

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

November 10, 2021

Katie Woodall Agent for Sharda USA LLC 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 Atrazine and Acetochlor Interim Decisions and the Technical Registrants' Commitments for the Endangered Species Act (ESA) Biological Evaluation for

Atrazine

Product Name: SHARDA ACETOCHLOR 24.8% + ATRAZINE 16.6% SE

EPA Registration Number: 83529-91

Application Dates: December 3, 2020 and September 28, 2021

Decision Numbers: 568523 and 578739

# Dear Ms. Woodall:

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 atrazine and acetochlor Interim Decisions and with the atrazine technical registrants' commitments for the ESA Biological Evaluation. 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.

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

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labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Lauren Weissenborn at weissenborn.lauren@epa.gov.

Sincerely,

Linda Arrington, Branch Chief

Risk Management and Implementation Branch 4

Pesticide Re-Evaluation Division

Office of Pesticide Programs

Enclosure

[MASTER LABEL]

# RESTRICTED USE PESTICIDE

This product is a restricted use herbicide due to ground and surface water concerns. For retail sale to and use only by Certified Applicators, or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for atrazine to reach ground and surface water

ACETOCHLOR	GROUP	15	HERBICIDES	
ATRAZINE	GROUP	5	HERBICIDES	

# Sharda Acetochlor 24.8% + Atrazine 16.6% SE **ABN: Aectra**

A Pre-Emergence Herbicide For Control of Annual Grasses and Broadleaf Weeds in Field Corn, Production Seed Corn, Silage Corn, Sweet Corn, and Popcorn.

ACTIVE INGREDIENTS:	WT. BY %
*Acetochlor, 2-chloro-2'-methyl-6'-ethyl-N-ethoxymethylacetanilide	24.8%
**Atrazine, 2-chloro-4-(ethylamino)-6-(isopropylamino)-s-triazine and related triazines	16.6%
OTHER INGREDIENTS:	<u>58.6%</u>
TOTAL:	100.0%

<sup>\*</sup>Contains 2.4 lbs. per U.S. gal. of the active ingredient acetochlor.

# 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 ON SKIN OR	Take off contaminated clothing.					
CLOTHING:	<ul> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> </ul>					
	Call a poison control center or doctor for treatment advice.					
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.					
	<ul> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.</li> </ul>					
	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 label booklet for [complete] [additional] [First Aid,] [Precautionary Statements], [Directions For Use], and [Storage and Disposal].]

EPA Reg. No. 83529-91

Hockessin, Delaware 19707

**EPA Est. No. XXXXX-XX-XXX** 

Manufactured for: Sharda USA LLC 7217 Lancaster Pike, Suite A

> Net Contents: [Gallons/Liters]

ACCEPTED

Nov 10, 2021

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under

EPA Reg. No. 83529-91

<sup>\*\*</sup>Contains 1.6 lbs. per U.S. gal. of the active ingredient atrazine and related triazines.

# PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

# Mixers, loaders, applicators, flaggers, and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves including 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 gloves made of barrier laminate, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, or viton ≥14 mils when mixing with oil.
- Shoes plus socks
- Protective eyewear
- Chemical-resistant headgear (If overhead exposure)
- Chemical-resistant apron when mixing/loading, cleaning up spills, or cleaning equipment, or otherwise exposed to the concentrate. See **ENGINEERING CONTROL STATEMENT** for additional requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

## **ENGINEERING CONTROL STATEMENT**

When applicators 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)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**IMPORTANT:** When reduced PPE is worn because an enclosed cab is being used, applicators must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

### **USER SAFETY RECOMMENDATIONS**

# Users should:

- Wash hands 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**

This pesticide is toxic to fish and aquatic invertebrates. 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 apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

# **Groundwater Advisory**

Atrazine can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable; i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

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

Acetochlor demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the groundwater is shallow, may result in groundwater contamination. Acetochlor has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

# **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 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 acetochlor 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.

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Refer to **Use Precautions** and **Restrictions** section under Information for additional requirements for protection of groundwater and surface waters.

# **Non-Target Organism 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.

## 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.

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through www.atrazine-watershed.info or 1-866-365-3014. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Sharda USA, LLC for a refund.

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

Not for use in the states of Hawaii or Alaska, or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands).

# **Endangered Species**

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 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.

# **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 12 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 long-sleeved shirt and long pants
- Chemical-resistant gloves including 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

# WEED RESISTANCE MANAGEMENT

**Sharda Acetochlor 24.8% + Atrazine 16.6% SE** contains two active ingredients, acetochlor and atrazine. Acetochlor is classified as a Group 15 herbicide (chloroacetamide chemical family) and is a mitosis inhibitor; and atrazine is classified as a Group 5 herbicide (triazine chemical family) and is an inhibitor of photosynthesis at photosystem II site A.

Herbicide resistance is defined as the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type. In a plant, resistance may be naturally occurring or induced by such techniques as genetic engineering or selection of variants produced by tissue culture or mutagenesis. Any weed population may contain or develop plants that are naturally resistant to **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** and other Group 15 or Group 5 herbicides. Weed species with acquired resistance to Group 15 or Group 5 herbicides may eventually dominate the weed population if Group 15 or Group 5 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** or other Group 15 or Group 5 herbicides.

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.

To delay herbicide resistance, consider:

- Avoiding the consecutive use of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** or other target site of action Group 15 or Group 5 herbicides that have a similar target site of action, on the same weed species.
- Using tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Monitoring treated weed populations for loss of field efficacy.

Users should scout before and after application. Users should report lack of performance to registrant or their representative.

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.

#### INTEGRATED WEED PEST MANAGEMENT

Integrate Sharda Acetochlor 24.8% + Atrazine 16.6% SE into an overall weed management strategy whenever the use of an herbicide is required. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

#### PRODUCT INFORMATION

**Sharda Acetochlor 24.8% + Atrazine 16.6% SE** is intended for pre-plant, pre-emergence, or early post-emergence use in corn. Use of this product in corn is limited to field corn, production seed corn, silage corn, sweet corn, and popcorn. Do not apply this product to any crop other than corn.

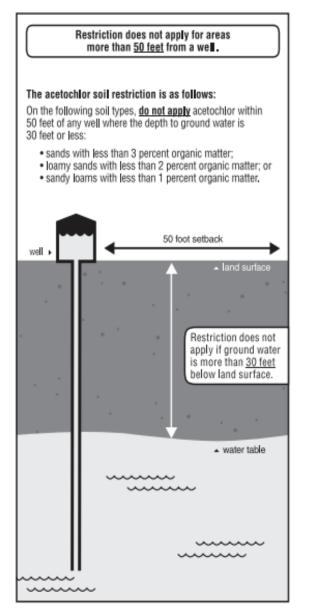
Sharda Acetochlor 24.8% + Atrazine 16.6% SE is a unique combination of the herbicides acetochlor and atrazine plus the antidote or safener, dichlormid. While the acetochlor and atrazine provide weed control, the dichlormid safens corn against herbicide injury. Sharda Acetochlor 24.8% + Atrazine 16.6% SE may be applied to the surface or incorporated into the top 1 - 2 inch layer of soil. It may be used for control alone, or in tank mix combinations, for the weeds listed in the "WEEDS CONTROLLED" section of this label. Sharda Acetochlor 24.8% + Atrazine 16.6% SE controls weeds by interfering with normal germination and seedling development. Sharda Acetochlor 24.8% + Atrazine 16.6% SE does not control established or germinated weeds present at application.

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

# **Use Restrictions:**

- Not for Sale, Sale Into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.
- On the following soil types, do not apply this product within 50 feet of any well where the depth to groundwater is 30 feet or less: sands with less than 3% organic matter; loamy sands with less than 2% organic matter; or sandy loams with less than 1% organic matter. See the figure for additional clarification.
- Do not apply **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** to sweet corn as an early post-emergence application.
- DO NOT apply by mechanically pressurized handguns to sweet corn.
- Chemigation: Do not apply this product through any type of irrigation system.
- Do not use flood irrigation to apply or incorporate this product.
- Product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.
- Do not apply 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 sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
  - Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow-covered soils.
  - 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.
- Aerial Application: Do not apply this product using aerial application equipment.
- Do not apply when wind conditions favor drift to non-target sites. To minimize spray drift to non-target areas:
  - Use low-pressure application equipment capable of producing a large droplet spray.
  - Do not use nozzles that produce a fine droplet spray.
  - Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.

- Keep ground-driven spray boom as low as possible above the target surface.
- Make application when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid application when gusts approach 15 mph.
- Low humidity and high temperatures increase the likelihood of spray drift to sensitive areas. Avoid spraying during conditions of low humidity and/or high temperatures. Do not apply during inversion conditions.



- This product must not be mixed or loaded within 50 ft. of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product must not be applied by ground within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-foot buffer or setback from runoff entry points must be planted to crop, seeded with grass or other suitable crop.
- This product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sinks 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. Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

### Tile-Outletted Fields Containing Standpipes

To ensure protection of surface water from runoff through standpipes with tile-outlets in fields, one of the following restrictions must be used in applying this product to tile-outletted fields containing standpipes:

- Do not apply this product within 66 feet of standpipes in tileoutletted fields.
- 2. Apply this product to the entire tile-outletted field and immediately incorporate it to a depth of 2 3 inches in the entire field.
- 3. Apply this product to the entire tile-outletted field under a no-till practice only when high crop residue management practices are used. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during or after crop harvest.

### Maximum Atrazine Application Rates Per Calendar Year

Maximum annual atrazine broadcast application rates for corn must be as follows:

- If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 pounds active ingredient (5.0 quarts Sharda Acetochlor 24.8% + Atrazine 16.6% SE) per acre. If post-emergence treatment is required following an earlier herbicide application, the total atrazine applied must not exceed 2.5 pounds active ingredient per acre per calendar year. Note: 1 quart per acre Sharda Acetochlor 24.8% + Atrazine 16.6% SE delivers 0.4 pound active ingredient atrazine per acre.
- Apply a maximum of 2.0 pounds active ingredient (5.0 quarts Sharda Acetochlor 24.8% + Atrazine 16.6% SE) per acre if a single pre-emergence application is made on soils that are not highly erodible or on highly erodible soil if at least 30% of the soil is covered with plant residues, or
- Apply a maximum of 1.6 pounds active ingredient (4.0 quarts Sharda Acetochlor 24.8% + Atrazine 16.6% SE) per acre as a single pre-emergence application on highly erodible soils if less than 30% of the soil is covered with plant residues; or 2.0 pounds active ingredient (5.0 quarts Sharda Acetochlor 24.8% + Atrazine 16.6% SE) per acre if only applied post-emergence.

## Maximum Acetochlor Application Rates Per Calendar Year

- Maximum annual acetochlor broadcast application rates for corn must not exceed 3.0 pounds active ingredient (5.0 quarts Sharda Acetochlor 24.8% + Atrazine 16.6% SE) per acre. Note: 1 quart per acre Sharda Acetochlor 24.8% + Atrazine 16.6% SE delivers 0.6 pound active ingredient acetochlor per acre.
- **Pre-Harvest Interval:** Do not apply **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** within 60 days of harvest of field corn for field corn forage uses or 45 days for sweet corn forage uses.
- Post-emergence applications of atrazine to corn must be made before the crop reaches 12 inches in height.
- Do not contaminate irrigation water used for crops other than corn or water used for domestic purposes.

• Do not apply Sharda Acetochlor 24.8% + Atrazine 16.6% SE before pre-irrigation in irrigated areas.

#### **Use Precautions:**

- Sharda Acetochlor 24.8% + Atrazine 16.6% SE must not be used on corn seed stock such as Breeders, Foundation, or Increase.
- Applied according to directions and under normal growing conditions, Sharda Acetochlor 24.8% + Atrazine 16.6% SE will not harm the treated crop. During germination and early stages of growth, extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, carryover pesticide residues, the use of certain soil applied systemic insecticides, improperly placed fertilizers or soil insecticides may create abnormal conditions that weaken crop seedlings. Sharda Acetochlor 24.8% + Atrazine 16.6% SE used under these abnormal conditions could result in crop injury.

## MANDATORY SPRAY DRIFT MANAGMENT

## **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- User must maintain a 15 foot (4.6 meter) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.

## **Boomless Ground Applications:**

- Applicators are required to use a coarse or coarser droplet size (ASABE S572) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- User must maintain a 15 foot (4.6 meter) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.

#### **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.

# **BOOM HEIGHT – Ground Boom**

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

# **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.

#### **ROTATIONAL CROP RESTRICTIONS**

When tank mixing this product with other herbicides, follow the most restrictive crop rotation guidelines on the label of each product used. The following rotational crops may be planted as indicated:

Rotational Crop	Timing or Interval
Corn <sup>1</sup>	0 months after application
Sorghum and Soybeans <sup>2</sup>	Spring following application
Alfalfa, Barley, Dry Beans (Adzuki, Kidney, Lima, Navy, Pinto), Lupin (Grain, White, White	
Sweet), Millet (Pearl or Proso), Oats, Pea (Blackeyed, Chick, Cow, Crowder, Field, Pigeon, Southern), Potatoes, Rye, Sugar Beets, Sunflower, Tobacco <sup>3</sup> , Triticale, Wheat, and Wild Rice	15 months after application*

<sup>\*</sup>Approved rotation crops list does not include any species of succulent beans and peas.

# MIXING, SPRAYING, AND HANDLING INSTRUCTIONS

# **Carriers and Spray Volume**

Either water or liquid fertilizers such as solutions, slurries or suspensions may be used as liquid carriers. If fluid fertilizers are used, a physical compatibility test with these must be done before combining in the spray tank. See **Testing the Compatibility of Sharda Acetochlor 24.8% + Atrazine 16.6% SE and Tank Mixes with Fluid Fertilizers** for details of the compatibility testing procedure. Even if **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** is physically compatible with a fluid fertilizer, constant agitation is necessary to maintain a uniform mixture during application.

Make application in a minimum broadcast spray volume of 10 gallons per acre using boom equipment for ground applications. Use low-pressure nozzles designed for application of herbicides. Use sufficient operating pressure to produce the desired spray pattern for the nozzle (15 to 40 PSI) and follow manufacturer's recommendations for nozzle spacing and operating height to ensure uniform spray distribution at the soil surface. Use 50-mesh or coarser screens, if needed.

## **Adding to Spray Tank**

The spray tank must be clean, thoroughly rinsed and decontaminated prior to adding either **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** alone or with tank mix combinations. If water is used as the carrier, use clean water. All return lines to the spray tank must discharge below the liquid level.

**Used Alone:** When applying **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** alone, add the specified amount to the spray tank when the tank is half filled with carrier, then add the rest of the water or fluid fertilizer. Provide sufficient agitation to ensure thorough mixing and to maintain a uniform spray mixture during application.

Tank Mixed: If product is used in a tank mixture, conduct a compatibility test prior to full-scale tank mixing. Refer to the Testing the Compatibility of Sharda Acetochlor 24.8% + Atrazine 16.6% SE and Tank Mixes with Fluid Fertilizers for details on the procedure for such a test.

## **Water Carrier**

Allow time for complete dispersion/mixing before adding another product to the spray mixture. Add products to the tank mixture in the following order:

- To start, add one-half of the required amount of water to the spray tank. Begin agitation.
- in water soluble packaging. Important: Allow time for complete dispersion.
- Wettable powders or dry flowables (slurry if recommended by tank mix product label)
- Liquid flowables
- Emulsifiable concentrates
- Sharda Acetochlor 24.8% + Atrazine 16.6% SE or other suspension concentrates
- Urea ammonium nitrate (UAN) or ammonium sulphate (AMS), if required.
- Compatibility agent, if needed.
- Soluble liquids such as glyphosate, paraquat, 2,4-D amine.
- Crop oil concentrate (COC) or nonionic surfactant (NIS), if required.
- Finish filling spray tank to required spray volume.

#### **Liquid Fertilizer Carrier**

Allow time for complete dispersion/mixing before adding another product to the mixture. Add products to the tank in the following order:

- To start, add one-half of the required amount of liquid fertilizer to the spray tank. Begin agitation.
- Compatibility agent, if needed.
- Products in water soluble packaging. **Important:** Products in water soluble packaging (WSP) must be premixed with water (slurried) before adding to the tank.
- Wettable powders or dry flowables (slurry if it is recommended by tank mix product label)
- Liquid flowables
- Emulsifiable concentrates
- Sharda Acetochlor 24.8% + Atrazine 16.6% SE or other suspension concentrates
- Ammonium sulphate (AMS), if tank mixing with glyphosate.

<sup>&</sup>lt;sup>1</sup>If crop treated with **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** is lost, corn may be replanted immediately. Do not make a second application of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE**. Do not apply **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** after June 10<sup>th</sup>, unless only corn will be planted the following year.

<sup>&</sup>lt;sup>2</sup>Due to the risk of atrazine carryover, injury may occur to soybeans the year following corn when planted in north central and northwest Iowa, south central and southwest Minnesota, northern Nebraska, and southeast South Dakota on soils having a calcareous surface layer and relatively high pH.

<sup>&</sup>lt;sup>3</sup>Because of atrazine carryover, injury may occur to tobacco.

- Soluble liquids such as glyphosate, paraquat, 2,4-D amine.
- Crop oil concentrate (COC) or nonionic surfactant (NIS), if required.
- Finish filling spray tank to required spray volume.

**Note:** For all tank mixtures, maintain constant agitation during mixing and throughout application to ensure spray mixture remains uniformly suspended.

Testing the Compatibility of Sharda Acetochlor 24.8% + Atrazine 16.6% SE and Tank Mixes with Fluid Fertilizers

Since fluid fertilizers vary, the following procedure is suggested for determining whether **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** may be combined with a specific fluid fertilizer for spray tank application.

#### Materials Needed:

- Sharda Acetochlor 24.8% + Atrazine 16.6% SE and any tank mix products.
- Fluid fertilizer to be used.
- Adjuvant for fertilizer tank mix: Use any adjuvant cleared for use on growing crops under 40 CFR 180.1001 to improve the compatibility of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** with fluid fertilizers. The adjuvant that provides the best emulsification depends on the specific fertilizer under consideration.
- Two 1 qt., wide mouth glass jars with lid or stopper.
- Measuring spoons (a 25 mL pipette or graduated cylinder provides more accurate measurement).
- Measuring cup, 8 oz. (257 mL).

#### Procedure:

- 1. Pour a pint (about 473 mL) of the fluid fertilizer into each of the quart jars.
- 2. Add Sharda Acetochlor 24.8% + Atrazine 16.6% SE and any tank mix combination to the jars. The order of addition is wettable powders first with mixing, followed by flowables with mixing and the EC's last. The rate of wettable powders and dry flowables is 1 ½ teaspoon per pound of product per acre to be applied. EC's should be added at the rate of ½ tsp. for each pint per acre to be applied. Premixing the wettable powders in 1 oz. of water before adding to the pint of fluid fertilizer will improve the compatibility of the final mixture.
- 3. Add ½ tsp. (2 mL) adjuvant to one of the jars, label it as "With", and mix. The rate of ½ tsp. per pint is equal to 3 pts. of adjuvant per 100 gals. of fluid fertilizer.
- 4. Close both jars with lids or stoppers and mix the contents by turning the jars upside down 10 times.
- 5. Inspect the surface and body of the mixtures:
  - a. Immediately after completing the jar inversions.
  - b. After allowing the jars to stand quietly for 30 minutes.
  - c. And then again after turning the jars upside down 10 times after the 30 minute inspection.

# **Evaluation:**

If either mixture remains uniform for 30 minutes, the combination may be used. If a uniform mix cannot be made, the mixture must not be used. Should either mixture separate after 30 minutes, but readily remix uniformly with 10 jar inversions, the mixture can be used if adequate agitation is maintained in the tank. If the mixture with adjuvant is satisfactory but the one without adjuvant is not, be sure to add the adjuvant in the spray tank. Add the adjuvant first, at a rate of 3 pints per 100 gallons of fluid fertilizer. Foaming can be reduced or minimized by using moderate agitation. If non-dispersible oil, sludge, or clumps of solids form in the mixtures, the combination must not be used.

## **APPLICATION TIMING AND METHODS**

For the optimum period of effective weed control during the time most critical to corn production, make pre-plant applications of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** as close as possible to planting. Make pre-emergence applications as close as possible to planting, but before weed emergence. Make post-emergence applications before weed emergence or in tank mix combination with a product that controls emerged weeds. **Note:** Do not make application of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** to sweet corn as an early post-emergence application.

## **Early Pre-Plant Applications**

On medium- and fine-textured soils, Sharda Acetochlor 24.8% + Atrazine 16.6% SE may be applied up to 30 days prior to planting.

# **Pre-Plant Incorporation Applications**

**Sharda Acetochlor 24.8% + Atrazine 16.6% SE** and certain tank mixes may be mechanically incorporated in the top 2" of the soil with field cultivators, discs, or spring tooth harrows at any time within 14 days prior to planting. Improper incorporation, excessive crop residues, or poor soil tilth may result in erratic, streaked or otherwise unsatisfactory weed control. Do not mix **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** deeper than 2" into the soil and avoid moving or shaping soil after incorporation.

# **Pre-Emergence Surface Applications**

Application of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** and certain tank mixes may be made to the soil surface as a broadcast or banded application. Precipitation or sprinkler irrigation of at least 0.25" is required to bring **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** into contact with germinating weed seeds. If rain or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe, or similar equipment, to incorporate the herbicide. Incorporation equipment must be run at a shallow depth to avoid disturbance of germinating corn seed. Erratic weed control resulting from exposure of untreated soil may occur if surface soil is moved or reshaped after incorporation.

### **Post-Plant Pre-Emergence Applications**

**Sharda Acetochlor 24.8% + Atrazine 16.6% SE** may be applied immediately after planting but prior to corn emergence. If rain or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe, or similar device, to shallowly incorporate the herbicide. Do not disturb germinating corn seed. Erratic weed control resulting from exposure of untreated soil may occur if surface soil is moved or reshaped during incorporation.

## **Banding Pre-Emergence Applications**

**Sharda Acetochlor 24.8% + Atrazine 16.6% SE** may be applied in a 10 - 14" band after corn planting but before corn emergence. If rain or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe or similar device to incorporate the herbicide. Do not disturb the germinating corn seed. Erratic weed control resulting from exposure of untreated soil may occur if surface soil is moved or reshaped during incorporation.

# **Early Post-Emergence Applications**

Application of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** may be made early post-emergence to corn up to 11" tall. Applications must be made prior to weed seedling emergence or in a tank mixture that controls the emerged weeds. Read and follow restrictions and directions on tank mix product labels.

## **Sprinkler Irrigation**

Do not make application of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** through sprinkler irrigation systems. Use a sprinkler system only to incorporate **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** after application. After **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** has been applied, a sprinkler irrigation system set to deliver 0.25 - 0.75" of water per acre may be used to incorporate the product. Using more than 0.75" of water could result in reduced performance. On sandy soils low in organic matter, use no more than 0.5" of water. Do not use flood irrigation to apply or incorporate **Sharda Acetochlor 24.8% + Atrazine 16.6% SE**.

#### Cultivation

Delay cultivation as long as possible. If weeds develop, a shallow cultivation or rotary hoeing will generally result in improved weed control. If **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** was incorporated, cultivate to a depth of less than half the depth of incorporation.

If cultivation is necessary due to soil crusting, compaction, or escaped weeds, adjust equipment to run shallow and minimize soil movement. This will decrease the possibility of diluting or moving the herbicide from the weed control zone.

# **Application Use Rates**

The use rate of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** is determined by a combination of two factors, soil texture and organic matter, which must be determined prior to application. Different soil textures are grouped into three textural classes (coarse, medium, and fine) as outlined below. Soil texture and organic matter content of the soil may be determined from soil survey information and/or by laboratory analysis and must be known in order to select the proper rate from Tables 1 and 2 below.

# **Soil Types:**

- Fine: Silty Clay Loam, Clay Loam, Sandy Clay, Silty Clay, Clay
- Medium: Loam, Silt Loam, Silt, Sandy Clay Loam
- Coarse: Sand, Loamy Sand, Sandy Loam

# **Use Rates in Conventional Tillage Systems**

The following use rates are for pre-plant incorporated, pre-emergence, and early post-emergence applications (refer to **Application Timing and Methods**). Refer to Table 2 if no-till applications are made or application is made more than 14 days before planting under conventional tillage.

Table 1. Sharda Acetochlor 24.8% + Atrazine 16.6% SE Use Rates (Qt./Acre) by Soil Texture and Organic Matter Content in Conventional Tillage Systems

Soil Texture	Soil Organic Matter Content			
	Less than 3%	3% or Greater		
Coarse	2.5 - 2.7	2.7 - 3.0		
Medium	2.7 - 3.3	3.0 - 3.3		
Fine	3.0 - 3.5*	3.0 - 5.0*		

<sup>\*</sup>On highly erodible soils with less than 30% plant residue, do not apply more than 4.0 qts. per acre.

**Rate Ranges:** Use a rate in the lower end of the rate range if weed infestation is light and/or soil organic matter is less than 3%. Use a rate in the higher end of the rate range if the weed infestation is heavy and/or soil organic matter is greater than 3%.

### **Use Rates for Reduced Tillage Systems**

Application may be made up to 40 days prior to planting or after planting. Optimal weed control will be obtained when applications are made as close to planting as possible, but before weeds emerge. In reduced or no-till systems, use a burndown herbicide such as paraquat (Gramoxone) or glyphosate (Glyphomax, Roundup, or Touchdown) or 2,4-D in tank mix with **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** if emerged weeds are present at application.

Table 2. Sharda Acetochlor 24.8% + Atrazine 16.6% SE Use Rates\* (Qt./Acre) by Soil Texture in Reduced or No-Tillage Systems

	Time of Application Relative to Planting					
Soil Texture	Greater Than 14 Days Before Planting	Less Than 14 Days Before Planting or After Planting But Prior to Corn Emergence	After Planting and/or Corn Emergence			
Coarse	Do not apply more than 14 days before planting on coarse-textured soils.	2.5 - 3.0	2.5 - 3.0			
Medium	2.7 - 4.0	2.7 - 3.3	2.7 - 3.3			
Fine	3.3 - 5.0**	3.0 - 5.0**	3.0 - 4.0			

<sup>\*</sup>Rates are for single applications. Split applications of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** may be used; make application of at least 60% of the specified rate up to 30 days prior to planting and the remaining balance up to 40% at planting.

# **Band Applications**

For band applications, use row and band width measurements (inches) to calculate the amount of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** to be applied per acre as follows:

Row Width in Inches	– X	Broadcast Rate per Acre	=	Band Rate per Treated Acre
Band Width in Inches Row Width in Inches	- X	Broadcast Volume per Acre	=	Band Volume per Treated Acre

#### **WEEDS CONTROLLED**

Sharda Acetochlor 24.8% + Atrazine 16.6% SE applied as directed in this label will control or partially control the weeds listed in Table 3. Additional weeds may be controlled with tank mixes. Refer to the "Sharda Acetochlor 24.8% + Atrazine 16.6% SE Tank Mix Combinations" section of this label for tank mix directions. 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.

Table 3. Weeds Controlled or Partially Controlled by Sharda Acetochlor 24.8% + Atrazine 16.6% SE at Specified Use Rates

BROADLEAVES		GRASSES		SEDGES			
Beggarweed, Florida C		Barnyardgrass C		Nutsedge, Yellow <sup>1,3</sup>	<sup>1,3</sup> C		
Carpetweed	С	Crabgrass spp.	С				
Cocklebur <sup>1</sup>	PC	Crowfootgrass	С				
Galinsoga	С	Cupgrass, southwestern	С				
Jimsonweed	С	Cupgrass, woolly	PC				
Kochia	PC	Foxtail, giant	С				
Lambsquarters, common	С	Foxtail, green	С				
Morningglory spp.	С	Foxtail, robust (purple, white)	С				
Nightshade, black	С	Foxtail, yellow	С				
Nightshade, hairy	С	Goosegrass	С				
Pigweed, redroot	С	Johnsongrass, seedling	PC				
Purslane, common	С	Millet, foxtail	С				
Pusley, Florida	С	Millet, wild proso	PC				
Ragweed, common	С	Panicum, browntop	С				
Ragweed, giant	PC	Panicum, fall	С				
Sicklepod	С	Panicum, Texas <sup>2</sup>	С				
Sida, prickly	С	Rice, red	С				
Smartweed spp.	С	Sandbur, field	PC				
Velvetleaf <sup>1</sup>	PC	Shattercane	PC				
Waterhemp, coomon	С	Signalgrass, broadleaf <sup>2</sup>	С				
Waterhemp, tall	С	Sprangletop, red	С				
		Witchgrass	С				

C = Controlled

# Sharda Acetochlor 24.8% + Atrazine 16.6% SE Tank Mix Combinations

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.

<sup>\*\*</sup>On highly erodible soils with less than 30% plant residue, do not apply more than 4.0 qts. per acre.

PC = Partial Control

<sup>&</sup>lt;sup>1</sup>Activity may be reduced under dry conditions or when early pre-plant applications are made more than 14 days prior to planting. Sequential herbicides or application of additional atrazine may be needed for complete control.

<sup>&</sup>lt;sup>2</sup>Best control is achieved when **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** is applied within 5 days of planting and rainfall occurs shortly after application or mechanical incorporation is used to activate the herbicide. If rainfall does not occur within 7 days after application, shallow cultivation will enhance activity. Excessive rainfall after application may reduce control. Under adverse weather conditions and/or heavy infestations, a cultivation or follow-up herbicide may be needed.

<sup>&</sup>lt;sup>3</sup>Yellow nutsedge requires a minimum of 3.5 qts. per acre. Incorporation will provide improved control.

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When tank mixing or sequentially applying atrazine or simazine or products containing either a.i. to corn, the total pounds of simazine and/or atrazine applied (lb. a.i./A) must not exceed 2.5 lbs. of a.i. per year. For all applications, do not exceed the maximum rate of acetochlor as specified in the **Maximum Acetochlor Application Rates per Calendar Year** section of this label.

Additional weeds may be controlled with tank mixtures. Tank mix combinations may be used in either conventional, reduced, or notill systems and may be applied by the same methods and at the same application timing as **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** unless otherwise specified in the tank mix product label.

Sharda Acetochlor 24.8% + Atrazine 16.6% SE may be tank mixed with any other herbicide labeled for use on corn provided the compatibility of the tank mix is verified by a jar test and tank mixing with Sharda Acetochlor 24.8% + Atrazine 16.6% SE is not prohibited by the label of the tank mix product. The compatibility of a tank mixture can be determined by mixing the ingredients of the herbicide mixture in their relative proportions in a glass jar as described for fluid fertilizer mixtures in the Testing the Compatibility of Sharda Acetochlor 24.8% + Atrazine 16.6% SE and Tank Mixes with Fluid Fertilizers section by substituting water for fluid fertilizer. Refer to the label of the tank mix product for applicable use directions, precautions and limitations, including additional weeds controlled. Do not exceed application rates on the respective product labels. Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used. Note: This product contains atrazine and may not control weeds that are known or suspected to be triazine "resistant".

When tank mixing **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** with atrazine, do not exceed the maximum allowable rate of atrazine in your county or State. In some atrazine management areas, atrazine is more restricted. Consult your county extension office or State university for further information.

# **Use of Spray Adjuvants**

Sharda Acetochlor 24.8% + Atrazine 16.6% SE is a pre-emergence herbicide, where spray adjuvants have little or no effect on product performance. However, several herbicides used in tank mixtures with Sharda Acetochlor 24.8% + Atrazine 16.6% SE require use of adjuvants to aid in the burndown of emerged weeds. Use only those adjuvants specified on tank mix product labels and approved for agricultural crop use. Note: Do not use liquid fertilizer as the carrier when Sharda Acetochlor 24.8% + Atrazine 16.6% SE is applied post-emergence to corn as severe injury may result. The addition of liquid fertilizers used as adjuvants with Sharda Acetochlor 24.8% + Atrazine 16.6% SE tank mixes applied post-emergence to corn under environmental stress conditions may result in significant crop injury and must be avoided if the risk of crop injury is unacceptable.

# **Pre-Emergence Tank Mix Combinations**

Conventional Tillage Corn (Sharda Acetochlor 24.8% + Atrazine 16.6% SE plus):

Tank Mix Herbicide*	Comments
Atrazine 4L**	<ul> <li>Pre-plant surface, pre-plant incorporated, pre-emergence. If emerged weeds are greater than 1.5" tall at the time of application, add an appropriate post-emergence herbicide.</li> <li>Longer growing season areas.</li> <li>High rainfall areas.</li> <li>Heavy broadleaf weed pressure.</li> </ul>
Balance Pro®	<ul> <li>Not labeled in all states; please refer to the Balance Pro label for precautionary statements, directions for use, geographic, and other restrictions.</li> <li>Field corn only.</li> <li>Refer to the use rates section for Sharda Acetochlor 24.8% + Atrazine 16.6% SE for minimum use rates.</li> </ul>
Hornet WDG	<ul> <li>Tank mixing with the labeled rate of Hornet® WDG herbicide provides consistent control of velvetleaf, lambsquarters, pigweed species, waterhemp, and triazine-resistant varieties of these species. Will also provide improved control of cocklebur, common ragweed, giant ragweed, common sunflower, and jimsonweed.</li> </ul>
Princep® 4L	Improve crabgrass or fall panicum control.
Python® WDG	• Tank mixing with the labeled rate of Python® WDG herbicide provides consistent control of velvetleaf, lambsquarters, pigweed species, waterhemp, and triazine-resistant varieties of these species.
Surpass® EC	Tank mix with the labeled rate for enhanced grass and nutsedge control.

<sup>\*</sup>Formulations that are not listed may be used: Perform a compatibility test and check the label of the tank mix product label for application rates, applicable use directions, precautions and limitations prior to use.

Reduced or No-Tillage Corn (Sharda Acetochlor 24.8% + Atrazine 16.6% SE plus):

Tank Mix Herbicide*	Comments
Atrazine 4L**	<ul> <li>Pre-plant surface, pre-plant incorporated, pre-emergence. If emerged weeds are greater than 1.5" tall at the time of application, add an appropriate post-emergence herbicide.</li> <li>Longer growing season areas.</li> <li>High rainfall areas.</li> </ul>
	Heavy broadleaf weed pressure.
Balance Pro®	• Not labeled in all states; refer to the label for Balance Pro label for precautionary statements, directions for use, geographic and other use restrictions.

<sup>\*\*</sup>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.

Surpass® EC

2,4-D

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	Field corn only.
	• See the use rate section for <b>Sharda Acetochlor 24.8% + Atrazine 16.6% SE</b> for minimum use rates.
Banvel®/Clarity® Marksman®**	• Make a pre-plant or pre-emergence application in reduced/no-till systems for burndown of existing weeds.
	Make a pre-plant application for burndown of existing weeds.
Durango® DMA, Roundup UltraMAX®, Touchdown®	• Weeds less than 6" tall are easiest to control with burndown herbicides applied in combination with Sharda Acetochlor 24.8% + Atrazine 16.6% SE.
Oitraiviax <sup>2</sup> , Touchidown <sup>2</sup>	• Always add ammonium sulphate (AMS) to tank mixes prior to addition of glyphosate (8.5 to 17 lbs. per 100 gals. of spray).
Gramoxone Inteon®	Control annuals, suppress perennials.
Pendimax®/Prowl®	• Pre-emergence to early post-emergence (up to 3" tall corn) but before weeds are more than 1" tall.
Princep® 4L	Improve crabgrass or fall panicum control.

<sup>\*</sup>Formulations that are not listed may be used: Perform a compatibility test and check the label of the tank mix product label for application rates, applicable use directions, precautions and limitations.

Enhanced grass and nutsedge control.

Apply pre-plant for burndown of existing weeds.

## **Post-Emergence Tank Mix Combinations**

Application of Sharda Acetochlor 24.8% + Atrazine 16.6% SE may be made before, with, or following the use of one or more of the following herbicides: Accent®, Accent Gold®, Aim® EW, atrazine, Banvel®, Basis®, Basis Gold®, Beacon®, Buctril®, Buctril®/atrazine, Clarity®, Distinct®, Hornet® WDG, Liberty®, Lightning®, Marksman®, Peak®, Permit®, Poast® (Plus and HC), Princep®, Pendimax®, Prowl®, Pursuit®, Shotgun®, Spirit®, and Steadfast®. Refer to the respective product label(s) for applicable directions for use, precautions and restrictions, and weeds controlled. Sharda Acetochlor 24.8% + Atrazine 16.6% SE may be tank mixed with any postemergence product approved for use on corn unless it is prohibited by the tank mix product label.

When tank mixing, consult the tank mix product label and follow the additional use directions given in this table. Application of **Sharda Acetochlor 24.8% + Atrazine 16.6% SE** can be made to corn up to 11" tall.

Post-Emergence Tank Mixes (Sharda Acetochlor 24.8% + Atrazine 16.6% SE plus):

Tank Mix Herbicide <sup>1</sup>		Comments					
Accent Gold® WDG		<ul> <li>Always add crop oil concentrate at 1% v/v. An ammonium nitrogen fertilizer (AMS or UAN) is also recommended.</li> </ul>					
Hornet® WDG	•	Always add NIS at 0.	.25% v/v or COC at 1	L% v/v.			
Aim® EW		Always add a NIS at					
Banvel®/Clarity® Marksman®*		Early post-emergent with another herbic			es are more than 2-	leaf stage, combine	
Buctril ® Buctril®/Atrazine* Shotgun®*	•	Refer to product lab	el for use directions	ò.			
Atrazine*	•	corn).	zine application ra	te per year for co	rn is 2.0 lbs. a.i. if	gence (up to 8" tall applied only post-	
Distinct®	•	Always add a NIS at Can be applied up to	10-inch corn.				
Liberty®							
Lightning®		For use on Clearfield acre or ammonium			liquid nitrogen fert	ilizer at 1 - 2 qts. per	
Pendimax®/Prowl®	•	Pre-emergence to e	arly post-emergence	e (up to 3" tall corn)	but before weeds a	re more than 1" tall.	
Pursuit® 2.5L Pursuit® 70DG	•						
Resource®	<ul> <li>Apply to weeds less than 5" tall. Add a crop oil concentrate at 1 - 2 pts. per acre and either 28% nitrogen at 2% v/v or ammonium sulfate at 2.5 lbs. per acre. May cause some burn or spotting to corn leaves.</li> </ul>						
Spirit <sup>®</sup>							
2,4-D Ester	•						
		Minimum Sharda Ad					
Accent® 75WDG Beacon®		Soil Type Organic Matter					
75WDG Basis®			<3%	3-7%	>7%		
Steadfast®		Coarse	2.0	2.0	2.5		
		Medium	2.0	2.0 - 2.5	2.5 - 3.0		
		Fine	2.0	2.0 - 2.5	2.5 - 3.0		

<sup>\*\*</sup>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.

Basis Gold®\*

Page **13** of **14**• Always add NIS at 0.25% (v/v); and in addition, if applied in dry conditions, add 4% (v/v) clear liquid fortilizer

 Banvel, Clarity, Marksman, Buctril, Buctril/Atrazine may be added to this mixture to provide burndown and residual control of broadleaf weeds.

Minimum Sharda Acetochlor 24.8% + Atrazine 16.6% SE use rates (qts./acre):

William Sharad Acception 241070 . Attacine 101070 32 ase rates (465.7 acre).			
Soil Type	Organic Matter		
	<3%	3-7%	>7%
Coarse	2.0	2.0	2.5
Medium	2.0	2.0 - 2.5	2.5 - 3.0
Fine	2.0	2.0 - 2.5	2.5 - 3.0

- Always add crop oil concentrate at 1.0% v/v or under dry arid conditions, 2.0% v/v and 28% liquid nitrogen at 2 qts. per acre or ammonium sulfate at 2 lbs. per acre.
- Banvel, Clarity, Marksman, Buctril, or Tough herbicide may be added to this mixture to provide burndown and residual control of broadleaf weeds.

# STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with vermiculite, earth, or synthetic absorbent.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, 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, by other procedures allowed by State and local authorities.

**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. 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.

To the extent consistent with applicable law, neither Sharda USA LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SHARDA USA LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SHARDA USA LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

<sup>\*</sup>Do not exceed an application rate of 2.0 pounds active ingredient 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 pounds active ingredient per acre per year.

Sharda Acetochlor 24.8% + Atrazine 16.6% SE ABN: Aectra Amendment – Interim Decision (Acetochlor)

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