix with other herbicides, refer to the rotational guidelines on all other herbicide labels and follow the most restrictive guidelines.

Table 2. Time Interval Between Application of This Product and Replanting or Planting of Rotational Crop

Crop		Replant / Rotational Interval
Corn (all types) Grain sorghum (Concep® treated only)	Sweet sorghum	Anytime
Barley Oats	Rye Wheat	4.5 mos.
Alfalfa Asparagus Cotton Kentucky bluegrass grown for seed Peanuts Peas[1,2] Potato Rhubarb	Rice Ryegrass (perennial and annual) grown for seed Snap beans[1,2] Soybeans Sunflowers Tall fescue grown for seed Tobacco	10 mos.
Canola	Flax	12 mos.
All other rotational crops		18 mos.

[1]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 inches 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 no later than June 30th the year preceding rotational crop planting.
- No other HPPD herbicides [such as products containing Mesotrione, Isoxaflutole, Tembotrione, Topramezone were applied the year prior to planting Peas and Snap beans.

[2]Do not plant Peas or Snap beans on sand, sandy loam or loamy sand soils in Minnesota or Wisconsin.

APPLICATION PROCEDURES

Refer to the *"CROP USE DIRECTIONS"* section for specific crop instructions.

USE OF ADJUVANTS

For post-emergence applications to Glyphosate tolerant Corn or burndown applications to Grain sorghum, add a nonionic surfactant at 1 to 2 quarts per 100 gallons of water (0.25 to 0.5% v/v) to the spray solution. Use the higher rate of nonionic surfactant when weeds are growing under stress conditions (e.g. cool temperatures, dry weather, etc.).

In addition to nonionic surfactant, add spray grade ammonium sulfate (AMS) at 8.5 to 17.0 pounds per 100 gallons of water. When using liquid AMS products, use a rate that delivers an AMS equivalent of 8.5 to 17.0 pounds per 100 gallons of water.

The use of this product with urea ammonium nitrate (UAN) instead of AMS will result in crop injury and reduced grass weed control.

GROUND APPLICATION

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

Flat fan (80º or 110º) or Turbo Tee Jet nozzles will provide optimum coverage. Do not use flood jet nozzles or controlled droplet application equipment for applications of this product.

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

Apply this product in a spray volume of 10 to 30 gallons per acre. Use a pump that can maintain a pressure of at least 35 to 40 psi at the nozzles (check nozzle manufacturer's instructions) 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 15 gallons per acre.

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

CLEANING EQUIPMENT AFTER APPLICATION

Special attention must be given to cleaning equipment before spraying a crop other than Glyphosate tolerant Corn or Grain sorghum. 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 re-circulate the cleaning solution for at least 15 minutes. Remove all visible deposits 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.

AERIAL APPLICATION

This product may be applied aerially for post-emergence weed control in Glyphosate tolerant Corn and pre-plant or pre-emergence weed control in Grain sorghum 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.

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

Restrictions: For aerial application, use only nozzles producing coarse-ultra coarse droplets. Do not use nozzles producing fine-medium size droplets.

ADDITIONAL SPRAY DRIFT PRECAUTIONS FOR AERIAL APPLICATION

The distance of the outer-most nozzles on the boom must not exceed three-fourths the length of the wingspan or rotor.

Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they must be observed.

Spray must be released at the lowest height consistent with effective weed control and flight safety.

For best results, each specific aerial application vehicle used should be quantifiably pattern tested initially for aerial application of this product and every year thereafter.

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Avoid application below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Avoid applying during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

TO PREVENT OFF-SITE MOVEMENT DUE TO RUNOFF OR WIND EROSION

Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas. To prevent off-site movement due to runoff or wind erosion, avoid treating powdery dry or light soils when conditions are favorable for wind erosion. Under these conditions, ensure that the soil surface is settled by rainfall or irrigation first. Do not apply to impervious substrates such as paved or highly compacted surfaces. Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least one-half inch of rainfall has occurred between application and the first irrigation.

MIXING PROCEDURES

Refer to the *"CROP USE DIRECTIONS"* section of this label for listed 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. Do not exceed any label dosage rates. 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 such as a jar test before actual tank-mixing.

Follow the mixing instructions below for adding this product to the spray tank.

Only use sprayers in good running condition with good agitation. Ensure that the sprayer is cleaned according to instructions on label of the product used prior to this product. 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. Avoid using screens finer than 50 mesh.

When adding products to the spray tank, make sure each product is added separately and thoroughly agitated before adding the next product. If using an induction tank, add only one product at a time. For example, add water, then add atrazine to the induction tank and transfer to spray tank, rinse induction tank with water, then add this product.

1. Fill tank one-half full of clean water and start agitation.
2. Add ammonium sulfate (AMS).
3. Add nonionic surfactant.
4. Add atrazine. Make sure atrazine is fully dispersed before other products are added to the mix.
5. Add fungicide (if applicable).
6. Add this product.
7. Add emulsifiable concentrate (EC) products (e.g., insecticides) last. Be aware that adding any EC type product will increase the risk for crop injury.
8. Fill tank with water to the desired level.

CROP USE DIRECTIONS

CORN (GLYPHOSATE TOLERANT)

This product may be applied post-emergence only in Glyphosate tolerant Corn (Roundup Ready) for control of the weeds listed in **Table 1**. When Glyphosate tolerant Corn is grown under no-till conditions, control all emerged weeds at the time of Corn planting with a Glyphosate or Paraquat based herbicide program. Following a burndown weed control application and after Glyphosate tolerant Corn emergence, this product can be applied post-emergence to control the weeds listed in **Table 1**.

PRE-EMERGENCE

This product is specifically formulated for post-emergence in crop use and does not contain a Corn safener. Therefore, this product is not labeled for early pre-plant or pre-emergence applications.

THIS PRODUCT ALONE - POST-EMERGENCE

This product may be applied at a rate of 3.6 to 4.0 pints per acre from Corn emergence up to 30 inches in height or the 8 leaf stage of Corn growth. Apply this product to actively growing weeds listed in **Table 1**. For the best protection of the Corn crops yield potential, apply this product before weeds exceed 4 inches in height, length or diameter. Use the higher end of the use rate range of this product (i.e., 4.0 pts./Ac.) when weeds are stressed or weed populations are dense.

Apply this product with a nonionic surfactant and ammonium sulfate (AMS). See the *"ADJUVANTS"* section for specific instructions.

Visible effects on annual weeds occur within 2 to 4 days after application. Effects on perennial weeds may take 7 days or longer. Extremely cool or cloudy weather following treatment may slow activity.

Weeds susceptible to Metolachlor or Mesotrione which emerge soon after application of this product will be controlled after they absorb the herbicides from the soil. The active ingredients contained in this product are in adequate amounts to provide 3 to 4 weeks of residual weed control extending through crop canopy. If an activating rain (0.25 inches) is not received within 7 to 10 days after the post-emergence application, residual weed control will be reduced.

Applying this product at rates less than 3.6 pints per acre may result in incomplete weed control, as well as less residual weed control. Using reduced rates of this product also increases the risk for the development of weed resistant biotypes. See the *"WEED RESISTANCE MANAGEMENT"* section of this label for specific instructions.

THIS PRODUCT – SEQUENTIAL WEED CONTROL

This product may be applied as the post-emergence component of a two-pass weed control program. Apply pre-emergence products at labeled rates and follow with a post-emergence application of this product at 3.6 to 4.0 pints per acre. Do not reduce the rate of this product when applied in a sequential program with pre-emergence products containing Mesotrione.

This product may also be applied following pre-emergence application of products containing Mesotrione not to exceed 0.094 pound of Mesotrione a.i. per acre per application and 0.24 pound of Mesotrione a.i. per acre per year.

Apply this product with a nonionic surfactant and ammonium sulfate (AMS). See the *"ADJUVANTS"* section for specific adjuvant instructions.

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.

THIS PRODUCT – TANK-MIXED WITH ATRAZINE

Apply this product at 3.6 to 4.0 pints per acre in tank-mixture with Atrazine. If weeds are more than 4 inches tall or for improved broadleaf weed control, add Atrazine at a rate of 0.25 to 2.0 pounds a.i. per acre. Alternatively, Atrazine in the form of dry flowable (DF) or water dispersible granules (WDG) containing 0.9 pound a.i. per pound of the product may be mixed with this product in place of Atrazine in liquid form containing 4 pounds a.i. per gallon of the product at a rate that delivers 0.25 to 2.0 pounds a.i. per acre. Atrazine rates above 0.5 pound a.i. per acre may result in Glyphosate antagonism and reduced grass control.

Apply this product in tank-mixture with Atrazine with a nonionic surfactant and ammonium sulfate (AMS). See the *"ADJUVANTS"* section of this label for specific instructions.

When tank-mixing or sequentially applying atrazine or products containing atrazine with this product to Glyphosate tolerant Corn, do not exceed an application rate of 2.0 pounds Atrazine a.i. per acre for any single application and the total pounds of atrazine applied (lbs. a.i./Ac.) must not exceed 2.5 pounds a.i. per acre per year. 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 no atrazine was applied prior to Corn emergence, apply a maximum of 2.0 pounds a.i. per acre broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total Atrazine applied may not exceed 2.5 pounds a.i. per acre per calendar year.

Do not apply any Atrazine formulation if Corn is greater than 12 inches tall.

THIS PRODUCT – TANK-MIXED WITH PRODUCTS CONTAINING DICAMBA

Tank-mix this product at 3.6 to 4 pints per acre with products containing Dicamba plus nonionic surfactant at 1 quart per 100 gallons plus spray grade ammonium sulfate (AMS) for improved control of difficult broadleaf weeds as a post-emergence application in Glyphosate tolerant Corn.

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

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

USE PRECAUTIONS

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

2. If additional Glyphosate is tank-mixed or applied sequentially with this product as a post-emergence treatment in Glyphosate tolerant Corn, refer to the specific Glyphosate label for in crop rate restrictions.

   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 USE RESTRICTIONS

1. Pre-grazing Interval (PGI): Do not graze or feed forage from treated areas for 45 days following application.

2. Pre-harvest Interval (PHI): Do not harvest forage, grain or stover within 45 days after application. Do not harvest ears of Sweet corn within 60 days after application.

3. Do not apply more than 4 pints of this product (0.105 lb. Mesotrione, 1.05 lb. Metolachlor and 1.05 lb. Glyphosate) per acre per year.

4. Do not make more than 1 application per year.

5. Do not make applications of this product past the 8 leaf stage of growth (or more than 30 inches tall) in Glyphosate tolerant Corn.

GRAIN SORGHUM

This product can be applied pre-plant non-incorporated (up to 21 days before planting) up through pre-emergence for weed control in Sorghum. This product will control the emerged weeds listed in the **Table 1** and will provide residual control of the weeds listed in **Table 3**.

The Sorghum seed must be treated with a protectant that is effective for safening Metolachlor to Sorghum. Applying this product pre-plant or pre-emergence to Sorghum that is not seed protected for applications to Metolachlor will result in crop death. Applying this product post-emergence to Sorghum will result in crop death.

Apply this product as a broadcast non-incorporated spray at a rate of 4 to 6 pints per acre beginning at 21 days before planting and up through planting but 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 or in extreme conditions, stunting or partial stand loss. Applying this product more than 7 days (but not more than 21) prior to Sorghum 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 poor weed control in the disturbed soil zone.

SPLIT APPLICATION

This product may also be applied as a split application to Grain sorghum. For a split application program, apply the first application as a non-incorporated early pre-plant (7 to 21 days before planting) treatment followed by a second application of this product as a pre-emergence application prior to Sorghum emergence. The total amount of this product applied in the split application program cannot exceed 6 pints per acre per season.

For control of emerged weeds listed in **Table 1**, add a nonionic surfactant (NIS) type adjuvant at a rate of 0.25 to 0.5% v/v (1 to 2 qts./100 gals.) to the spray solution. Use the higher NIS rate of 0.5% v/v under adverse environmental conditions (high temperatures and/or low humidity). In addition to NIS, a spray grade ammonium sulfate (AMS) at a rate of 8.5 to 17 pounds per 100 gallons of spray may be added to the solution for improved control of emerged weeds.

This product can be applied sequentially or in tank-mixture with other herbicides registered for use in Grain sorghum. Always refer to labels of the tank mix partners for use directions, precautions and restrictions.

GRAIN SORGHUM USE RESTRICTIONS

1. Do not apply more than 6 pints of this product per acre per growing season.
2. Do not apply this product to Sorghum grown on sandy soils (sand, sandy loam or loamy sand).
3. Do not apply this product to emerged Grain sorghum or plant death will occur.
4. Do not use this product in the production of Forage sorghum, Sweet sorghum (sorgo), Sudangrass, Sorghum-Sudangrass hybrids or dual purpose Sorghum.
5. Sorghum seed must be treated with Concep® III herbicide safener prior to planting or severe crop injury may occur.
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.

WEEDS CONTROLLED IN GRAIN SORGHUM

When applied as directed in this label, this product at 6 pints per acre will provide pre-emergence control or partial control the weeds listed in **Table 3**. Optimum weed control will be obtained if this product is applied according to all label directions.

If a significant rainfall does not occur within 7 days after application, weed control may be decreased. If irrigation is available, apply 0.5 to 1 inch of water. If irrigation is not available, a uniform shallow cultivation as soon as weeds emerge will provide improved control.

Table 3. Weeds Controlled or Partially Controlled by Pre-emergence Applications of This Product

Common Name	Weed Type*	Scientific Name	Control or Partial Control**
Amaranth, Palmer	B	*Amaranthus palmeri*	C
Amaranth, Powell	B	*Amaranthus powellii*	C
Barnyardgrass	G	*Echinochloa crus-galli*	C
Buffalobur	B	*Solanum rostratum*	C
Carpetweed	B	*Mollugo verticillata*	C
Cocklebur, common	B	*Xanthium strumarium*	PC
Crabgrass, large	G	*Digitaria sanguinalis*	C
Crowfootgrass	G	*Dactyloctenium aegyptium*	C
Cupgrass, prairie	G	*Eriochloa contracta*	C
Cupgrass, Southwestern	G	*Eriochloa acuminata*	C
Cupgrass, woolly	G	*Eriochloa villosa*	PC
Foxtail, giant	G	*Setaria faberi*	C
Foxtail, green	G	*Setaria viridis*	C
Foxtail, robust (purple, white)	G	*Setaria viridis*	C
Foxtail, yellow	G	*Setaria pumila*	C
Galinsoga	B	*Galinsoga parviflora*	C
Goosegrass	G	*Eleusine indica*	C
Horseweed (marestail)	B	*Conyza canadensis*	PC
Jimsonweed	B	*Datura stramonium*	C
Johnsongrass, seedling	G	*Sorghum halepense*	PC
Kochia	B	*Kochia scoparia*	PC
Lambsquarters, common	B	*Chenopodium album*	C
Millet, foxtail	G	*Setaria italica*	C
Millet, wild proso	G	*Panicum miliaceum*	PC
Morningglory, ivyleaf	B	*Ipomoea hederacea*	PC
Morningglory, entireleaf	B	*Ipomoea hederacea*	PC
Nightshade, black	B	*Solanum nigrum*	C
Nightshade, Eastern black	B	*Solanum ptycanthum*	C
Nightshade, hairy	B	*Solanum sarachoides*	C
Nutsedge, yellow	S	*Cyperus esculentus*	C
Panicum, browntop	G	*Panicum fasciculatum*	C
Panicum, fall	G	*Panicum dichotomiflorum*	C
Panicum, Texas	G	*Panicum texanum*	PC
Pigweed, redroot	B	*Amaranthus retroflexus*	C
Pigweed, smooth	B	*Amaranthus hybridus*	C
Purslane, common	B	*Portulaca oleracea*	C
Pusley, Florida	B	*Richardia scabra*	C
Ragweed, common	B	*Ambrosia artemisiifolia*	PC
Ragweed, giant	B	*Ambrosia trifida*	PC
Rice, red	G	*Oryza sativa*	C
Sandbur, field	G	*Cenchrus incertus*	PC
Shattercane	G	*Sorghum bicolor*	PC
Sida, prickly	B	*Sida spinosa*	PC
Signalgrass, broadleaf	G	*Brachiaria platyphylla*	PC
Smartweed, ladysthumb	B	*Polygonum persicaria*	C
Smartweed, Pennsylvania	B	*Polygonum pensylvanicum*	C
Sprangletop, red	G	*Leptochloa filiformis*	C
Velvetleaf	B	*Abutilon theophrasti*	C
Waterhemp, common	B	*Amaranthus rudis*	C

Waterhemp, tall	B	*Amaranthus tuberculatus*	C
Witchgrass	G	*Panicum capillare*	C
*B = Broadleaf; G = Grass; S = Sedge **C = Control; PC = Partial Control			

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in original container. Keep container tightly closed. This product can be stored at temperatures as low as minus 20ºF. 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; ≤ 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, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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.

Manufactured By: