



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

January 18, 2023

Annette Marine
Regulatory Assistant
Sharda USA LLC c/o Wagner Regulatory Associates, Inc.
P.O. Box 640
Hockessin, DE 19707

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: SHARDA GLYPHOSATE 20.5 % + METOLACHLOR 20.5 % + MESOTRIONE 2.05 % ZC
EPA Registration Number: 83529-111
Application Date: 5/14/2021, 8/27/2021, and 3/23/2022
Decision Number: 575700, 582767, and 588851

Dear Annette Marine:

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.

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. The label referred to above, submitted in connection with registration under FIFRA, as amended, is 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 Quinn Gavin at gavin.quinn@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a long horizontal flourish extending to the right.

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

Enclosure

[MASTER]

GLYPHOSATE	GROUP	9	HERBICIDES
METOLACHLOR	GROUP	15	HERBICIDES
MESOTRIONE	GROUP	27	HERBICIDES

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC ABN: Magna

A Post-Emergence Herbicide For Weed Control in Glyphosate-Resistant Field Corn
and Pre-Emergence Weed Control in Grain Sorghum

ACTIVE INGREDIENTS:	WT. BY %
Glyphosate, potassium salt*.....	20.50%
Metolachlor**	20.50%
Mesotrione***	2.05%
OTHER INGREDIENTS:	56.95%
TOTAL:	100.00%

Active ingredients per U.S. gallon: glyphosate acid 2.09 lbs., metolachlor 2.09 lbs., and mesotrione 0.209 lb.

*CAS No. 70901-12-1 **CAS No. 51218-45-2 ***CAS No. 104206-82-8

KEEP OUT OF REACH OF CHILDREN CAUTION

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

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • DO NOT induce vomiting unless told to do so by a poison control center or doctor. • DO NOT give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. • 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 emergency information concerning this product, call your poison control center at 1-800-222-1222 .	

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

See Panel for First Aid Instructions and booklet for complete Precautionary Statements and Directions For Use.

See label booklet for complete Precautionary Statements, Directions For Use, and Storage and Disposal.

See label booklet for additional Precautionary Statements, Directions For Use, and Storage and Disposal.

See label booklet for complete Directions For Use.]

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

EPA Reg. No. 83529-111

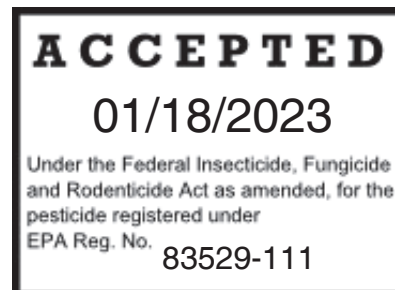
EPA Est. No. XXXXX-XX-XXX

Manufactured for:

Sharda USA LLC 

7217 Lancaster Pike, Suite A
Hockessin, Delaware 19707

Net Contents: _____



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. This product may cause skin sensitization reactions in some people. Wash hands 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:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Polyvinyl Chloride (PVC) ≥ 14 mils or Viton ≥ 14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

Follow manufacturer's instructions for cleaning and/or maintaining PPE. If there are no such instructions for washables, clean with detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

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

Groundwater Advisory

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

Surface Water Advisory

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks or months 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/or mesotrione from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

Non-Target Organism Advisory

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

Reporting Ecological Incidents

To report ecological incidents, including mortality, injury, or harm to plants and animals, contact Sharda USA, LLC at 302-635-7632.

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 rainwater 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.

DIRECTIONS FOR USE

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

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 6 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.

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.

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

Not for Use in Nassau and Suffolk Counties in New York State.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of **24 hours**.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, 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 Worker Protection Standard 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 Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Polyvinyl Chloride (PVC) ≥ 14 mils or Viton ≥ 14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

PRODUCT INFORMATION

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC is a systemic, post-emergence herbicide that provides contact control followed by residual control of weeds in glyphosate-resistant field corn. **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** is also a pre-emergence herbicide for control of weeds in grain sorghum. **Sharda Glyphosate 20.5% + Metolachlor**

20.5% + Mesotrione 2.05% ZC is a combination of the herbicides glyphosate, mesotrione and metolachlor.

Following a post-emergence application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC**, susceptible weeds uptake the herbicide through the treated foliage and stop growth soon after treatment. **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** also provides control through movement in the soil and/or in the foliage of emerged weeds. Complete death of the weeds may take up to 14 days.

When application is made to glyphosate-resistant corn, **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** provides 21 to 28 days of residual control of newly emerging susceptible weeds (see the **WEEDS CONTROLLED** table) through root and shoot absorption.

DO NOT make application under conditions that 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 ½ inch of rainfall has occurred between application and the first irrigation.

USE RESTRICTIONS:

- **DO NOT** cultivate corn within 7 days before or after a **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** application as weed control from the **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** application may be reduced.
- **DO NOT** make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** through any type of irrigation system.
- **DO NOT** make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** with suspension fertilizers.
- **DO NOT** make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** to glyphosate-resistant corn with urea ammonium nitrate (UAN) as the carrier.
- **DO NOT** make application of more than 4 pts. of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** per acre per year to glyphosate-resistant corn.
- **DO NOT** make application of more than 6 pts. of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** per acre per year to grain sorghum.
- **DO NOT** make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** to ground that has been or will be treated with mesotrione in the same season.
- Tank must be mixed and agitated before dispensing.

USE PRECAUTIONS:

- Application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** may be made post-emergence to glyphosate-resistant (e.g., Roundup Ready®, Agrisure™ GT) corn only. An application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** to a corn hybrid that is not glyphosate-resistant 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 re-growth may occur when application is made under prolonged stress conditions. Optimum weed control will be obtained if an application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** is made following label directions when weeds are actively growing.
- If an activating rain (0.25") is not received within 7 - 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 **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** 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 **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** 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 **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** 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 **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** application.
- Severe corn injury may occur if **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** is applied post-emergence in a tank mix with emulsifiable concentrate (EC formulation) products.
- Tank mix application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** may be made with pyrethroid insecticides such as lambda-cyhalothrin.
- To avoid contamination, ensure that the spray system is thoroughly cleaned with water and a commercial tank cleaner before and after each use.

Aerial Applications:

- **DO NOT** release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S641).
- If the wind speed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the wind speed is between 11-15 miles per hour, applicators must use ¾ 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 be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- **DO NOT** apply during temperature inversions.

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- Applicators are required to select the nozzles and pressure that deliver medium or coarser droplets (ASABE S572).
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplet size (ASABE S572.3) for all applications.
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

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

IMPORTANCE OF DROPLET SIZE

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

Controlling Droplet Size – Ground Boom

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

Controlling Droplet Size – Aircraft

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

BOOM HEIGHT – Ground Boom

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

RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

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

TEMPERATURE AND HUMIDITY

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

TEMPERATURE INVERSIONS

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

WIND

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

Boomless 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.

WEED RESISTANCE MANAGEMENT

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC contains three active ingredients: glyphosate, metolachlor and mesotrione, classified in Group 9 – Glycine (inhibitor of 5-enolpyruvyl-shikimate-3-phosphate synthase [EPSPS]); Group 15 – chloroacetamide (mitosis inhibitor); and Group 27 - triketone (inhibitor of 4-hydroxyphenyl-pyruvatedioxygenase [4-HPPD]) chemical classes, respectively. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** 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 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 your local Sharda USA, LLC representative at [registrant phone number].

Contact your local sales representative, extension agent, or certified crop advisors to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed.

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 **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC**, so glyphosate-resistance management is critical. **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** will control broadleaf weeds that are showing increased tolerance or resistance to glyphosate. When applying **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** 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. Follow all label directions and restrictions for the atrazine product tank mixed with **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC**.

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC 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.

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

1. In Roundup Ready (RR™) corn 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.
2. Use alternative (non-glyphosate) burndown and/or residual herbicides for RR crops likely to require more than one application of glyphosate.
3. To help manage RR-resistant volunteers, rotate RR crops with conventional or non-RR crops.
4. Use full labeled rates of glyphosate and tank mix partners. Minimize weed escapes.
5. Monitor treated weed populations for any loss of field efficacy.
6. Contact your local extension specialist, certified crop advisor, and/or Sharda USA LLC representative for herbicide resistance management and/or integrated weed management practices for specific crops and resistant weed biotypes.

WEEDS CONTROLLED			
For best results, make application of Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC to actively growing weeds. For the best protection of the corn crop's yield potential, make application of Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC prior to the weeds reaching 4" in height or length. Susceptible weeds that emerge soon after an application of Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC will be controlled for an additional 21 to 28 days.			
C = Control PC = Partial Control			
Weeds Controlled with Post-Emergence Applications of Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC			
Common Name	Scientific Name	3.6 - 4.0 Pts./Acre plus NIS plus AMS	3.6 - 4.0 Pts./Acre plus atrazine plus NIS plus AMS
		Apply to weeds less than 4" in height or length	Apply to weeds 4 - 10" in height or length
BROADLEAVES			
Amaranth, Palmer	<i>Amaranthus palmeri</i>	C ¹	C
Amaranth, Powell	<i>Amaranthus powellii</i>	C	C
Amaranth, Spiny	<i>Amaranthus spinosus</i>	C	C
Anoda, Spurred	<i>Anoda cristata</i>	C	C
Atriplex	<i>Chenopodium orach</i>	C	C
Beggarweed, Florida	<i>Desmodium tortuosum</i>	C	C
Buckwheat, Wild	<i>Polygonum convolvulus</i>	C ²	PC
Buffalobur	<i>Solanum rostratum</i>	C	C
Burcucumber	<i>Sicyos angulatus</i>	C	PC
Carpetweed	<i>Mollugo verticillata</i>	C	C
Chickweed, Common	<i>Stellaria media</i>	C	C
Chickweed, Mouseear	<i>Cerastium vulgatum</i>	C	C
Cocklebur, Common	<i>Xanthium strumarium</i>	C	C
Copperleaf, Hophornbeam	<i>Acalypha ostryifolia</i>	C	C
Crotalaria, Showy	<i>Crotalaria spectabilis</i>	C	C
Croton, Tropic	<i>Croton glandulosus</i>	C	C
Dandelion, Common	<i>Taraxacum officinale</i>	C ⁵	PC
Dock, Curly	<i>Rumex crispus</i>	C	PC
Eclipta	<i>Eclipta prostrata</i>	C	C
Galinsoga	<i>Galinsoga parviflora</i>	C	C
Groundcherry, Smooth	<i>Physalis longifolia</i>	C	PC
Groundsel, Common	<i>Senecio vulgaris</i>	C	C
Hemp	<i>Cannabis sativa</i>	C	C
Henbit	<i>Lamium amplexicaule</i>	C	C
Horseweed (Marestail)	<i>Conyza canadensis</i>	C ¹	C
Jimsonweed	<i>Datura stramonium</i>	C	C
Johnsongrass	<i>Sorghum halepense</i>	C	C
Knotweed, Prostrate	<i>Polygonum aviculare</i>	C	C
Kochia	<i>Kochia scoparia</i>	C ⁶	PC
Lambsquarters, Common	<i>Chenopodium album</i>	C	C
Mallow, Venice	<i>Hibiscus trionum</i>	C	C
Marshelder	<i>Iva xanthifolia</i>	C	C
Morningglory, Entireleaf	<i>Ipomoea hederacea</i>	C ²	PC
Morningglory, Ivyleaf	<i>Ipomoea hederacea</i>	C ²	PC

Morningglory, Pitted	<i>Ipomoea lacunose</i>	C ²	PC
Morningglory, Tall	<i>Ipomoea purpurea</i>	C ²	PC
Mustard, Wild	<i>Brassica kaber</i>	C	C
Nightshade, Black	<i>Solanum nigrum</i>	C	C
Nightshade, Eastern Black	<i>Solanum ptycanthum</i>	C	C
Nightshade, Hairy	<i>Solanum sarrachoides</i>	C	C
Pennycress, Field	<i>Thlaspi arvense</i>	C	C
Pigweed, Prostrate	<i>Amaranthus blitoides</i>	C	C
Pigweed, Redroot	<i>Amaranthus retroflexus</i>	C	C
Pigweed, Smooth	<i>Amaranthus hybridus</i>	C	C
Pigweed, Tumble	<i>Amaranthus albus</i>	C	C
Pokeweed, Common	<i>Phytolacca americana</i>	C	C
Potato, Volunteer	<i>Solanum spp.</i>	C	C
Puncturevine	<i>Tribulus terrestris</i>	C	PC
Purslane, Common	<i>Portulaca oleracea</i>	C	C
Pusley, Florida	<i>Richardia scabra</i>	C	PC
Ragweed, Common	<i>Ambrosia artemisiifolia</i>	C ¹	C
Ragweed, Giant	<i>Ambrosia trifida</i>	C ¹	C
Senna, Coffee	<i>Senna occidentalis</i>	C	C
Sesbania, Hemp	<i>Sesbania exaltata</i>	C	C
Shepherd's Purse	<i>Capsella bursa-pastoris</i>	C	C
Sicklepod	<i>Senna obtusifolia</i>	C ⁴	C ⁴
Sida, Prickly (Teaweed)	<i>Sida spinosa</i>	C	PC
Smartweed, Ladysthumb	<i>Polygonum persicaria</i>	C	C
Smartweed, Pale	<i>Polygonum lapathifolium</i>	C	C
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>	C	C
Spurge, Prostrate	<i>Euphorbia humistrata</i>	C	C
Spurge, Spotted	<i>Euphorbia maculata</i>	C	C
Sunflower, Common	<i>Helianthus annuus</i>	C	C
Thistle, Canada	<i>Cirsium arvense</i>	C	C
Thistle, Russian	<i>Salsola iberica</i>	C ⁶	C
Velvetleaf	<i>Abutilon theophrasti</i>	C	C
Waterhemp, Common	<i>Amaranthus rudis</i>	C ¹	C
Waterhemp, Tall	<i>Amaranthus tuberculatus</i>	C ¹	C
GRASSES			
Barnyardgrass	<i>Echinochloa crus-galli</i>	C	C
Bluegrass, Annual	<i>Poa annua</i>	C	C
Brome, Downy	<i>Bromus tectorum</i>	C	C
Cheat	<i>Bromus secalinus</i>	C	C
Corn, Volunteer (Non-GT)	<i>Zea mays</i>	C ³	C ³
Crabgrass, Large	<i>Digitaria sanguinalis</i>	C	C
Crabgrass, Smooth	<i>Digitaria ischaemum</i>	C	C
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	C	C
Cupgrass, Woolly	<i>Eriochloa villosa</i>	C ⁴	C ⁴
Foxtail, Bristly	<i>Setaria verticillata</i>	C	C
Foxtail, Giant	<i>Setaria faberi</i>	C	C
Foxtail, Green	<i>Setaria viridis</i>	C	C
Foxtail, Yellow	<i>Setaria pumila</i>	C	C
Goosegrass	<i>Eleusine indica</i>	C	C
Millet, Wild-Proso	<i>Panicum miliaceum</i>	C	C
Oat, Wild	<i>Avena fatua</i>	C	C
Panicum, Fall	<i>Panicum dichotomiflorum</i>	C	C
Panicum, Texas	<i>Panicum texanum</i>	C	C
Sandbur, Field	<i>Cenchrus incertus</i>	C	C
Sandbur, Southern	<i>Cenchrus echinatus</i>	C	C
Shattercane	<i>Sorghum bicolor</i>	C	C
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>	C	C
Sorghum, Grain (Milo)	<i>Sorghum bicolor</i>	C	C
Starbur, Bristly	<i>Acanthospermum hispidum</i>	C	C
Stinkgrass	<i>Eragrostis ciliaris</i>	C	C
Witchgrass	<i>Panicum capillare</i>	C	C
SEDGES			
Nutsedge, Yellow	<i>Cyperus esculentus</i>	C	PC

Nutsedge, Purple	<i>Cyperus rotundus</i>	C	PC
¹ For glyphosate-resistant weeds such as common ragweed, giant ragweed, horseweed (marestail), Palmer amaranth and waterhemp, the addition of atrazine will improve control. ² Maximum runner length of <4". ³ Will not control Glyphosate-Resistant volunteer corn. ⁴ Will not provide residual control. ⁵ Plant diameter of <4" for control. ⁶ Control may be reduced at the button stage or when less than 2" in height.			

ROTATIONAL CROPS

If the corn or grain sorghum crop is lost or destroyed after treatment of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC**, use and follow the rotational guidelines below. If **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** is applied sequentially or in a tank mix with other herbicides, see the rotational guidelines on all other herbicide labels and follow the most restrictive guidelines.

Time Interval Between Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC Application and Replanting or Planting of Rotational Crop

Crop	Rotational Interval (Months)
Corn (All Types); Sweet Sorghum; Grain Sorghum (Concep® Treated Only)	Anytime
Barley; Oats; Rye; Wheat	4 ½
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
Canola; Flax	12
All Other Rotational Crops	18
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 Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC application. <ul style="list-style-type: none"> • 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 Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC applied no later than June 30th the year preceding rotational crop planting. • No other HPPD herbicides (e.g., mesotrione, atrazine, s-metolachlor, topramezone, isoxaflutole, tembotrione, or thiencazone-methyl,) 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.

Adjuvants

For applications made post-emergence to glyphosate-resistant corn or burndown applications to grain sorghum, add a nonionic surfactant (NIS) at 1 - 2 qts. per 100 gals. of water (0.25 - 0.5% v/v) to the spray solution. Use the higher rate of NIS when weeds are growing under stress conditions (e.g., cool temperatures, dry weather, etc.).

In addition to NIS, add spray grade ammonium sulfate (AMS) at 8.5 - 17.0 lbs. per 100 gals. of water. When using liquid AMS products, use a rate that delivers an AMS equivalent of 8.5 - 17.0 lbs. per 100 gals. of water.

Precaution:

The use of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** with urea ammonium nitrate (UAN) instead of ammonium sulfate (AMS) will result in post-emergence glyphosate-resistant corn injury and reduced grass weed control.

Ground Applications

Ensure that spray nozzles are uniformly spaced, the 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" above the crop canopy.

Flat fan (of 80° or 110°) or Turbo Tee Jet nozzles will provide optimum coverage. **DO NOT** use flood jet nozzles or controlled droplet application equipment for applications of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC**. Nozzles may be angled forward or backward 45° to enhance penetration of the crop and provide better coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser.

Make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** in a spray volume of 10 - 30 gals. per acre. Use a pump that can maintain a pressure of at least 35 - 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 gals. 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, resuspend the spray solution by running on full agitation before spraying.

Aerial Applications

Restriction: For aerial application, use only nozzles producing coarse-ultra coarse droplets. **DO NOT** use nozzles producing fine-medium size droplets.

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC may be applied aerially for post-emergence weed control in Glyphosate-resistant 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.

Cleaning Equipment After Application

Special attention must be given to cleaning equipment before spraying a crop other than glyphosate-resistant corn or grain sorghum. Mix only as much spray solution as needed. Flush tank, hoses, boom, and nozzles with clean water.

1. Prepare a cleaning solution of 1 gallon of household ammonia per 25 gals. of water. Many commercial spray tank cleaners may be used.
2. 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.
3. Flush hoses, spray lines, and nozzles for at least 1 minute with the cleaning solution.
4. Dispose of rinsate from steps 1 - 3 in an appropriate manner.
5. Repeat steps 2 - 5.
6. Remove nozzles, screens, and strainers and clean separately in the ammonia solution after completing the above procedures.
7. Rinse the complete spraying system with clean water.

MIXING PROCEDURES

Refer to the **CROP USE DIRECTIONS** section of this label for listed tank mixes.

Always refer to the 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 **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** 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.

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.

Follow the mixing instructions for adding **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** to the spray tank. Only use sprayers in good running condition with good agitation. Ensure the sprayer is cleaned according to instructions on label of the product used prior to **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC**. 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 **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC**.

1. Fill tank ½ full of clean water and start agitation.
2. Add ammonium sulfate (AMS).
3. Add nonionic surfactant (NIS).
4. Add atrazine – make sure atrazine is fully dispersed before other products are added to the mix.
5. Add fungicide (if applicable).
6. Add **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC**.
7. Add 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

GLYPHOSATE-RESISTANT FIELD CORN

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC may be applied post-emergence only in glyphosate-resistant (e.g., Roundup Ready, Agrisure GT) corn for control of the weeds listed in **WEEDS CONTROLLED** table.

When glyphosate-resistant 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-resistant corn emergence, application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** can be made post-emergence to control the weeds listed in **WEEDS CONTROLLED** table.

Pre-Emergence

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC is specifically formulated for post-emergence in crop use and does not contain a corn safener. Therefore, **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** is not labeled for early pre-plant or pre-emergence applications.

Post-Emergence – Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC Alone

Application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** may be made at a rate of 3.6 - 4.0 pts. per acre from corn emergence up to 30" in height or the 8-leaf stage of corn growth. Make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** to actively growing weeds listed in **WEEDS CONTROLLED** table. For the best protection of the corn crops yield potential, make application **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** prior to weeds reaching 4" in height, length or diameter. Use the higher end of the listed **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** use rate range (4.0 pts. per acre) when weeds are stressed or weed populations are dense.

Make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** with a non-ionic surfactant (NIS) and ammonium sulfate (AMS). See the **Adjuvants** section for specific adjuvant instructions.

Visible effects on annual weeds occur within 2 - 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 that emerge soon after application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** will be controlled after they absorb the herbicides from the soil. The active ingredients in **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** are in adequate amounts to provide 3 - 4 weeks of residual weed control extending through crop canopy. If an activating rain (0.25") is not received within 7 - 10 days after the post-emergence application, residual weed control will be reduced.

Making applications of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** at rates less than 3.6 pts. per acre may result in incomplete weed control, as well as less residual weed control. Using reduced rates of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** also increases the risk for the development of weed resist biotypes. See the **WEED RESISTANCE MANAGEMENT** section of this label for specific instructions.

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC – Sequential Weed Control

Application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** may be made as the post-emergence component of a two-pass weed control program. Apply s-metolachlor/metolachlor, mesotrione, or atrazine, pre-emergence and follow with a post-emergence application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** at 3.6 - 4.0 pts. per acre. **DO NOT** reduce the rate of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** when product is applied in a sequential program with these mesotrione containing products.

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.

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC can also be applied at a rate of 3.6 - 4.0 pts. per acre post-emergence following a pre-emergence application of atrazine, glyphosate, and s-metolachlor/metolachlor.

Make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** with a non-ionic surfactant (NIS) and ammonium sulfate (AMS). Refer to the **Adjuvants** section for specific adjuvant instructions.

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC – Tank Mix with Atrazine

In tank mix with atrazine, apply **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** at 3.6 - 4.0 pts. per acre. If weeds are more than 4" tall, or for improved broadleaf weed control add atrazine. Atrazine rates above 0.5 lb. a.i. per acre may result in glyphosate antagonism and reduced grass control.

Apply the tank mix of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** plus atrazine with a non-ionic surfactant (NIS) and ammonium sulfate (AMS). Refer to the **Adjuvants** section of this label for specific instructions.

When tank mixing or sequentially applying atrazine or products containing atrazine with **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** to glyphosate-resistant corn, **DO NOT** exceed an application rate of 2.0 lbs. a.i. of atrazine per acre for any single application and the total pounds of atrazine applied (lb. a.i. per acre) must not exceed 2.5 lbs. a.i. per acre per year.

If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 lbs. 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 lbs. a.i. per acre per calendar year.

Restriction:

DO NOT apply any atrazine formulation if the corn is greater than 12" tall.

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC – Tank Mix with Dicamba, Dicamba + Diflufenzopyr-sodium, Dicamba + Primisulfuron-methyl

Tank mix **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** at 3.6 - 4 pts. per acre dicamba, dicamba + diflufenzopyr-sodium, dicamba + primisulfuron-methyl + nonionic surfactant (NIS) at 1 qt. per 100 gals. + spray grade ammonium sulfate (AMS) for improved control of difficult broadleaf weeds as a post-emergence application in glyphosate-resistant corn. Refer to the applicable tank mixture product label for specific application rates, precautions, and restrictions.

Precautions - Corn:

- Temporary crop response (transient bleaching) from post-emergence applications to glyphosate-resistant corn may occur under extreme weather conditions or when the crop is suffering from stress. Corn quickly outgrows these effects and develops normally.
- If additional glyphosate is tank mixed or applied sequentially with **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** as a post-emergence treatment in glyphosate-resistant corn, refer to the specific glyphosate label for in crop rate restrictions.

Restrictions - Corn:

- Pre-Grazing Interval (PGI): **DO NOT** graze or feed forage from treated areas for 45 days following application.
- Pre-Harvest Interval (PHI): **DO NOT** harvest forage, grain, or stover within 45 days after application.
- **DO NOT** apply more than 4 pts. (0.105 lb. mesotrione, 1.05 lbs. metolachlor, and 1.05 lbs. glyphosate) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** make applications of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** past the 8-leaf stage of growth (or >30" tall) in glyphosate-resistant 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.

GRAIN SORGHUM

Application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** can be made pre-plant non-incorporated (up to 21 days before planting) up through pre-emergence for weed control in sorghum. **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** will control the emerged weeds listed in the **WEEDS CONTROLLED** table and will provide residual control of the weeds listed in the below **WEEDS CONTROLLED IN GRAIN SORGHUM** table.

The sorghum seed must be treated with a protectant that is effective for safening metolachlor to sorghum. Making application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** pre-plant or pre-emergence to sorghum that is not seed protected for applications to metolachlor will result in crop death. Making application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** post-emergence to sorghum will result in crop death.

Apply **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** as a broadcast non-incorporated spray at a rate of 4 - 6 pts. per acre beginning at 21 days before planting and up through planting but prior to sorghum emergence. Making application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** 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. Making application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** more than 7 days (but not more than 21) before sorghum planting will reduce the risk of crop injury.

If **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** is applied before planting, minimize disturbance of the herbicide treated soil barrier during the planting process to lessen the potential for poor weed control in the disturbed soil zone.

Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC Sorghum Split Application: Application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** may also be made as a split treatment to grain sorghum. For a split treatment program, make the first application as a non-incorporated early pre-plant (7 - 21 days before planting) treatment followed by a second **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** application as a pre-emergence application before sorghum emerges. The total amount of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** applied in the split treatment program cannot exceed 6 pts. per acre per season.

For control of emerged weeds listed in **WEEDS CONTROLLED** table, add a nonionic surfactant (NIS) type adjuvant at a rate of 0.25 - 0.5% v/v (1 - 2 qts. per 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 AMS at a rate of 8.5 - 17 lbs. per 100 gals. of spray may be added to the solution for improved control of emerged weeds.

Application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** can be made sequentially or in tank mixture with other herbicides registered for use in grain sorghum. 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 - Grain Sorghum:

- **DO NOT** make application of more than 6 pts. per acre of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** per year.
- **DO NOT** make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** to sorghum grown on sandy soils (sand, sandy loam, or loamy sand).
- **DO NOT** make application of **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** to emerged grain sorghum or plant death will occur.
- **DO NOT** use **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** in the production of forage sorghum, sweet sorghum (sorgo), sudangrass, sorghum-sudangrass hybrids, or dual-purpose sorghum.
- Sorghum seed must be treated with Concep® III herbicide safener before planting, or severe crop injury may occur.
- In the state of Texas, **DO NOT** apply **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** 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 at 6 pts. per acre, **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** will provide pre-emergence control or partial control of the weeds listed in the below table. Optimum weed control will be obtained if **Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC** 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 ½ - 1" of water. If irrigation is not available, a uniform shallow cultivation as soon as weeds emerge will provide improved control.

C = Control

PC = Partial Control

Weeds Controlled or Partially Controlled by Pre-Emergence Applications of Sharda Glyphosate 20.5% + Metolachlor 20.5% + Mesotrione 2.05% ZC

Common Name	Scientific Name	Control or Partial Control
BROADLEAVES		
Amaranth, Palmer	<i>Amaranthus palmeri</i>	C
Amaranth, Powell	<i>Amaranthus powellii</i>	C
Buffalobur	<i>Solanum rostratum</i>	C
Carpetweed	<i>Mollugo verticillata</i>	C
Cocklebur, Common	<i>Xanthium strumarium</i>	PC
Galinsoga	<i>Galinsoga parviflora</i>	C
Horseweed (Marestail)	<i>Conyza canadensis</i>	PC
Jimsonweed	<i>Datura stramonium</i>	C
Kochia	<i>Kochia scoparia</i>	PC
Lambsquarters, Common	<i>Chenopodium album</i>	C
Morningglory, Ivyleaf	<i>Ipomoea hederacea</i>	PC
Morningglory, Entireleaf	<i>Ipomoea hederacea</i>	PC
Nightshade, Black	<i>Solanum nigrum</i>	C
Nightshade, Eastern Black	<i>Solanum ptycanthum</i>	C
Nightshade, Hairy	<i>Solanum sarrachoides</i>	C
Morningglory, Ivyleaf	<i>Ipomoea hederacea</i>	PC
Pigweed, Redroot	<i>Amaranthus retroflexus</i>	C
Pigweed, Smooth	<i>Amaranthus hybridus</i>	C
Purslane, Common	<i>Portulaca oleracea</i>	C
Pusley, Florida	<i>Richardia scabra</i>	C
Ragweed, Common	<i>Ambrosia artemisiifolia</i>	PC
Ragweed, Giant	<i>Ambrosia trifida</i>	PC
Sida, Prickly	<i>Sida spinosa</i>	PC
Smartweed, Ladysthumb	<i>Polygonum persicaria</i>	C
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>	C
Velvetleaf	<i>Abutilon theophrasti</i>	C
Waterhemp, Common	<i>Amaranthus rudis</i>	C
Waterhemp, Tall	<i>Amaranthus tuberculatus</i>	C
GRASSES		
Barnyardgrass	<i>Echinochloa crus-galli</i>	C
Crabgrass, Large	<i>Digitaria sanguinalis</i>	C
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	C

Cupgrass, Prairie	<i>Eriochloa contracta</i>	C
Cupgrass, Southwestern	<i>Eriochloa acuminata</i>	C
Cupgrass, Woolly	<i>Eriochloa villosa</i>	PC
Foxtail, Giant	<i>Setaria faberi</i>	C
Foxtail, Green	<i>Setaria viridis</i>	C
Foxtail, Robust (Purple, White)	<i>Setaria viridis</i>	C
Foxtail, Yellow	<i>Setaria pumila</i>	C
Goosegrass	<i>Eleusine indica</i>	C
Johnsongrass, Seedling	<i>Sorghum halepense</i>	PC
Millet, Foxtail	<i>Setaria italica</i>	C
Millet, Wild Proso	<i>Panicum miliaceum</i>	PC
Panicum, Browntop	<i>Panicum fasciculatum</i>	C
Panicum, Fall	<i>Panicum dichotomiflorum</i>	C
Panicum, Texas	<i>Panicum texanum</i>	PC
Rice, Red	<i>Oryza sativa</i>	C
Sandbur, Field	<i>Cenchrus incertus</i>	PC
Shattercane	<i>Sorghum bicolor</i>	PC
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>	PC
Sprangletop, Red	<i>Leptochloa filiformis</i>	C
Witchgrass	<i>Panicum capillare</i>	C
SEDGES		
Nutsedge, yellow	<i>Cyperus esculentus</i>	C

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep container tightly closed when not in use. Product can be stored at temperatures as low as -10°F. **DO NOT** store near seeds, fertilizers, or food stuffs. Keep away from heat and flame.

PESTICIDE DISPOSAL: Open dumping is prohibited. Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. Thoroughly rinse the spray equipment after use. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of as described above, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING [Less Than 5 Gallons]: Non-refillable container. **DO NOT** reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank. Drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

CONTAINER HANDLING [Greater Than 5 Gallons]: Non-refillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

CONTAINER HANDLING [For Bulk and Mini-Bulk Containers]: Refillable container. Refill this container with pesticide only. **DO NOT** use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by State and local authorities.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

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

Sharda USA LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent consistent with applicable law, this warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or Sharda USA LLC and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, SHARDA USA LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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