

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

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

(7505P) e., N.W. 100-1667 Date of Issuance:

9/14/21

NOTICE OF PESTICIDE:

X Registration
Reregistration
(under FIFRA, as amended)

Term of Issuance: Conditional

EPA Reg. Number:

Name of Pesticide Product:

A22670

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.

Continued on page 2

Signature of Approving Official:	Date:
Mindy Ondish	9/14/21
Mindy Ondish, Product Manager 23	
Herbicide Branch, Registration Division (7505P)	

- 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 Reevaluation Division: <a href="http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1">http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1</a>

- 3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one-year study is required to satisfy these data requirements. 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) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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

- Basic CSF dated 12/09/2019
- Alternate CSFs #1-2 (2370/1, 2369/1) dated 12/09/2019

If you have any questions, please contact Curtis Hildebrandt at 703-347-8198 or by email at hildebrandt.curtis@epa.gov.

Enclosure

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

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

#### A22670

#### Herbicide

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

Active Ingredient	its:
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S-metolachlor*:	30.9%
Mesotrione**:	2.94%
Bicyclopyrone***:	0.65%
Other Ingredients:	65.51%
Total:	100.0%

<sup>\*</sup>CAS No. 87392-12-9 \*\*CAS No. 104206-82-8 \*\*\*CAS No. 352010-68-5

A22670 is a ZC formulation containing 0.06 lb bicyclopyrone, 0.27 lb mesotrione and 2.81 lb S-metolachlor per gallon.

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

# **CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1667 EPA Est.	ACCEPTED
	09/14/2021
Net Contents	Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the
[Batch Code:] (For nonrefillables only.)	pesticide registered under EPA Reg. No. 100-1667

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# 1.0 FIRST AID

FIRST AID		
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>	
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.		
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**

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

## 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, natural rubber >14 mils, polyethylene, polyvinyl chloride (PVC) >14 mils, or Viton® >14 mils
- Shoes plus socks

See engineering controls for additional requirements.

## 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.
- 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 wash water or rinsate.

# 2.6.1 Groundwater Advisory

A22670 contains the active ingredients bicyclopyrone and S-metolachlor which are 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.

## 2.6.2 Surface Water Advisory

This product may impact surface water quality due to runoff of rain water. 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 weeks or months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of bicyclopyrone, mesotrione and S-metolachlor 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 Mixing/Loading/Applications Restrictions

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 may 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 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 selfcontained. 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.

## 2.6.4 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.

# 2.6.5 Reporting Ecological Incidents

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

# 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 <a href="http://www.epa.gov/espp/">http://www.epa.gov/espp/</a>, 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, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils
- Shoes and socks

# 3.0 PRODUCT INFORMATION

A22670 may be used preemergence and postemergence in the culture of field corn and seed corn. A22670 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.

A22670 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, A22670 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. A22670 used under these conditions can result in crop injury.

A22670 is a combination of the herbicides bicyclopyrone, mesotrione and s-metolachlor plus the safener benoxacor. Determine the soil type and organic matter of the soil on which the application is to be made prior to application. The use rate of A22670 is based on soil type and percent soil organic matter.

A22670 is recommended for management of the weed species listed in **Section 8.0**.

# 3.1 Weed Resistance Management

A22670 is a combination of bicyclopyrone, mesotrione and S-metolachlor herbicides.

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 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 (1-800-334-9481). 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.

A22670 contains three 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 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) (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 A22670 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 A22670 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 or coarser 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 floodjet 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 ground or crop – at least 15 inches above the crop canopy, but no more than 4 feet above the ground or crop canopy.
- 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 20 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 A22670 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 A22670 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 A22670 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 A22670 with other pesticides, fertilizers, or any other additives not specifically labelled for use with A22670 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 A22670 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 A22670 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 A22670.
  - 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 A22670 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.

To avoid mixing issues, do not add A22670 to the spray tank via in-line injection.

# 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 A22670 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 water.
- The use of crop oil concentrate (COC) may result in temporary crop injury. In severe cases, injury can persist and result in crop stunting.
- Do not use methylated seed oil (MSO) or urea ammonium nitrate (UAN) with A22670
  when applied alone to emerged corn, or when A22670 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 A22670 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

A22670 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 A22670 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 A22670 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, A22670 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 A22670 onto ammonium nitrate, potassium nitrate, or sodium nitrate either alone or in blends with other fertilizers.
- Do not impregnate A22670 onto single super phosphate or triple superphosphate fertilizers.
- Do not impregnate A22670 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 A22670 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 A22670 needed by the following formula:

$$\frac{2,000}{\text{lb of fertilizers per acre}} \quad X \qquad \frac{\text{qt/A of}}{\text{A22670}} \qquad = \qquad \frac{\text{qt of A22670}}{\text{ton of fertilizer}}$$

## 4.5.4 Pneumatic (Compressed Air) Application

- A22670 may be applied through pneumatic applicators, whether the fertilizer/herbicide mixture is blender-mixed or on-board fertilizer impregnation system.
- A22670 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 A22670 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 A22670 is applied as directed on this label, follow the crop replant/rotational intervals shown below. If A22670 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 A22670 and planting of the replant/rotational crop.

Crop	Replant/Rotational Interval
Field corn	
Seed corn	Anytime
Yellow popcorn	Arrytime
Sweet corn	
Small grain cereals including wheat, barley and rye	4 Months
Alfalfa (see rotational crops use restrictions below)	
Cotton	
Dry beans (see rotational crops use restrictions below)	
Peanuts	10 Months
Potato	10 Months
Rice	
Soybeans	
Sorghum (all types)	
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**

- **DO NOT** apply more than 3.0 qt of A22670 per year.
- The 10 month rotation to alfalfa applies only when the total amount of A22670 applied was 2.7 qt/A. If more than 2.7 qt/A was applied, the alfalfa rotational interval is 18 months.
- The 10 month rotational interval for dry beans applies only to areas west of US highway 83 in the states of Colorado and Nebraska where A22670 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 A22670 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 A22670. 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.

## 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, A22670 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. A22670 used under these conditions could result in crop injury.

# 7.3 Mandatory Spray Drift Management

## **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 select the nozzles and pressure that deliver medium or coarser droplets (ASABE S572).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

## **Boomless Ground Applications:**

- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplet size (ASABE S572) for all applications.
- Do not apply when wind speeds exceed 15 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 potential 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

- **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.

## 7.4.3 Boom Height - Ground Boom

 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 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.

## 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 Handheld Technology Applications

Take precautions to minimize spray drift.

# 8.0 WEEDS CONTROLLED OR PARTIALLY CONTROLLED BY A22670

A22670 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 A22670

		1
Common Name	Scientific Name	Weed Rating
Broadleaf Weeds		
Amaranth, Palmer	Amaranthus palmeri	С
Amaranth, Powell	Amaranthus powellii	С
Buckwheat, wild	Fallopia convolvulus	PC
Carpetweed	Mollugo verticillata	С
Cocklebur, common	Xanthium strumarium	PC
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	PC
Morningglory, tall	Ipomoea purpurea	PC
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	C
Puncturevine	Tribulus terrestris	PC
Purslane, common	Portulaca oleracea	C
Purslane, pink	Portulaca pilosa	C
Pusley, Florida	Richardia scabra	C
Ragweed, common	Ambrosia artemisiifolia	C
Ragweed, giant	Ambrosia trifida	C
Sicklepod	Senna obtusifolia	C
Sida, prickly	Sida spinosa	C
Smartweed, Pennsylvania	Persicaria pensylvanica	C
Sunflower, common	Helianthus annuus	PC
Thistle, Russian	Salsola tragus	PC
Velvetleaf	Abutilon theophrasti	C
Waterhemp	Amaranthus tuberculatus	C
Grass Weeds	ากาลเลาแนง เนอยาบนเลเนง	
Barnyardgrass	Echinochloa crus-galli	С
Crabgrass, large	Digitaria sanguinalis	C
Crowfootgrass	Digitaria sariguirialis Dactyloctenium aegyptium	C
Cupgrass, prairie	Eriochloa contracta	PC
Cupgrass, Praine Cupgrass, Southwestern	Eriochioa contracta Eriochioa acuminata	PC
10	Eriochioa acuminata Eriochioa villosa	PC PC
Cupgrass, woolly		
Foxtail, giant	Setaria faberi	С
Foxtail, giant green	Setaria viridis	С
Foxtail, green	Setaria viridis	С
Foxtail, yellow	Setaria pumila	С
Goosegrass	Eleusine indica	C
Johnsongrass, seedling	Sorghum halepense	PC

Common Name	Scientific Name	Weed Rating
Millet, foxtail	Setaria italica	С
Millet, Texas	Urochloa texana	PC
Millet, wild-proso	Panicum miliaceum	PC
Panicum, fall	Panicum dichotomiflorum	С
Rice, red	Oryza sativa	С
Ryegrass, Italian	Lolium perenne ssp multiflorum	С
Sandbur, field	Cenchrus spinifex	PC
Shattercane	Sorghum bicolor	PC
Signalgrass, broadleaf	Urochloa platyphylla	PC
Signalgrass, browntop	Urochloa fusca	С
Sprangletop, red	Dinebra panicea	С
Stinkgrass	Eragrostis cilianensis	С
Witchgrass	Panicum capillare	С
Sedges		
Nutsedge, yellow	Cyperus esculentus	PC
0 0 1 1 00 0 11 10		

- C= Control, PC=Partial Control
- 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 A22670 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 A22670

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

Common Name	Scientific Name	Weed Rating
Pigweed, redroot	Amaranthus retroflexus	С
Pigweed, smooth	Amaranthus hybridus	С
Pokeweed, common	Phytolacca americana	C
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
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	C
Grass Weeds		
Barnyardgrass	Echinochloa crus-galli	PC
Crabgrass, large	Digitaria sanguinalis	С
Foxtail, giant	Setaria faberii	PC
Signalgrass, broadleaf	Urochloa platyphylla	PC
Sedges		
Nutsedge, yellow	Cyperus esculentus	PC

- C= Control, PC=Partial Control
- 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.
- A22670 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
	Loam	Clay
Loamy sand	Sandy Clay	Clay loam
Sand	Sandy Clay Loam	Silty clay
Sandy loam	Silt	Silty clay loam
	Silt loam	

# 9.1 **Corn**

# 9.1.1 Preplant, Preemergence, Early Postemergence, and Split Applications

Crops (including cultivars, varieties, and/or hybrids of these)						
Field Corn	Sweet Corn					
Seed Corn	Yellow Popcorn					
Application Timing	Rate	Use Directions				
Preplant and Preemergence	Apply at the following rates based on soil texture and organic matter (OM):  Fine, medium and course textured soils with >3% OM: 3.0 qt/A  [3.0 qt/A = 0.045 lb ai/A bicyclopyrone + 0.2 lb ai/A mesotrione + 2.1 lb ai/A Smetolachlor]  Fine and medium textured soils with <3.0% OM: 2.5 qt/A  [2.5 qt/A = 0.038 lb ai/A bicyclopyrone + 0.17 lb ai/A mesotrione + 1.8 lb ai/A Smetolachlor]  Coarse textured soils with <3.0% OM: 2.0 qt/A  [2.0 qt/A = 0.030 lb ai/A bicyclopyrone + 0.14 lb ai/A mesotrione + 1.4 lb ai/A smetolachlor]  For extended residual or control of heavy weed infestations, 3.0 qt/A may be applied to medium and fine textures soils with <3% OM and 2.5 qt/A may be applied to coarse textured soils with <3% OM and 2.5 qt/A may be applied to coarse textured soils with <3% OM	Apply to all corn types (field corn, seed corn, sweet corn and yellow popcorn).  For preplant weed control, A22670 may be applied up to 28 days prior to planting.  For preemergence surface applications, A22670 may be applied as a broadcast or banded application.  Refer to Section 4.4.5 for burndown additive recommendations.				
Early Postemergence	Apply at the following rates based on soil texture and organic matter (OM):	Apply after corn emergence in Field Corn and Seed Corn ONLY.				
	Fine, medium and coarse textured soils with >3% OM: 3.0 qt/A	This treatment may be applied until plants reach 30 inches in height or up to the 8-leaf stage of corn growth, whichever comes first.				
		Use only clean water as the carrier when applying A22670 after crop emergence.				

[3.0 qt/A = 0.045 lb ai/A]bicyclopyrone + 0.2 lb ai/A Apply before broadleaf weeds reach 3 inches in height and labeled grasses reach mesotrione + 2.1 lb ai/A Smetolachlor1 2 inches in height. Fine and medium textured Refer to **Section 4.4.5** for spray additive soils with <3.0% OM: information. 2.5 qt/A [2.5 qt/A = 0.038 lb ai/A]bicyclopyrone + 0.17 lb ai/A mesotrione + 1.8 lb ai/A Smetolachlor1 Coarse textured soils with <3.0% OM: 2.0 qt/A [2.0 qt/A = 0.030 lb ai/A]bicyclopyrone + 0.14 lb ai/A mesotrione + 1.4 lb ai/A Smetolachlor] For extended residual or control of heavy weed infestations, 3.0 qt/A may be applied to medium and fine textures soils with <3% OM and 2.5 qt/A may be applied to coarse textures soils with <3% OM Apply at the following rates Use this application method for Field Corn Split Application and Seed Corn ONLY. based on soil texture and organic matter (OM): Apply  $\frac{1}{2}$  to  $\frac{2}{3}$  of the labeled rate of A22670 Fine. medium and course prior to crop emergence as described in the textured soils with >3% OM: preplant/preemergence section above, followed by a second A22670 application at 3.0 qt/A 1/₃ to 1/₂ of the labeled rate as an early post [3.0 qt/A = 0.045 lb ai/A]application after corn emergence. bicyclopyrone + 0.2 lb ai/A mesotrione + 2.1 lb ai/A S-Apply the postemergence treatment before metolachlor] broadleaf weeds reach 3 inches in height and labeled grasses reach 2 inches in Fine and medium textured height. soils with <3.0% OM: 2.5 qt/A Do not make the second application within 14 days of the first application. [2.5 qt/A = 0.038 lb ai/A]bicvclopyrone + 0.17 lb ai/A The total amount of A22670 applied in the mesotrione + 1.8 lb ai/A Ssplit application program cannot exceed 3.0 metolachlor] qt/A per year. Coarse textured soils with <3.0% OM: 2.0 qt/A

[2.0 qt/A = 0.030 lb ai/A bicyclopyrone + 0.14 lb ai/A mesotrione + 1.4 lb ai/A S-metolachlor]

For extended residual or control of heavy weed infestations, 3.0 qt/A may be applied to medium and fine textures soils with <3% OM and 2.5 qt/A may be applied to coarse textures soils with <3% OM

#### Preplant or Preemergence followed by Glyphosate Programs in Glyphosate Resistant Corn

Apply at the following rates based on soil texture and organic matter:

Fine, medium and course textured soils with >3% OM: 2.0 - 3.0 qt/A

[2.0 qt/A = 0.030 lb ai/A bicyclopyrone + 0.14 lb ai/A mesotrione + 1.4 lb ai/A S-metolachlor]

[3.0 qt/A = 0.045 lb ai/A bicyclopyrone + 0.2 lb ai/A mesotrione + 2.1 lb ai/A Smetolachlor]

Fine and medium textured soils with <3.0% OM: 1.67 – 2.5 qt/A

[1.67 qt/A = 0.025 lb ai/A bicyclopyrone + 0.11 lb ai/A mesotrione + 1.2 lb ai/A S-metolachlor]

[2.5 qt/A = 0.038 lb ai/A bicyclopyrone + 0.17 lb ai/A mesotrione + 1.8 lb ai/A Smetolachlor]

Coarse textured soils with <3.0% OM: 1.5 – 2.0 qt/A

[1.5 qt/A = 0.023 lb ai/A bicyclopyrone + 0.10 lb ai/A mesotrione + 1.05 lb ai/A Smetolachlor]

[2.0 qt/A = 0.030 lb ai/A bicyclopyrone + 0.14 lb ai/A mesotrione + 1.4 lb ai/A Smetolachlor] Apply this program only to corn designated as resistant to glyphosate.

Apply A22670 as the soil applied part of a two-pass weed control program when followed by a postemergence application of a glyphosate based mixture.

Glyphosate applied alone is not an effective resistance management strategy. Apply glyphosate in combination with other herbicides such that multiple effective sites of action are delivered against the target weeds.

When used in this way, A22670 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.

For extended residual or control of heavy weed infestations, 3.0 qt/A may be applied to medium and fine textures soils with <3% OM and 2.5 qt/A may be applied to coarse textures soils with <3% OM Apply at the following rates based on soil texture and organic matter: Fine, medium and course textured soils with >3% OM:

Preplant or Preemergence followed by Glufosinate Programs in Glufosinate Resistant Corn

2.0 - 3.0 qt/A

[2.0 qt/A = 0.030 lb ai/A]bicyclopyrone + 0.14 lb ai/A mesotrione + 1.4 lb ai/A Smetolachlor]

[3.0 qt/A = 0.045 lb ai/A]bicyclopyrone + 0.2 lb ai/A mesotrione + 2.1 lb ai/A Smetolachlor]

Fine and medium textured soils with <3.0% OM: 1.67 - 2.5 qt/A

[1.67 qt/A = 0.025 lb ai/A]bicyclopyrone + 0.11 lb ai/A mesotrione + 1.2 lb ai/A Smetolachlorl

[2.5 qt/A = 0.038 lb ai/A]bicvclopyrone + 0.17 lb ai/A mesotrione + 1.8 lb ai/A Smetolachlor]

Coarse textured soils with <3.0% OM: 1.5 - 2.0 qt/A

[1.5 gt/A = 0.023 lb ai/A]bicyclopyrone + 0.10 lb ai/A mesotrione + 1.05 lb ai/A Smetolachlor]

[2.0 qt/A = 0.030 lb ai/A]bicyclopyrone + 0.14 lb ai/A mesotrione + 1.4 lb ai/A Smetolachlor]

Apply this program only to corn designated as resistant to glufosinate.

Apply A22670 as the soil applied part of a two-pass weed control program when followed by a postemergence application of a glufosinate based mixture.

Glufosinate applied alone is not an effective resistance management strategy. Apply glufosinate in combination with other herbicides such that multiple effective sites of action are delivered against the target weeds.

When used in this way, A22670 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.

	For extended residual or control of heavy weed infestations, 3.0 qt/A may be applied to medium and fine textures soils with <3% OM and 2.5 qt/A may be applied to coarse textures soils with <3% OM	
Preemergence followed by Halex® GT in Glyphosate Resistant Corn	Apply at 1.5 qt/A  [1.5 qt/A = 0.023 lb ai/A bicyclopyrone + 0.10 lb ai/A mesotrione + 1.05 lb ai/A S-metolachlor]	Apply this program only to corn designated as resistant to glyphosate.  Apply A22670 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, A22670 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 A22670 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 A22670 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 A22670 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 A22670 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) Maximum Single Application Rate: 3.0 qt/A/application
- 6) Minimum Application Interval: 14 days
- 7) Maximum Annual Rate: 3.0 qt/A/year
  - a. **DO NOT** exceed 3.71 lb ai/A/year of S-metolachlor 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/application of Bicyclopyrone containing products.
- 8) **DO NOT** apply A22670 to corn that is greater than 30 inches tall or corn that is larger than the 8-leaf stage of growth.
- 9) **DO NOT** make more than 1 postemergence application and not more than 2 total applications of A22670 per year.
- 10) **DO NOT** use A22670 on any crop other than corn (field or seed), sweet corn or yellow popcorn.
- 11) **DO NOT** feed or harvest forage or sweet corn ears within 45 days after application.
- 12) Preharvest Interval (PHI):60 days

# 9.1.2 Tank Mix Combinations

Application	Tank-Mix Brands	Use Directions	
Burndown Combinations for Reduced Tillage Situations	Gramoxone® SL 3.0 - (paraquat)	Apply in reduced or no-till corn and before the crop has emerged to burndown weeds.	
	Roundup® or other glyphosate brands	In these situations, an adjuvant may be added to the tank-mix. Refer to <b>Section 4.4.5</b> for spray additive	
	Liberty® or other glufosinate brands	information.	
	2,4-D Banvel®	For best results, apply tank mixes of A22670 plus Gramoxone SL 3.0 to emerged weeds that are < 6 inches in height.	
	Clarity®	Tank mixtures with 2-4-D are allowed, but must only be	
	ŕ	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, water or carrier temperature, product source, or tank mixture recipe is changed.	
Preplant and Preemergence Applications	AAtrex® or other solo atrazine products Princep®	Apply in either conventional, reduced, or no-till systems and by the same methods and at the same timings as A22670 unless otherwise specified in the tank mix product label.	
	Tricor® or other solo metribuzin products	Tank mix with AAtrex or Princep for improved broadleaf and grass weed control.	
		Tank mix with atrazine for common cocklebur, entireleaf morningglory, ivyleaf morningglory, and broadleaf signalgrass.	
		Tank mix with Tricor for improved broadleaf weed control.	
	Banvel	Add for burndown of emerged weeds.	
	Clarity	In these applications, an adjuvant may be added. Refer	
	Gramoxone SL 3.0 (paraquat)	to <b>Section 4.4.5</b> for spray additive information.	
	Roundup or other glyphosate brands		
	Warrior® brands	Tank mix for control of insects.	
	Besiege®		
Early Postemergence	AAtrex or other solo atrazine products	Apply in conventional, reduced or no-till systems and by the same methods and at the same timings as A22670	
1 octomorgenee	Accent® Q	unless otherwise specified in the tank mix product label.	
	Basis® Blend	Apply before broadleaf weeds reach 3 inches in height	
	Diflexx®	and labeled grasses reach 2 inches in height.	
	Peak®	Refer to <b>Section 4.4.5</b> for spray additive information.	
	Resolve® Q	Improved Control of Emerged Grasses:	
	Steadfast® Q	Accent Q Basis brands	

	Status®	Resolve Q Steadfast Q  Improved Broadleaf Control and Weed Resistance Management:  AAtrex or other solo atrazine products Diflexx Peak Status
	Besiege Warrior brands	Control of Insects Besiege Warrior brands
Early Postemergence in Glyphosate Resistant Corn	Roundup or other solo glyphosate brands	Apply A22670 at a rate of 1.5-3.0 qt/A over-the-top in field corn designated as glyphosate resistant. Application to 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 Corn	Liberty	Apply A22670 at a rate of 1.5-2.0 qt/A to over-the-top in field corn designated as glufosinate resistant. Application to 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 A22670 solo apply to tank mixes with A22670.

#### TANK-MIX USE RESTRICTIONS

- 1) All use restrictions cited in **Section 9.1.1** for A22670 solo apply to tank mixes with A22670.
- 2) Do not make postemergence (emerged corn) applications of A22670 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 A22670 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 -10°F. Keep away from heat and flame.

#### **Pesticide Disposal**

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

## Container Handling [equal to or 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 a 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 a 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 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 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 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

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# 12.0 APPENDIX

## 12.1 Tank Mix Partner Table

Product Name	EPA Registration Number	Active Ingredient(s)
Gramoxone SL 3.0	100-1652	paraquat
Roundup	524-549-(multiple)	glyphosate
Liberty	264-829 & 7969-448	glufosinate
AAtrex	100-497 & 100-585	atrazine
Princep	100-526 & 100-603	simazine
Warrior II with Zeon Technology	100-1295	lambda-cyhalthrin
Besiege	100-1402	chlorantraniliprole + lambda- cyhalothrin
Accent Q	352-773	nicosulfuron
Basis Blend	352-854	rimsulfuron + thifensulfuron
Diflexx	264-1173	dicamba
Peak	100-763	prosulfuron
Resolve Q	352-777	rimsulfuron + thifensulfuron
Steadfast Q	352-774	nicosulfuron + rimsulfuron
Status	7969-242	dicamba + diflufenzopyr

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