

U.S. ENVIRONMENTAL PROTECTION AGENCY

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

Date of Issuance:

EPA Reg. Number:

6/2/23

X Registration Reregistration (under FIFRA, as amended) Term of Issuance: Conditional

Name of Pesticide Product: A23980 Herbicide

Name and Address of Registrant (include ZIP Code):

Syngenta Crop Protection, LLC P.O. Box 18300 Greensboro, NC 27419

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

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

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

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

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

Continues on page 2

Signature of Approving Official:	Date:
Mindy Ondish	6/2/23
Mindy Ondish, Product Manager 23	
Herbicide Branch, Registration Division (7505T)	

- 2. You are required to comply with the data requirements described in the generic data call-in (GDCI) identified below:
 - a. Mesotrione GDCI-122990-1474

You must comply with all of the data requirements within the established deadlines. If you have questions about the GDCI listed above, you may contact the Chemical Review Manager in the Pesticide Re-Evaluation Division: http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1

- 3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. You have 18 months from the date of registration to provide these data.
- 4. Submit one copy of the final printed label for the record before you release the product for shipment.

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

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

Please note that the alternate brand name "STOREN" has been added to the product record.

Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 6/8/2022
- Alternate CSF 1 dated 6/8/2022
- Alternate CSF 2 dated 6/8/2022

If you have any questions, please contact Endia Blunt at 202-566-2505 or at blunt.endia@epa.gov.

Enclosure

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

S-METOLACHLOR	GROUP	15	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE
PYROXASULFONE	GROUP	15	HERBICIDE
BICYCLOPYRONE	GROUP	27	HERBICIDE

A23980 Herbicide

[ABN: STOREN™]

Herbicide

A Herbicide for Control of Annual Grass and Broadleaf Weeds in Field Corn, Seed Corn, Sweet Corn and Yellow Popcorn

Active Ingredients:	% w/w
S-Metolachlor*:	29.30%
Mesotrione**:	3.34%
Pyroxasulfone***:	1.63%
Bicyclopyrone****:	0.81%
Other Ingredients:	64.92%
Total:	100.00%

^{*}CAS No. 87392-12-9 **CAS No. 104206-82-8 ***CAS No. 447399-55-5

A23980 Herbicide is a ZC formulation containing 0.075 lb bicyclopyrone, 0.31 lb mesotrione, 0.15 lb pyroxasulfone and 2.69 lb S-metolachlor per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional precautionary statements and directions for use [on label][inside booklet].

EPA Reg. No. 10 EPA Est.	0-1735
Net Contents	
[Batch Code:] (For nonrefillables only.)

A	C	C	E	P	T	E	D
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06/02/2023

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 100-1735

^{****}CAS No. 352010-68-5

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1.0 FIRST AID

	FIRST AID
If on skin or clothing	 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	 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 eye. Call a poison control center or doctor for treatment advice.
If swallowed	 Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
If inhaled	 Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Have the product co treatment.	ontainer or label with you when calling a poison control center or doctor, or going for
	SYNGENTA HOTLINE NUMBER For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call 1-800-888-8372

PRECAUTIONARY STATEMENTS

2.0 PRECAUTIONARY STATEMENTS

2.1 Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

2.2 Personal Protective Equipment (PPE)

Mixers, Loaders, Applicators and other handlers must wear:

- Protective eyewear
- Long-sleeved shirt and long 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 VitonTM ≥14 mils
- Shoes plus socks

2.3 User Safety Requirements

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

2.4 Engineering Controls

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.607(d-e)), the handler PPE requirements may be reduced or modified as specified in the WPS.

2.5 User Safety Recommendations

User Safety Recommendations:

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly
 and put on clean clothing. If pesticide gets on skin, wash immediately with soap and
 water.
- 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.

2.6 Environmental Hazards

Do not apply directly to water, 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 washwater or rinsate.

Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

2.6.1 Groundwater Advisory

A23980 Herbicide contains the active ingredients bicyclopyrone, mesotrione and *S*-metolachlor which are known to leach through soil into groundwater under certain conditions as a result of label use. Pyroxasulfone has properties and characteristics associated with chemicals detected in groundwater. These chemicals may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

2.6.2 Surface Water Advisory

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

A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of bicyclopyrone, mesotrione, pyroxasulfone, S-metolachlor and any degradation products 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.

2.6.3 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.

2.6.4 Reporting Ecological Incidents

To report ecological incidents, including mortality, injury, or harm to plant and animals call 1-800-888-8372.

2.6.5 Mixing/Loading/Application Restrictions

Care must be taken when using this product to prevent back siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures or rinsates.

Check valves or antisiphoning devices must be used on mixing equipment.

- This product may not be mixed or loaded within 50 ft of perennial or intermittent streams and rivers, natural or impounded lakes, and reservoirs.
- This product must not be mixed/loaded or used within 50 ft of all 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 ft 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 washwater, 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 abovespecified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

2.7 Physical or Chemical Hazards

Do not use or store near heat or open flame. Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

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 six months before using this product. To obtain Bulletins, consult http://www.epa.gov/espp/, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

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.

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 (WPS).

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

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 and water, wear:

- Protective eyewear
- Coveralls
- 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 VitonTM ≥14 mils
- Shoes and socks

3.0 PRODUCT INFORMATION

A23980 Herbicide is a combination of bicyclopyrone, mesotrione, pyroxasulfone and *S*-metolachlor herbicides, plus the safener benoxacor.

A23980 Herbicide may be used preemergence and or postemergence in the culture of field corn and seed corn. A23980 Herbicide may also be used in the culture of sweet corn and yellow popcorn but the application must be made prior to crop emergence, (i.e., preplant or preemergence) or severe crop injury may occur.

A23980 Herbicide may be used in all tillage systems including reduced and no-till systems. The highest levels of in-crop residual weed control will be obtained when applications are made as close to planting as possible.

Applied according to use directions and under normal growing conditions, A23980 Herbicide will not harm the treated crop. During germination and early stages of growth, environmental conditions or other factors that favor poor or slow growth can weaken crop seedlings. A23980 Herbicide used under these conditions can result in crop injury.

Determine the organic matter and soil type of the soil on which the application is to be made prior to application. The use rate of A23980 Herbicide is based on percent soil organic matter and soil type.

A23980 Herbicide is recommended for management of the weed species listed in **Section 8.0**.

3.1 Weed Resistance Management

S-METOLACHLOR	GROUP	15	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE
PYROXASULFONE	GROUP	15	HERBICIDE
BICYCLOPYRONE	GROUP	27	HERBICIDE

Naturally occurring biotypes of certain weed species with resistance to triazines, ALS, PPO, Glycine (glyphosate) and HPPD-inhibiting herbicides are known to exist. If biotypes of weeds resistant to triazines, ALS, PPO and glycine inhibitors are present in the field, this herbicide should control them if they are listed in **Section 8.0**.

To reduce the risk of weeds developing resistance to HPPD-inhibiting herbicides, implement a program including both preemergence and/or postemergence herbicides that provides effective control of all weeds using multiple effective modes of action. This includes scouting fields before application to ensure the herbicide will be appropriate for the weeds present. Scout fields and eliminate weed escapes. If suspected weed resistance is observed against a particular weed species, contact your Syngenta or retailer representative or call Syngenta Customer Service 1-866-Syngent(a) (1-866-796-4368). Lack of weed control is not necessarily an indicator of weed resistance.

Consider weed resistance management strategies that include two or more modes of action where a minimum of two modes of action are effective at controlling the target weed when either are applied alone.

Read and follow all label directions.

A23980 Herbicide contains four herbicide active ingredients and two modes of action and can be an effective component of a weed resistance management strategy.

3.1.1 Principles of Herbicide Resistant Weed Management

Scout and know your field

- Know weed species present in the field to be treated through scouting and field history. An understanding of weed biology is useful in designing a resistance management strategy. Ensure the weed management program will control all weeds present.
- Fields should be scouted prior to application to determine species present and growth stage. Always apply this herbicide at the labeled rate and correct timing for the weeds present in the field.

Utilize non-herbicidal practices to add diversity

• Use diversified management tactics such as cover crops, mechanical weed control, harvest weed seed control, and crop rotation as appropriate.

Use good agronomic practices, start clean and stay clean

• Use good agronomic practices that enhance crop competitiveness.

- Plant into weed-free fields utilizing tillage or an effective burndown herbicide for control
 of emerged weeds.
- Sanitize farm equipment to avoid spreading seed or vegetative propagules prior to leaving fields.

Difficult to control weeds

- Fields with difficult to control weeds should be planted in rotation with crops that allow the use of herbicides with an alternative mode of action or different management practices.
- Difficult to control weeds may require sequential applications, such as a broad spectrum preemergence herbicide followed by one or more postemergence herbicide applications. Utilize herbicides containing different modes of action effective on the target weeds in sequential applications.

Do not overuse the technology

 Do not use more than two applications of this or any other herbicide with the same mode of action in a single growing season unless mixed with an herbicide with a different effective mode of action which provides overlapping spectrum for the difficult to control weeds.

Scout and inspect fields following application

- Prevent an influx of weeds into the field by controlling weeds in field borders.
- Scout fields after application to verify that the treatment was effective.
- Suspected herbicide resistant weeds may be identified by these indicators
 - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
 - A spreading patch of non-controlled plants of a particular weed species.
 - Surviving plants mixed with controlled individuals of the same species.
- Report non-performance of this product to your Syngenta retailer, Syngenta representative, or call 1-866-Syngent(a) (1-866-796-4368). If resistance is suspected ensure weed escapes are controlled using an herbicide with an effective mode of action and/or use non-chemical means to prevent further seed production.

Prevent weed escapes before, during, and after harvest

 Do not allow weed escapes to produce seed or vegetative structures such as tubers or stolons which contribute to spread and survival. Consider harvest weed seed management and control weeds post-harvest to prevent seed production.

Resistant Weeds

 Contact your local Syngenta representative, retailer, crop advisor or extension agent to determine if weeds resistant to modes of action contained in this product are present in your area.

- Do not assume that each listed weed is being controlled by multiple modes of action.
 Premixes are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product.
- If resistant biotypes have been reported, use the full labeled rate of this product, apply at the labeled timing, and tank-mix with an additional different mode of action product so there are multiple effective modes of application for each suspected resistant weed.

4.0 APPLICATION DIRECTIONS

4.1 Methods of Application

Applications with A23980 Herbicide alone or in tank mixtures are permitted by ground application only. Preplant, preemergence, and postemergence applications are allowed as specified in **Section 9.0** unless otherwise restricted in **Section 7.0**. Refer to **Section 4.5** for use of A23980 Herbicide with dry bulk fertilizers.

4.2 Application Equipment

- Configure spray equipment to provide accurate and uniform coverage of the target area and minimize potential for spray drift.
- To ensure accuracy, calibrate sprayer before each use.
- For information on spray equipment and calibration, consult spray equipment manufacturers and/or state recommendations.
- All ground application equipment must be properly maintained.
- Spray nozzles should be uniformly spaced, the same size and type and should provide accurate and uniform application.
- Use spray nozzles that provide medium to coarse droplet size to avoid drift yet provide good coverage.
- Ensure that all in line strainer and nozzle screens in the sprayer are 50-mesh or coarser.
- Flat fan nozzles of 80° or 110° are recommended for optimum postemergence coverage.
- Do not use flood-jet nozzles or controlled droplet application equipment for postemergence applications.
- Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage with postemergence application.
- Use a pump that can maintain the manufacturer's recommended pressure at the nozzles and provide proper agitation within the tank to keep the product dispersed.
- Lower pressures may be used with extended range or drift reduction nozzles as long as adequate coverage is maintained.
- Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time.
- If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying.

4.3 Application Volume and Spray Coverage

- Good weed coverage is essential for optimum postemergence weed control.
- Boom height for broadcast over-the-top applications must be based on the height of the crop, at least 15 inches above the crop canopy, but only high enough to give uniform coverage.
- For preemergence applications, apply in a spray volume of 10-80 gal/A.
- For early postemergence applications, apply in a spray volume of 10-30 gal/A. When weed foliage is dense, use a minimum spray volume of 15 gal/A.

4.4 Mixing Directions

- 1. Thoroughly clean spray equipment before using this product. Dispose of the cleaning solution in a responsible manner. If water is used as the carrier, use clean water. Do not use a sprayer or applicator contaminated with other materials, or crop damage or sprayer clogging of the application device may occur.
- 2. Prepare no more spray mixture than is needed for the immediate operation.
- 3. Keep product container tightly closed when not in use.
- 4. Agitate the spray solution before and during application.
- 5. Do not let the spray mixture stand overnight in the spray tank.
- 6. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

4.4.1 A23980 Herbicide Alone

- 1. For preemergence applications, either clean water or liquid fertilizer, excluding suspension fertilizers, may be used as carriers. If liquid fertilizer is used, conduct a compatibility test to ensure mixture compatibility.
- 2. For postemergence applications, use only clean water as the carrier.
- 3. Provide sufficient agitation during mixing and application to maintain a uniform mixture.
- 4. Even if A23980 Herbicide is physically compatible with a liquid fertilizer, constant agitation is necessary to maintain a uniform mixture during application.
- 5. Fill the spray tank ½ full with clean water or liquid fertilizer and add AMS (if used) while continuing agitation.
- 6. Add the specified amount of A23980 Herbicide to the spray tank when the tank is half full of the carrier.
- 7. Add an adjuvant, if needed.
- 8. Complete filling the sprayer tank and continue agitation.

4.4.2 Tank-Mix Precautions

- It is the pesticide user's responsibility to ensure that all products are registered for the
 intended use. Read and follow the applicable restrictions, limitations and directions for use
 on all specified product labels involved in tank mixing. User must follow the most
 restrictive directions for use and precautionary statements of each product in the tank
 mixture.
- Tank mixes of A23980 Herbicide with other pesticides, fertilizers, or any other additives not specifically labelled for use with A23980 Herbicide may result in tank mix

incompatibility or unsatisfactory performance. In such cases, always check tank mix compatibility by conducting a jar test according to guidance in **Section 4.4.3** before actual tank mixing.

4.4.3 Tank-Mix Compatibility

- Conduct a jar test using a 1 pt to 1 qt container with lid by adding water or other intended carrier such a liquid fertilizer to the jar.
- Next, add the appropriate amount of pesticides(s) or tank-mix partner(s) in their relative proportions based on specified label rates. Add tank-mix components separately in the order described in the tank-mixing section, **Section 4.4.4**. After each addition, shake or stir gently to thoroughly mix.
- After all ingredients have been added, put the lid on the jar, tighten and invert the jar 10 times to mix.
- After mixing, let the mixture stand 15–30 minutes and then examine for signs of incompatibility such as obvious separation, large flakes, precipitates, gels or heavy oily film on the jar.
- If the mixture remains mixed or can be remixed readily, it is physically compatible and can be used.
- If the mixture is incompatible, repeat the test using a compatibility agent at the specified label rate. Or, if applicable, slurry dry formulations in water before adding to the jar. If incompatibility is still observed after following these procedures, do not use the mixture.
- After compatibility testing is complete, dispose of any pesticide wastes in accordance with the storage and disposal section, **Section 10.0**, of this label.

4.4.4 A23980 Herbicide In Tank Mixtures

- 1. Fill the spray tank or premix tank half full with clean water or liquid fertilizer.
- 2. Use only clean water as the carrier if applying A23980 Herbicide after crop emergence.
- 3. Begin tank agitation and continue constantly throughout mixing and spraying.
- 4. Prepare the components and add in the following order:
 - a) If ammonium sulfate (AMS) is used, add slowly while continuing agitation until completely dispersed.
 - b) If a wettable powder or dry flowable formulation is used, make a slurry with water and add it slowly through the screen into the tank. Agitate during the procedure.
 - c) Mixing and compatibility may be improved when a dry flowable is diluted with water before adding to the tank.
 - d) If a liquid formulation (excluding EC) is used, add slowly through screen into the tank.
 - e) Add A23980 Herbicide.
 - f) Add any other tank mix products next with emulsifiable concentrate (EC) products added last.
 - g) Add an adjuvant last, if needed.
- 5. Complete filling the sprayer tank and continue agitation.
- 6. Apply as soon as possible after spray mixture is prepared.
- 7. Do not leave mixture in spray tank overnight without agitation or unattended.

If A23980 Herbicide is added to the spray tank via induction, compatibility may be compromised. If an induction tank (or similar equipment) is used, add each product separately and allow each to disperse into the spray tank before adding the next product. For best tank-mix compatibility, rinse the induction tank with water before adding each component.

Avoid adding A23980 Herbicide to the spray tank via in-line injection or compatibility may be compromised.

4.4.5 Spray Additives

When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is recommended.

- Where A23980 Herbicide is applied after the corn has emerged, add a non-ionic surfactant (NIS) at 0.25% v/v (1 qt/100 gal of spray solution).
- In addition to NIS, a spray grade ammonium sulfate (AMS) at 8.5-17 lb/100 gal of water may also be used.
- When using liquid AMS products, use a rate that delivers an AMS equivalent of 8.5-17 lb/100 gal of spray solution.
- The use of crop oil concentrate (COC) products may result in temporary crop injury. In severe cases, injury can persist and result in crop stunting.
- Do not use methylated seed oil (MSO) products or urea ammonium nitrate (UAN) with A23980 Herbicide when applied alone to emerged corn, or when A23980 Herbicide is applied as a postemergence tank mixture with other products, unless directed for a specific tank mix on this label or as part of a supplemental A23980 Herbicide label.
- Any of these adjuvants may be used at a preemergence or preplant timing, i.e., where the corn crop has not yet emerged to increase burndown activity on existing weeds.

4.5 Dry Bulk Granular Fertilizers

A23980 Herbicide may be impregnated or coated onto dry bulk fertilizers including ammonium phosphate-sulfate, ammonium sulfate (AMS), diammonium phosphate (DAP), monoammonium phosphate (MAP), potassi (potassium chloride), potassium sulfate, urea, or blends of these dry bulk fertilizer types.

When applying A23980 Herbicide on dry bulk fertilizer, follow all directions for use and precautions on the product label regarding target crops, application rate, timing of application and all precautions and restrictions.

All individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application are the responsibility of the mixer and applicator.

4.5.1 Preparation of Herbicide/Fertilizer Mixtures

- Prepare the fertilizer/herbicide mixture by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender.
- Nozzles used to spray A23980 Herbicide onto the fertilizer must be placed to provide uniform spray coverage.
- Care must be taken to aim the spray directly onto the fertilizer and avoid spraying the walls of the blender.
- If the fertilizer/herbicide blend is too wet for uniform application, adding a drying agent is advised.
- Add the drying agent slowly to the fertilizer/herbicide blend until the mixture is suitable for uniform application.
- The amount of drying agent needed will depend on fertilizer type, A23980 Herbicide application rate and amount of fertilizer used.
- Apply the fertilizer/herbicide blend immediately following impregnation.

4.5.2 Precautions

- TO AVOID POTENTIAL FOR EXPLOSION: do not impregnate A23980 Herbicide onto ammonium nitrate, potassium nitrate, or sodium nitrate either alone or in blends with other fertilizers.
- Do not impregnate A23980 Herbicide onto single super phosphate or triple superphosphate fertilizers.
- Do not impregnate A23980 Herbicide on straight unadulterated agricultural limestone since absorption will not be achieved.

4.5.3 Application of Herbicide/Fertilizer Mixtures

- Apply a minimum of 200 lb of dry bulk fertilizer impregnated with A23980 Herbicide at the specified broadcast rate per acre.
- For best results, apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending.
- Uniform application of the blended fertilizer/herbicide mixture is essential to prevent possible crop injury and achieve weed control. Non-uniform application will result in unsatisfactory weed control.
- In areas where tillage is practiced, a shallow incorporation of the blended fertilizer/herbicide mixture is advised for improved weed control.

Calculate amount of A23980 Herbicide needed by the following formula:

2,000		<u>qt/A of</u>		qt of A23980 Herbicide
lb of fertilizers per acre	Χ	A23980	=	ton of fertilizer
		Herbicide		

4.5.4 Pneumatic (Compressed Air) Application

- A23980 Herbicide may be applied through pneumatic applicators, whether the fertilizer/herbicide mixture is blender-mixed or on-board fertilizer impregnation system.
- A23980 Herbicide must not be mixed with any other liquid or dry material in on-board fertilizer impregnation system tanks.
- Use high quality fertilizer with a minimum of fines when applying A23980 Herbicide with on-board impregnation equipment.
- Drying agents are not advised for use with on-board impregnation systems.

4.6 Sprayer Cleanout

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

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

5.0 REPLANT AND ROTATIONAL CROPS

When A23980 Herbicide is applied as directed on this label, follow the crop replant/rotational intervals shown below. If A23980 Herbicide is tank mixed with other products, follow the most restrictive product's crop rotation interval. The replant/rotational interval is the time between the last application of A23980 Herbicide and planting of the replant/rotational crop.

Crop	Replant/Rotational Interval
Field corn	
Seed corn	Anytime
Yellow popcorn	Anytime
Sweet corn	
Wheat	4 1/2 Months
Alfalfa (see rotational crops use restrictions below)	
Cotton	
Peanuts	10 Months
Potato	
Soybeans	

Sorghum (all types)	
Dry beans (see rotational crops use restrictions below) Barley, oats, and rye	11 Months
Rice	12 Months
All other rotational crops	18 Months

ROTATIONAL CROPS USE PRECAUTIONS

If applied after June 1, rotating to crops other than corn (all types) may result in crop injury.

ROTATIONAL CROPS USE RESTRICTIONS

- The 10-month rotation to alfalfa applies only when the total amount of A23980 Herbicide applied was equal to or less than 2.1 qt/A and the soil pH is greater than 6.5 or a minimum of 18" of rainfall or equivalent irrigation has been received between application and planting of alfalfa. Otherwise, the alfalfa rotational interval is 18 months.
- The 11-month rotational interval for dry beans applies only to areas west of US highway 83 in the states of Colorado, Kansas and Nebraska where A23980 Herbicide was applied to ground that was under center pivot irrigation and the soil pH is greater than 6.5. Otherwise, the dry bean rotational interval is 18 months.

6.0 COVER CROPS

A cover crop can be an important tool for the overall farm cropping system. Cover crops are planted for conservation purposes, soil erosion control, soil health improvement, water quality improvement and weed management. A cover crop can be a single crop or a combination of crops, including grasses and/or broadleaf crops.

After harvest of a A23980 Herbicide treated crop, planting of a cover crop is allowed provided the cover crop is not grazed or fed to livestock nor harvested for food. Terminate the cover crop through natural causes such as frost or intentional termination by herbicide application, crimping, rolling, tillage or cutting.

All possible cover crops or cover crop combinations have not been tested for tolerance to this product. Before planting the cover crop, determine the level of tolerance for the intended cover crops by conducting a field bioassay. Refer to **Section 6.1** for instructions on how to conduct a field bioassay.

6.1 Field Bioassay for Cover Crops

A field bioassay is a method of determining if herbicide residues are present in the soil at concentrations high enough to adversely affect crop growth.

Conduct the field bioassay by planting several strips of the desired cover crop across the field which has been previously treated with A23980 Herbicide. Plant the cover crop strips perpendicular to the direction of the product application. Locate the strips so that all the different field conditions are encountered, including differences in field terrain, soil texture, organic matter, pH, and drainage.

If the cover crop does not show adverse effects such as crop injury and/or stand reduction, the field can be planted to this cover crop. If injury and/or stand reduction are visible, wait two to four weeks for further herbicide degradation to occur and repeat the bioassay.

Alternatively, select a different cover crop and repeat the bioassay. Only plant cover crops that show acceptable tolerance in the field bioassay.

7.0 RESTRICTIONS AND PRECAUTIONS

7.1 Use Restrictions

- DO NOT sell, use or distribute this product in Nassau and Suffolk Counties in the State of New York.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply by air.
- **DO NOT** contaminate irrigation water used for crops or water used for domestic purposes.
- **DO NOT** use flood irrigation to apply, activate, or incorporate this product.

7.2 Use Precautions

- Avoid making applications under conditions which favor runoff or wind erosion of soil containing this product to non-target areas.
- To prevent off-site movement due to runoff or wind erosion:
 - Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
 - Avoid making applications to impervious substrates, such as paved or highly compacted surfaces.
 - Avoid use of tail water 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.
- Applied according to directions and under normal growing conditions, A23980 Herbicide
 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 weaken crop seedlings. A23980
 Herbicide used under these conditions could result in crop injury.

7.3 Mandatory Spray Drift Management

Ground Boom Applications

- Do not release spray at a height greater 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 10 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).

- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

7.4 SPRAY DRIFT ADVISORIES

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

7.4.1 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.

7.4.2 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. Ensure nozzles are producing the intended spray pattern, lowering pressure and addition of drift reduction agents may alter spray pattern.
- **Spray Nozzle** Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

7.4.3 Boom Height – Ground Boom

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

7.4.4 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.

7.4.5 Temperature And Humidity

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

7.4.6 Temperature Inversions

- Drift potential is high during a temperature inversion.
- Temperature inversions are characterized by increasing temperatures 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 the movement of smoke from a ground source or an aircraft smoke generator.
- Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
- Avoid applications during temperature inversions.

7.4.7 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.

7.4.8 Boomless Ground Applications

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

7.4.9 Buffer Zone

Leave a 25-foot buffer downwind of the application to avoid drift to non-target areas.

7.4.10 Windblown Soil Particles

- A23980 Herbicide has the potential to move off-site due to wind erosion.
- Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content.
- Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns.
- Avoid applying A23980 Herbicide if prevailing local conditions may be expected to result in off-site movement.

8.0 WEEDS CONTROLLED OR PARTIALLY CONTROLLED BY A23980 HERBICIDE

A23980 Herbicide applied as directed in this label will control or suppress the weeds listed in **Sections 8.1** and **8.2**. Additional weeds may be controlled with tank mixes. See **Section 9.1.2** for specified tank mix combinations. Always consult the tank mix product labels for specific rates and use directions.

PARTIAL WEED CONTROL

Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor or consistent control at a level below that generally considered acceptable for commercial weed control.

8.1 Weeds Controlled or Partially Controlled Preemergence by A23980 Herbicide

Common Name	Scientific Name	Weed Rating
Broadleaf Weeds		
Amaranth, Palmer	Amaranthus palmeri	С
Amaranth, Powell	Amaranthus powellii	С
Buckwheat, wild	Fallopia convolvulus	С
Carpetweed	Mollugo verticillata	С
Chickweed, Common	Stellaria media	С
Chickweed, Mouseear	Cerastium Fontanum	С
Cocklebur, common	Xanthium strumarium	С
Fleabane, hairy	Erigeron bonariensis	PC
Horseweed (marestail)	Erigeron canadensis	С
Jimsonweed	Datura stramonium	С
Henbit	Lamium amplexicaule	С
Kochia	Bassia scoparia	С
Ladysthumb smartweed	Persicaria maculosa	С
Lambsquarters, common	Chenopodium album	С
Mallow, Venice	Hibiscus trionum	С
Morningglory, ivyleaf/entireleaf	Ipomoea hederacea	С
Morningglory, tall	Ipomoea purpurea	С
Morningglory, pitted	Ipomoea lacunosa	С
Mustard, wild	Sinapis arvensis	С
Nightshade, black	Solanum nigrum	С
Nightshade, Eastern black	Solanum ptychanthum	С
Nightshade, hairy	Solanum physalifolium	С
Pigweed, redroot	Amaranthus retroflexus	С
Pigweed, smooth	Amaranthus hybridus	С
Puncturevine	Tribulus terrestris	PC
Purslane, common	Portulaca oleracea	С
Purslane, pink	Portulaca pilosa	С
Pusley, Florida	Richardia scabra	С
Ragweed, common	Ambrosia artemisiifolia	С
Ragweed, giant	Ambrosia trifida	С
Sicklepod	Senna obtusifolia	С
Shepherdspurse	Capsella bursa-pastoris	С
Sida, prickly	Sida spinosa	С

Common Name	Scientific Name	Weed Rating
Smartweed, Pennsylvania	Persicaria pensylvanica	С
Sunflower, common	Helianthus annuus	С
Thistle, Russian	Salsola tragus	С
Velvetleaf	Abutilon theophrasti	С
Waterhemp	Amaranthus tuberculatus	С
Grass Weeds	<u> </u>	
Barley, hare	Hordeum murinum	С
Barnyardgrass	Echinochloa crus-galli	С
Bluegrass, annual	Poa annua	С
Brome, downy	Bromus tectorum	PC
Brome, Japanese	Bromus japonicus	PC
Crabgrass, large	Digitaria sanguinalis	С
Crabgrass, smooth	Digitaria ischaemum	С
Canarygrass	Phalaris canariensis	С
Cheat	Bromus secalinus	PC
Crowfootgrass	Dactyloctenium aegyptium	С
Cupgrass, prairie	Eriochloa contracta	PC
Cupgrass, Southwestern	Eriochloa acuminata	С
Cupgrass, woolly	Eriochloa villosa	PC
Foxtail, giant	Setaria faberi	С
Foxtail, giant green	Setaria viridis	С
Foxtail, green	Setaria viridis	С
Foxtail, yellow	Setaria pumila	С
Goosegrass	Eleusine indica	С
Johnsongrass, seedling	Sorghum halepense	С
Millet, foxtail	Setaria italica	С
Millet, Texas	Urochloa texana	PC
Millet, wild-proso	Panicum miliaceum	PC
Oat, wild	Avena fatua	PC
Panicum, fall	Panicum dichotomiflorum	С
Rice, red	Oryza sativa	С
Ryegrass, Italian	Lolium perenne ssp multiflorum	С
Ryegrass rigid	Lolium rigidum	С
Sandbur, field	Cenchrus spinifex	PC
Sandbur, longspine	Cenchrus longispinus	PC
Shattercane	Sorghum bicolor	PC
Signalgrass, broadleaf	Urochloa platyphylla	С
Signalgrass, browntop	Urochloa fusca	С
Sprangletop, red	Dinebra panicea	С
Stinkgrass	Eragrostis cilianensis	С
Witchgrass	Panicum capillare	С

Common Name	Scientific Name	Weed Rating	
Sedges			
Nutsedge, yellow	Cyperus esculentus	С	

- C= Control, PC=Partial Control
- Tank mix A23980 Herbicide with [atrazine][, simazine] [or metribuzin] to provide increased control or increased consistency of control of wild buckwheat, Russian thistle, common cocklebur, annual morningglory species, kochia, Pennsylvania smartweed, sunflower, giant ragweed and broadleaf signalgrass. Refer to Section 9.1.2
- If irrigation or a significant rainfall does not occur within 7 days after a preplant or preemergence application, weed control may be decreased. If irrigation is available, apply ½ to 1 inch of water. If irrigation is not available, a uniform shallow cultivation is advised as soon as weeds emerge or apply an appropriately labeled herbicide to control emerged weeds.
- Should weeds develop after application, a shallow cultivation or rotary hoeing will generally result in improved weed control. If A23980 Herbicide was incorporated, cultivate 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.

8.2 Weeds Controlled or Partially Controlled by Early Postemergence Applications of A23980 Herbicide

Common Name	Scientific Name	Weed Rating	
Broadleaf Weeds			
Amaranth, Palmer	Amaranthus palmeri	С	
Amaranth, Powell	Amaranthus powellii	С	
Buckwheat, wild	Fallopia convolvulus	С	
Buffalobur	Solanum rostratum	С	
Carpetweed	Mollugo verticillata	С	
Cocklebur, common	Xanthium strumarium	С	
Dandelion	Taraxacum officinale	PC	
Galinsoga, smallflower	Galinsoga parviflora	С	
Horsenettle	Solanum carolinense	С	
Horseweed (marestail)	Erigeron canadensis	С	
Jimsonweed	Datura stramonium	С	
Kochia	Bassia scoparia	PC	
Ladysthumb smartweed	Persicaria maculosa	С	
Lambsquarters, common	Chenopodium album	С	
Mallow, Venice	Hibiscus trionum	С	
Morningglory, ivyleaf/entireleaf	Ipomoea hederacea	С	
Morningglory, tall	Ipomoea purpurea	С	
Mustard, wild	Sinapis arvensis	С	
Nightshade, black	Solanum nigrum	С	
Nightshade, Eastern black	Solanum ptycanthum	С	
Nightshade, hairy	Solanum physalifolium	С	
Pigweed, redroot	Amaranthus retroflexus	С	
Pigweed, smooth	Amaranthus hybridus	С	
Pokeweed, common	Phytolacca americana	С	
Potatoes, volunteer	Solanum tuberosum	С	
Puncturevine	Tribulus terrestris	PC	
Purslane, pink	Portulaca pilosa	С	
Ragweed, common	Ambrosia artemisiifolia	С	
Ragweed, giant	Ambrosia trifida	С	
Russian thistle	Salsola tragus	PC	

Common Name	Scientific Name	Weed Rating		
Sicklepod	Senna obtusifolia	С		
Sida, prickly	Sida spinosa	PC		
Smartweed, Pennsylvania	Persicaria pensylvanica	С		
Thistle, Canada	Cirsium arvense	PC		
Velvetleaf	Abutilon theophrasti	С		
Waterhemp	Amaranthus tuberculatus	С		
Grass Weeds				
Barnyardgrass	Echinochloa crus-galli	PC		
Crabgrass, large	Digitaria sanguinalis	С		
Foxtail, giant	Setaria faberii	PC		
Signalgrass, broadleaf	Urochloa platyphylla	PC		
Sedges	Sedges			
Nutsedge, yellow	Cyperus esculentus	PC		

- C= Control, PC=Partial Control
- Tank mix A23980 Herbicide with atrazine to provide increased postemergence activity of broadleaf weeds. Refer to Section 9.1.2
- Apply to Russian thistle, barnyardgrass, large crabgrass, giant foxtail, and broadleaf signalgrass before weeds exceed 2 inches in height.
- When weeds are stressed or not actively growing due to drought, heat, lack of fertility, flooding, or prolonged cool temperatures, postemergence control can be reduced or delayed.
- A23980 Herbicide applied early postemergence will provide control or partial control of small emerged broadleaf weeds (less than 3 inches) but will not provide consistent or effective control of weeds identified as resistant to postemergence HPPD inhibitors.

9.0 CROP USE DIRECTIONS

SOIL TEXTURES

Where rates are based on coarse, medium, or fine textured soils, soil textural classes are categorized as follows:

Coarse	Medium	Fine
Loamy sand Sand Sandy loam	Loam Sandy Clay Sandy Clay Loam Silt Silt loam	Clay Clay loam Silty clay Silty clay loam

APPLICATION RATE INFORMATION

A23980 Herbicide contains 0.075 lb bicyclopyrone, 0.31 lb mesotrione, 0.15 lb pyroxasulfone and 2.69 lb S-metolachlor per gallon. The amount of each active ingredient based upon the product application rate is presented in the following application rate table:

A23980 Herbicide Application Rate Conversion Table				
Product Bicyclopyrone Mesotrione Pyroxasulfone S-metolachlor (qt/A) (lb ai/A) (lb ai/A) (lb ai/A) (lb ai/A)				S-metolachlor (lb ai/A)
2.4	0.045	0.186	0.09	1.61
2.1	0.039	0.163	0.08	1.41

1.8	0.034	0.140	0.07	1.21
1.7	0.032	0.132	0.06	1.14
1.2	0.023	0.093	0.05	0.81

9.1 **Corn**

9.1.1 Preplant, Preemergence, Early Postemergence, and Split Applications

Crops (including cultivars, varieties, and/or hybrids of these)			
Field Corn Seed Corn	Sweet Corn Yellow Popcorn		
Application Timing	Rate	Use Directions	
Preplant and Preemergence	Rates based on organic matter-(OM) and <u>Soil</u> <u>Texture</u> :	Use this application method for: Field Corn, Seed Corn, Sweet Corn and Yellow Popcorn.	
	≥3.0% OM Soil Texture-(medium and fine only): 2.4 qt/A	For preplant weed control, A23980 Herbicide may be applied up to 28 days prior to planting.	
	<3.0% OM: Soil Texture-(medium and fine only): 2.1 qt/A	For preemergence surface applications, A23980 Herbicide may be applied as a broadcast or banded application.	
[For extended residual or control of heavy weed infestations, 2.4 qt/A may be applied to medium and fine textured soils with less than 3% OM.]	Refer to Section 4.4.5 for burndown additive recommendations.		

Early Postemergence

Rates based on organic matter-(**OM**) and <u>Soil</u> <u>Texture</u>:

>3.0% OM:

Soil Texture-(medium and fine only): 2.4 qt/A

<3.0% OM:

Soil Texture-(medium and fine only): 2.1 qt/A

[For extended residual or control of heavy weed infestations, 2.4 qt/A may be applied to medium and fine textured soils with less than 3% OM.]

Use this application method for: Field Corn and Seed Corn ONLY.

Not all seed corn inbreds have been screened for herbicide sensitivity. Consult with your seed provider or local extension service for any known herbicide sensitivity concerns.

This treatment may be applied up to the V8 stage of corn growth-(visible eighth leaf collar).

Use only clean water as the carrier when applying A23980 Herbicide after crop emergence.

Apply before broadleaf weeds reach 3 inches in height and labeled grasses reach 2 inches in height. A23980 Herbicide may not provide consistent control of emerged grass weeds. For control of emerged grass weeds a grass herbicide tank-mix may be required. Refer to **Section 9.1.2** for tank-mix combinations.

Refer to **Section 4.4.5** for spray additive information.

Split Application

Rates based on organic matter-(**OM**) and <u>Soil</u> Texture:

>3.0% OM:

Soil Texture-(medium and fine only): 2.4 qt/A

<3.0% OM:

Soil Texture-(medium and fine only): 2.1 qt/A

[For extended residual or control of heavy weed infestations, 2.4 qt/A may be applied to medium and fine textured soils with less than 3% OM.]

Use this application method for **Field Corn and Seed Corn ONLY**.

Apply $\frac{1}{2}$ to $\frac{2}{3}$ of the labeled rate of A23980 Herbicide prior to crop emergence followed by a second A23980 Herbicide application at $\frac{1}{3}$ to $\frac{1}{2}$ of the labeled rate as an early post application after corn emergence.

Apply the postemergence treatment before broadleaf weeds reach 3 inches in height and labeled grasses reach 2 inches in height. A23980 Herbicide may not provide consistent control of emerged grass weeds. For control of emerged grass weeds a grass herbicide tank-mix may be required. Refer to **Section 9.1.2** for tank-mix combinations

Do not make the second application within 14 days of the first application.

The total amount of A23980 Herbicide applied in the split application

		program cannot exceed 2.4 qt/A per year.
Preplant or Preemergence followed by Glyphosate	Rates based on organic matter-(<i>OM</i>) and <u>Soil</u> <u>Texture</u> : >3.0% <i>OM</i> :	Apply this program only to Field Corn designated as resistant to glyphosate.
Programs in Glyphosate Resistant Field Corn	Soil Texture-(medium and fine only): 2.1 to 2.4 qt/A	Apply A23980 Herbicide as the soil applied part of a two-pass weed control program when followed by a postemergence application of a glyphosate-based mixture.
	<3.0% OM:	Churchanata annliad alama is not an
	Soil Texture-(medium and fine only): 1.8 to 2.1 qt/A For extended residual and/or control of heavy	Glyphosate applied alone is not an effective resistance management strategy. Apply glyphosate in combination with other herbicides such that multiple effective sites of
	weed infestations, use the highest rate as indicated above by organic matter and soil	action are delivered against the target weeds.
	texture.	When used in this way, A23980 Herbicide will provide reduced competition of the weeds listed in Section 8.1 for a period of 30 or more days, thus improving the timing flexibility and effectiveness of the glyphosate-based mixture.
Preplant or Preemergence followed by	Rates based on organic matter-(OM) and <u>Soil</u> <u>Texture</u> :	Apply this program only to Field Corn designated as resistant to glufosinate.
Glufosinate	≥3.0% OM:	
Programs in Glufosinate Resistant Field	Soil Texture-(medium and fine only): 2.1 to 2.4 qt/A	Apply A23980 Herbicide as the soil applied part of a two-pass weed control program when followed by a postemergence application of a
Corn	<3.0% OM:	glufosinate based mixture.
	Soil Texture-(medium and fine only): 1.8 to 2.1 qt/A For extended residual and/or control of heavy	Glufosinate applied alone is not an effective resistance management strategy. Apply glufosinate in combination with other herbicides such that multiple effective sites of
	weed infestations, use the highest rate as indicated above by organic matter and soil texture.	action are delivered against the target weeds.
		When used in this way, A23980 Herbicide will provide reduced competition of the weeds listed in Section 8.1 for a period of 30 or more days, thus improving the timing flexibility and effectiveness of the glufosinate based mixture.

Preemergence followed by Halex® GT in Glyphosate Resistant Field Corn

Rates based on organic matter-(**OM**) and <u>Soil</u> Texture:

>3.0% OM:

 $\frac{Soil\ Texture}{\text{-(medium and fine only): 1.2 to 1.7}}{\text{qt/A}}$

<3.0% OM:

Soil Texture-(medium and fine only): 1.2 to 1.7 qt/A

For extended residual and/or control of heavy weed infestations, use the highest rate as indicated above by organic matter and soil texture.

Apply this program only to <u>Field</u> <u>Corn designated as resistant to</u> glyphosate.

Apply A23980 Herbicide as the soil applied part of a two-pass weed control program when followed by a postemergence application of a Halex GT based program.

Tank Mix Options:

- Refer to Section 9.1.2 for tank-mix options.
- This product will not provide consistent control of emerged grass weeds. For control of emerged grass weeds a grass herbicide tank mix may be required.

Resistance Management:

Refer to Section 3.1.

Precautions:

- On soils with greater than 10% organic matter, A23980 Herbicide activity may be affected resulting in reduced or poor weed control.
- If irrigation or a significant rainfall does not occur within 7 days after a preplant or preemergence application, weed control may be decreased.
- When A23980 Herbicide is used as a preemergence herbicide, and before weeds have emerged, spray adjuvants have little or no influence on performance.
- Early postemergence application may result in occasional corn leaf bleaching or burn, but this will not affect later growth or corn yield.
- Applying A23980 Herbicide postemergence to corn that has received an at-plant application of Counter® (terbufos) insecticide can result in severe corn injury.
- Temporary corn injury may occur if A23980 Herbicide is applied to emerged corn where organophosphate insecticides other than Counter were applied at planting.
- Postemergence (emerged corn) applications of any organophosphate or carbamate insecticide within 7 days before or 7 days after an A23980 Herbicide application may result in severe corn injury.

USE RESTRICTIONS

- 1) Refer to **Section 7.1** for additional product use restrictions.
- 2) **DO NOT** apply postemergence with liquid fertilizers as the carrier or severe crop injury will occur.
- 3) **DO NOT** apply to emerged yellow popcorn or sweet corn or severe crop injury may occur.
- 4) DO NOT use in the culture of white popcorn or ornamental (Indian) corn or injury may occur.
- 5) **DO NOT** use on coarse textured soils or injury may occur.
- 6) **Maximum Single Application Rate:** 2.4 qt/A/application-(0.045 lb ai/A bicyclopyrone, 0.09 lb ai/A pyroxasulfone, 0.186 lb ai/A mesotrione and 1.61 lb ai/A S-metolachlor).
- 7) Minimum Application Interval: 14 days
- 8) **Maximum Annual Rate:** 2.4 qt/A/year-(0.045 lb ai/A bicyclopyrone, 0.09 lb ai/A pyroxasulfone, 0.186 lb ai/A mesotrione and 1.61 lb ai/A S-metolachlor).
 - a. **DO NOT** exceed 0.266 lb ai/A/year of pyroxasulfone containing products.
 - b. **DO NOT** exceed 0.24 lb ai/A/year of mesotrione containing products.
 - c. **DO NOT** exceed 0.045 lb ai/A/year of bicyclopyrone containing products.

- d. **DO NOT** exceed 3.71 lb ai/A/year of S-metolachlor containing products.
- 9) **DO NOT** apply A23980 Herbicide to corn that is greater than the V8 growth stage.
- 10) **DO NOT** make more than 1 postemergence application and not more than 2 total applications of A23980 Herbicide per year.
- 11) **DO NOT** use A23980 Herbicide on any crop other than field corn, seed corn, sweet corn or yellow popcorn.
- 12) **DO NOT** graze or feed forage to livestock for 45 days after application.
- 13) Preharvest Interval (PHI): 45 days (grain, forage, sweet corn ears)

9.1.2 Tank Mix Combinations

Application	Tank-Mix Brands	Use Directions
Burndown Combinations for	Gramoxone® SL 3.0 - (paraquat)	Apply in reduced or no-till corn and before the crop has emerged to burndown weeds.
Reduced Tillage Situations	Roundup® or other glyphosate brands Liberty® or other	In these situations, an adjuvant may be added to the tank-mix. Refer to Section 4.4.5 for spray additive information.
	glufosinate brands 2,4-D Clarity® Sharpen®	For best results, apply tank mixes of A23980 Herbicide plus Gramoxone SL 3.0 to emerged weeds that are < 6 inches in height. The addition of atrazine with Gramoxone SL 3.0 plus A23980 Herbicide will improve burndown control.
		Tank mixtures with 2-4-D are allowed but must only be done with extreme care with regard to ensuring compatibility before mixing a load. 2,4-D products, and even batches, vary greatly with regard to compatibility and must be checked each time a water or carrier source, carrier temperature, product source, or tank mixture recipe is changed.
Preplant and Preemergence Applications	AAtrex® or other solo atrazine products Princep® Tricor® or other solo metribuzin products	Apply in either conventional, reduced, or no-till systems and by the same methods and at the same timings as A23980 Herbicide unless otherwise specified in the tank mix product label. Tank mix with AAtrex or Princep for improved broadleaf and grass weed control. Tank mix with atrazine to provide increased control or increased consistency of control of Russian thistle, common cocklebur, annual morningglory species, kochia, Pennsylvania smartweed sunflower and broadleaf signalgrass.
	Gramoxone SL 3.0 (paraquat) Roundup or other glyphosate brands Clarity	Add for burndown of emerged weeds. In these applications, an adjuvant may be added. Refer to Section 4.4.5 for spray additive information.
	Warrior® II with Zeon Technology Besiege®	Tank mix for control of insects.

Early Postemergence	AAtrex or other solo atrazine products Accent® Q Basis® brands Diflexx® Resolve® Q Steadfast® Q Status®	Apply in conventional, reduced or no-till systems and by the same methods and at the same timings as A23980 Herbicide unless otherwise specified in the tank mix product label. Apply before broadleaf weeds reach 3 inches in height and labeled grasses reach 2 inches in height. Refer to Section 4.4.5 for spray additive information. Improved Control of Emerged Grasses: Accent Q Basis brands Resolve Q Steadfast Q Improved Broadleaf Control and Weed Resistance Management: AAtrex or other solo atrazine products Diflexx Status
	Warrior® II with Zeon Technology Besiege	Tank mix for control of insects.
Early Postemergence in Glyphosate Resistant Field Corn	Roundup or other solo glyphosate brands	Apply A23980 for over-the-top applications in Field Corn designated as glyphosate resistant. Refer to Section 9.1.1-(Early Postemergence) for labelled uses by organic matter and soil type. Application to field corn that is not glyphosate resistant will result in crop death. To minimize weed competition with the crop, target the application of this mixture to weeds less than 3 inches in height. If the glyphosate product has a built-in adjuvant system (i.e., the product label does not ask for additional adjuvant), only spray-grade ammonium sulfate (AMS) at 8.5-17 lb/100 gal of spray solution may be added to this mixture. If the glyphosate product label calls for an adjuvant in addition to AMS, add a non-ionic surfactant (NIS) at 0.25% v/v and AMS to this spray mixture. Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to these mixtures, or crop injury may occur.
Early Postemergence in Glufosinate Resistant Field Corn	Liberty	Apply A23980 Herbicide for over-the-top applications in Field Corn designated as glufosinate resistant. Use A23980 Herbicide at 1.2 qt/A in a postemergence tankmix with Liberty. Tank-mixes of A23980 Herbicide plus Liberty may cause significant crop response under certain environmental conditions. Application to field corn that is not glufosinate resistant will result in crop death. To minimize weed competition with the crop, target the application of this mixture to weeds less than 3 inches in height.

	Ammonium sulfate (AMS) may be added as a spray adjuvant as directed on the Liberty label. However, AMS must be the only adjuvant added to this tank mixture.

Precaution:

All use precautions cited in Section 9.1.1 for A23980 Herbicide solo apply to tank mixes with A23980 Herbicide.

TANK-MIX USE RESTRICTIONS

- 1) All use restrictions cited in **Section 9.1.1** for A23980 Herbicide solo apply to tank mixes with A23980 Herbicide.
- 2) Do not make postemergence (emerged corn) applications of A23980 Herbicide in a tank mix with any organophosphate or carbamate insecticide, or severe corn injury may occur.
- 3) Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to tank mixtures with glyphosate for early postemergence application in glyphosate resistant corn or with Liberty in glufosinate resistant corn, or crop injury may occur.
- 4) For all tank mixtures, refer to individual product labels for precautionary statements, restrictions, rates, approved uses, rotational restrictions and a list of weeds controlled. Follow the most restrictive label.
- 5) When tank mixing or sequentially applying atrazine or products containing atrazine with A23980 Herbicide to corn, do not exceed an application rate of 2.0 lb ai/A for any single application and the total atrazine applied must not exceed 2.5 lb ai/A per year.

10.0 STORAGE AND DISPOSAL

STORAGE AND DISPOSAL

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

Pesticide Storage

Keep container tightly closed when not in use. Do not store near seeds, fertilizers, or food stuffs. Can be stored at temperatures as low as 14°F (-10°C). Keep away from heat and flame.

Pesticide Disposal

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 by the 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 [(equal to or less than 5 gallons)]

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and 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 a mix tank or store rinsate for later use or disposal. Drain for 10

seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Container Handling [(greater than 5 gallons)]

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 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 puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Container Handling [(greater than 5 gallons)]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the 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 approved by state and local authorities.

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

11.0 CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA 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 permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA 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 SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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12.0 APPENDIX

12.1 Tank Mix Partner and Other Referenced Products Table

Product Name	EPA Registration Number	Active Ingredient(s)
AAtrex	100-497 & 100-585	atrazine
Accent Q	352-773	nicosulfuron
Basis	352-571	rimsulfuron + thifensulfuron
Besiege	100-1402	chlorantraniliprole + lambda-cyhalothrin
Clarity	7969-137	dicamba
Counter	5481-545	terbufos
Diflexx	264-1173	dicamba
Gramoxone SL 3.0	100-1652	paraquat
Halex GT	100-1282	S-metolachlor, mesotrione + glyphosate
Liberty	264-829 & 7969-448	glufosinate
Princep	100-526 & 100-603	simazine

Resolve Q	352-777	rimsulfuron + thifensulfuron
Roundup	524-549-(multiple)	glyphosate
Sharpen	7969-278	saflufenacil
Status	7969-242	dicamba + diflufenzopyr
Steadfast Q	352-774	nicosulfuron + rimsulfuron
Tricor	70506-103	metribuzin
Warrior II with Zeon Technology	100-1295	lambda-cyhalothrin
2,4-D	1381-102-(multiple)	2,4-D

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