



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

January 24, 2023

Rachel Hardie  
Regulatory Product Manager, Herbicides  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, NC 27419

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from the Interim Decisions for S-Metolachlor and Mesotrione and the National Marine Fisheries Services' (NMFS) Biological Opinion on the Effects of S-Metolachlor on Pacific Salmonids  
*Product Name:* HALEX GT HERBICIDE  
*EPA Registration Number:* 100-1282  
*Application Dates:* 6/11/2021, 9/3/2021 and 3/29/2022  
*Decision Numbers:* 576418, 582922 and 589141

Dear Rachel Hardie:

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

This letter also addresses the label mitigation resulting from the NMFS' Biological Opinion on the effects of S-Metolachlor on Pacific salmonids. The Agency has concluded that your submission is also acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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

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

If you have any questions about this letter, please contact Anna Senninger at [senninger.anna@epa.gov](mailto:senninger.anna@epa.gov).

Sincerely,



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

Enclosure

[Master label]

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

<b>S-METOLACHLOR</b>	<b>GROUP</b>	<b>15</b>	<b>HERBICIDE</b>
<b>GLYPHOSATE</b>	<b>GROUP</b>	<b>9</b>	<b>HERBICIDE</b>
<b>MESOTRIONE</b>	<b>GROUP</b>	<b>27</b>	<b>HERBICIDE</b>

Halex® GT Herbicide

A Postemergence Herbicide for Weed Control in Glyphosate Tolerant (GT) Field Corn and Preemergence Weed Control in Grain Sorghum

Active Ingredients:

S-metolachlor*	20.50%
Glyphosate, N-(phosphonomethyl) glycine.....	20.50%
Mesotrione** .....	2.05%
<hr/>	
Other Ingredients:	56.95%
Total:	100.00%

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

\*CAS No. 87392-12-9

\*\*CAS No. 104206-82-8

**KEEP OUT OF REACH OF CHILDREN.**

## **CAUTION**

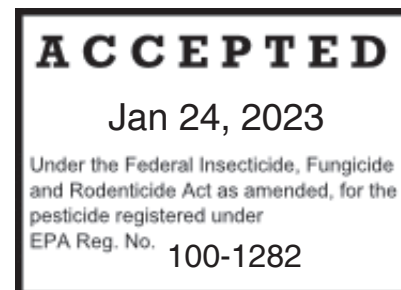
See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1282

EPA Est. No.

---

Net Contents



<b>FIRST AID</b>	
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>If in eyes</b>	<ul style="list-style-type: none"><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>
<b>If swallowed</b>	<ul style="list-style-type: none"><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 the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><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>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOTLINE NUMBER</b> For 24-Hour Medical Emergency Assistance (Human or Animal), or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) Call <b>1-800-888-8372</b>	

---

## **PRECAUTIONARY STATEMENTS**

---

### **Hazards to Humans and Domestic Animals**

#### **CAUTION**

Harmful if inhaled. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with eyes or clothing. This product may cause skin sensitization reactions in some people.

## Personal Protective Equipment (PPE)

### Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of 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.
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

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

## Engineering Control Statements

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)). When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

### User Safety Recommendations

#### Users should:

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

## GROUNDWATER ADVISORY

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

## **SURFACE WATER ADVISORY**

This product may impact surface water through ground spray drift and due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several 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 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. Sound erosion control practices will reduce this product's contribution to surface water contamination.

## **NON-TARGET ORGANISM ADVISORY**

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

## **Reporting Ecological Incidents**

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

## **Mixing and Loading Instructions**

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

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

This product may not be mixed/loaded or used within 50 ft of wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 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 rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to

completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

### **Physical and Chemical Hazards**

Do not use or store near heat or open flame.

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

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

## **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.

### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, natural rubber  $\geq$  14 mils, polyethylene, polyvinyl chloride (PVC)  $\geq$  14 mils, or Viton  $\geq$  14 mils.
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

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

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

---

## **PRODUCT INFORMATION**

---

Halex® GT Herbicide is a systemic, postemergence herbicide for contact followed by residual control of weeds in Glyphosate Tolerant (GT) field corn. Halex GT is also a preemergence herbicide for control of weeds in grain sorghum. Halex GT is a combination of the herbicides glyphosate, mesotrione and S-metolachlor.



## **WEED RESISTANCE MANAGEMENT**

To reduce the risk of weeds developing resistance to HPPD inhibitors, do not apply other postemergence HPPD inhibitor herbicides (e.g., Callisto, Impact®, or Laudis®) in the same season or on the same field where Halex GT Herbicide has been applied. 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.

Halex GT Herbicide contains three herbicide active ingredients and three modes of action and can be an effective component of a weed resistance management strategy.

### **Triazine and Acetolactate Synthase (ALS) Resistance**

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

### **Glyphosate Resistance**

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

Glyphosate is one of the active ingredients in Halex GT Herbicide, so glyphosate resistance management is critical. Halex GT Herbicide will control broadleaf weeds that are showing increased tolerance or resistance to glyphosate. When applying Halex GT Herbicide to broadleaf weeds that are suspected or known to be resistant to glyphosate, tank mix with atrazine or dicamba to provide an additional mode of action. Follow all label directions and restrictions for the atrazine product tank mixed with Halex GT Herbicide.

Halex GT Herbicide will not provide control of emerged grasses that are resistant to glyphosate. For control of glyphosate resistant grass weeds, a weed control program that includes a preemergence grass herbicide will reduce the dependence on glyphosate.

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

- a. In Roundup Ready (RR™) corn and RR soybean systems do not use more than two applications of a glyphosate based herbicide over a two-year period. Diversify with alternative mode of action herbicides and/or cultural practices.
- b. In RR cotton, a maximum of three applications of a glyphosate based herbicide may be used if employing in-crop cultivation and/or residual herbicides.
- c. Use alternative (non-glyphosate) burndown and/or residual herbicides for RR crops likely to require more than one application of glyphosate.
- d. To help manage RR resistant volunteers rotate RR crops with conventional or non-RR crops.

## **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 full 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 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; and
  - 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.

Following a postemergence application of Halex GT Herbicide, susceptible weeds take up the herbicide through the treated foliage and cease growth soon after application. Halex GT Herbicide is also absorbed through the soil and/or by the foliage of emerged weeds. Complete death of the weeds may take up to 2 weeks.

When applied to glyphosate-tolerant corn, Halex GT Herbicide provides 3-4 weeks of residual control of newly emerging susceptible weeds (see Table 1) through root and shoot absorption.

Do not apply under conditions which favor runoff or wind erosion of soil containing this product to nontarget areas. To prevent off-site movement due to runoff or wind erosion, avoid treating powdery dry or light soils when conditions are favorable for wind erosion. Under these conditions, ensure that the soil surface is settled by rainfall or irrigation first. Do not apply to impervious substrates such as paved or highly compacted surfaces. Do not use tailwater from the first flood or furrow irrigation of treated fields to treat nontarget crops unless at least ½ inch of rainfall has occurred between application

and the first irrigation.

## USE RESTRICTIONS

1. **Do not** cultivate corn within 7 days before or after a Halex GT Herbicide application as weed control from the Halex GT Herbicide application may be reduced.
2. **Do not** apply Halex GT Herbicide through any type of irrigation system.
3. **Do not** apply Halex GT Herbicide with suspension fertilizers.
4. **Do not apply** Halex GT Herbicide to glyphosate-tolerant corn with urea ammonium nitrate (UAN) as the carrier.
5. **Do not** apply more than 4 pt of Halex GT Herbicide per acre per year to glyphosate-tolerant corn.
6. Do not apply more than 6 pt of Halex GT Herbicide per acre per year to grain sorghum.
7. Do not apply Halex GT Herbicide to ground that has been or will be treated with Callisto® in the same season.

## USE PRECAUTIONS

1. Halex GT Herbicide can be applied postemergence to Glyphosate Tolerant (e.g. Roundup Ready®, Agrisure™ GT) corn only. An application of Halex GT Herbicide to a corn hybrid that is not Glyphosate Tolerant will result in crop death.
2. When weeds are stressed due to drought, heat, lack of fertility, flooding, or prolonged cool temperatures, control can be reduced or delayed since the weeds are not actively growing. Weed escapes or re-growth may occur when application is made under prolonged stress conditions. Optimum weed control will be obtained if an application of Halex GT Herbicide is made following label directions when weeds are actively growing.
3. If an activating rain (0.25 inches) is not received within 7-10 days after the postemergence application, residual weed control will be reduced.
4. Avoid drift onto adjacent crops. Severe damage or destruction may be caused by contact of Halex GT Herbicide to any vegetation (including leaves, green stems, exposed non-woody roots, or fruit) of crops, trees, and other desirable plants to which treatment is not intended.

5. Severe corn injury resulting in yield loss may occur if Halex GT Herbicide is applied postemergence to corn crops that were treated with Counter®, Lorsban® or other organophosphate containing soil insecticides.
6. Severe corn injury resulting in yield loss may occur if Halex GT Herbicide is applied foliar postemergence in a tank mix with any organophosphate or carbamate insecticide.
7. Severe corn injury resulting in yield loss may occur if any foliar organophosphate or carbamate insecticide is applied postemergence within 7 days before or 7 days after Halex GT Herbicide application.
8. Severe corn injury may occur if Halex GT Herbicide is applied postemergence in a tank mix with emulsifiable concentrate (EC formulation) products.
9. Halex GT Herbicide may be applied with pyrethroid insecticides such as Warrior®.
10. Circulation before dispensing is required.
11. To avoid contamination, ensure that the spray system is thoroughly cleaned with water and a commercial tank cleaner before and after each use.

## WEEDS CONTROLLED

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

**Table 1. Weeds Controlled with Postemergence Applications of Halex GT Herbicide**

Common Name	Weed Type <sup>1</sup>	Scientific Name	3.6-4.0 pt/A plus NIS plus AMS	3.6-4.0 pt/A plus AAtrex 4L (or equivalent) plus NIS plus AMS
			Apply to weeds less than 4" in height or length	Apply to weeds 4-10" in height or length
Amaranth, palmer	B	<i>Amaranthus palmeri</i>	C <sup>2,3</sup>	C
Amaranth, Powell	B	<i>Amaranthus powellii</i>	C	C
Amaranth, spiny	B	<i>Amaranthus spinosus</i>	C	C
Anoda, spurred	B	<i>Anoda cristata</i>	C	C
Atriplex	B	<i>Chenopodium orach</i>	C	C

Common Name	Weed Type <sup>1</sup>	Scientific Name	3.6-4.0 pt/A plus NIS plus AMS	3.6-4.0 pt/A plus AAtrex 4L (or equivalent) plus NIS plus AMS
			Apply to weeds less than 4" in height or length	Apply to weeds 4-10" in height or length
Barnyardgrass	G	<i>Echinochloa crus-galli</i>	C	C
Beggarweed, Florida	B	<i>Desmodium tortuosum</i>	C	C
Bluegrass, annual	G	<i>Poa annua</i>	C	C
Brome, downy	G	<i>Bromus tectorum</i>	C	C
Buckwheat, wild	B	<i>Polygonum convolvulus</i>	C <sup>4</sup>	PC <sup>2</sup>
Buffalobur	B	<i>Solanum rostratum</i>	C	C
Burcucumber	B	<i>Sicyos angulatus</i>	C	PC
Carpetweed	B	<i>Mollugo verticillata</i>	C	C
Cheat	G	<i>Bromus secalinus</i>	C	C
Chickweed, common	B	<i>Stellaria media</i>	C	C
Chickweed, mouseear	B	<i>Cerastium vulgatum</i>	C	C
Cocklebur, common	B	<i>Xanthium strumarium</i>	C	C
Copperleaf, hophornbeam	B	<i>Acalypha ostryifolia</i>	C	C
Corn, volunteer (non-GT)	G	<i>Zea mays</i>	C <sup>5</sup>	C <sup>5</sup>
Crabgrass, large	G	<i>Digitaria sanguinalis</i>	C	C
Crabgrass, smooth	G	<i>Digitaria ischaemum</i>	C	C
Crotalaria, showy	B	<i>Crotalaria spectabilis</i>	C	C
Croton, tropic	B	<i>Croton glandulosus</i>	C	C
Crowfootgrass	G	<i>Dactyloctenium aegyptium</i>	C	C
Cupgrass, woolly	G	<i>Eriochloa villosa</i>	C <sup>6</sup>	C <sup>6</sup>
Dandelion, common	B	<i>Taraxacum officinale</i>	C <sup>7</sup>	PC
Dock, curly	B	<i>Rumex crispus</i>	C	PC
Eclipta	B	<i>Eclipta prostrata</i>	C	C
Foxtail, bristly	G	<i>Setaria verticillata</i>	C	C
Foxtail, giant	G	<i>Setaria faberii</i>	C	C
Foxtail, green	G	<i>Setaria viridis</i>	C	C
Foxtail, yellow	G	<i>Setaria pumila</i>	C	C
Galinsoga	B	<i>Galinsoga parviflora</i>	C	C
Goosegrass	G	<i>Eleusine indica</i>	C	C
Groundcherry, smooth	B	<i>Physalis longifolia</i>	C	PC
Groundsel, common	B	<i>Senecio vulgaris</i>	C	C
Hemp	B	<i>Cannabis sativa</i>	C	C
Henbit	B	<i>Lamium amplexicaule</i>	C	C
Horseweed (maretail)	B	<i>Conyza canadensis</i>	C <sup>3</sup>	C
Jimsonweed	B	<i>Datura stramonium</i>	C	C
Johnsongrass	B	<i>Sorghum halepense</i>	C	C
Knotweed, prostrate	B	<i>Polygonum aviculare</i>	C	C
Kochia	B	<i>Kochia scoparia</i>	C <sup>8</sup>	PC
Lambsquarters, common	B	<i>Chenopodium album</i>	C	C
Mallow, Venice	B	<i>Hibiscus trionum</i>	C	C
Marshelder	B	<i>Iva xanthifolia</i>	C	C
Millet, wild-proso	G	<i>Panicum miliaceum</i>	C	C
Morningglory, entireleaf	B	<i>Ipomoea hederacea</i>	C <sup>4</sup>	PC

Common Name	Weed Type <sup>1</sup>	Scientific Name	3.6-4.0 pt/A plus NIS plus AMS	3.6-4.0 pt/A plus AAtrex 4L (or equivalent) plus NIS plus AMS
			Apply to weeds less than 4" in height or length	Apply to weeds 4-10" in height or length
Morningglory, ivyleaf	B	<i>Ipomoea hederacea</i>	C <sup>4</sup>	PC
Morningglory, pitted	B	<i>Ipomoea lacunose</i>	C <sup>4</sup>	PC
Morningglory, tall	B	<i>Ipomoea purpurea</i>	C <sup>4</sup>	PC
Mustard, wild	B	<i>Brassica kaber</i>	C	C
Nightshade, black	B	<i>Solanum nigrum</i>	C	C
Nightshade, Eastern black	B	<i>Solanum ptycanthum</i>	C	C
Nightshade, hairy	B	<i>Solanum sarrachoides</i>	C	C
Nutsedge, yellow	S	<i>Cyperus esculentus</i>	C	PC
Nutsedge, purple	S	<i>Cyperus rotundus</i>	C	PC
Oat, wild	G	<i>Avena fatua</i>	C	C
Panicum, fall	G	<i>Panicum dichotomiflorum</i>	C	C
Panicum, Texas	G	<i>Panicum texanum</i>	C	C
Pennycress, field	B	<i>Thlaspi arvense</i>	C	C
Pigweed, prostrate	B	<i>Amaranthus blitoides</i>	C	C
Pigweed, redroot	B	<i>Amaranthus retroflexus</i>	C	C
Pigweed, smooth	B	<i>Amaranthus hybridus</i>	C	C
Pigweed, tumble	B	<i>Amaranthus albus</i>	C	C
Pokeweed, common	B	<i>Phytolacca americana</i>	C	C
Potato, volunteer	B	<i>Solanum spp.</i>	C	C
Puncturevine	B	<i>Tribulus terrestris</i>	C	PC
Purslane, common	B	<i>Portulaca oleracea</i>	C	C
Pusley, Florida	B	<i>Richardia scabra</i>	C	PC
Ragweed, common	B	<i>Ambrosia artemisiifolia</i>	C <sup>3</sup>	C
Ragweed, giant	B	<i>Ambrosia trifida</i>	C <sup>3</sup>	C
Sandbur, field	G	<i>Cenchrus incertus</i>	C	C
Sandbur, southern	G	<i>Cenchrus echinatus</i>	C	C
Senna, coffee	B	<i>Senna occidentalis</i>	C	C
Sesbania, hemp	B	<i>Sesbania exaltata</i>	C	C
Shattercane	G	<i>Sorghum bicolor</i>	C	C
Shepherdspurse	B	<i>Capsella bursa-pastoris</i>	C	C
Sicklepod	B	<i>Senna obtusifolia</i>	C <sup>6</sup>	C <sup>6</sup>
Sida, prickly (teaweed)	B	<i>Sida spinosa</i>	C	PC
Signalgrass, broadleaf	G	<i>Brachiaria platyphylla</i>	C	C
Smartweed, ladysthumb	B	<i>Polygonum persicaria</i>	C	C
Smartweed, pale	B	<i>Polygonum lapathifolium</i>	C	C
Smartweed, Pennsylvania	B	<i>Polygonum pensylvanicum</i>	C	C
Sorghum, grain (milo)	G	<i>Sorghum bicolor</i>	C	C
Spurge, prostrate	B	<i>Euphorbia humistrata</i>	C	C
Spurge, spotted	B	<i>Euphorbia maculata</i>	C	C
Starbur, bristly	G	<i>Ancanthosporium hispidum</i>	C	C
Stinkgrass	G	<i>Eragrostis cilianensis</i>	C	C
Sunflower, common	B	<i>Helianthus annuus</i>	C	C

Common Name	Weed Type <sup>1</sup>	Scientific Name	3.6-4.0 pt/A plus NIS plus AMS	3.6-4.0 pt/A plus AAtrex 4L (or equivalent) plus NIS plus AMS
			Apply to weeds less than 4" in height or length	Apply to weeds 4-10" in height or length
Thistle, Canada	B	<i>Cirsium arvense</i>	C	C
Thistle, Russian	B	<i>Salsola iberica</i>	C <sup>8</sup>	C
Velvetleaf	B	<i>Abutilon theophrasti</i>	C	C
Waterhemp, common	B	<i>Amaranthus rudis</i>	C <sup>3</sup>	C
Waterhemp, tall	B	<i>Amaranthus tuberculatus</i>	C <sup>3</sup>	C
Witchgrass	G	<i>Panicum capillare</i>	C	C

<sup>1</sup>B = Broadleaf, G = Grass, S = Sedge

<sup>2</sup>C = Control, PC = Partial Control

<sup>3</sup>For glyphosate resistant weeds such as common ragweed, giant ragweed, horseweed (marestalk), Palmer amaranth and waterhemp, the addition of atrazine will improve control

<sup>4</sup>Maximum runner length of <4"

<sup>5</sup>Will not control Glyphosate-Tolerant volunteer corn

<sup>6</sup>Will not provide residual control

<sup>7</sup>Plant diameter of <4" for control

<sup>8</sup>Control may be reduced at the button stage or when less than 2 inches in height

## ROTATIONAL CROPS

If the corn or grain sorghum crop is lost or destroyed following an application of Halex GT Herbicide, follow the rotational guidelines below. If Halex GT Herbicide is applied sequentially or in a tank mix with other herbicides, refer to the rotational guidelines on all other herbicide labels and follow the most restrictive guidelines.

**Table 2. Time Interval Between Halex GT Application and Replanting or Planting of Rotational Crop**

Crop	Replant/Rotational Interval
Corn (all types) Sweet sorghum Grain sorghum (Concep® treated only)	Anytime
Barley Oats Rye Wheat	4 ½ months
Alfalfa Asparagus Cotton Kentucky bluegrass grown for seed Peanuts Peas <sup>1,2</sup>	10 Months



Crop	Replant/Rotational Interval
Potato Rhubarb Rice Ryegrass (perennial and annual) grown for seed Snap beans <sup>1,2</sup> Soybeans Sunflowers Tall fescue grown for seed Tobacco	
Canola Flax	12 Months
All other rotational crops	18 Months

<sup>1</sup>Plant these rotational crops only if the following criteria below have been met. If all criteria are not met, plant peas and snap beans a minimum of 18 months following Halex GT application.

- A minimum of 20" of rainfall plus irrigation has been received between application and planting of the rotational crop.
- Soil pH is 6.0 or greater.
- Application of Halex GT applied no later than June 30<sup>th</sup> the year preceding rotational crop planting.
- No other HPPD herbicides (e.g., Callisto, Callisto® Xtra, Lexar® EZ, Lumax® EZ, Zemax®, Armezon™, Balance® Flexx, Capreno®, Corvus®, Impact, or Laudis) were applied the year prior to planting peas and snap beans.

<sup>2</sup>Do not plant peas or snap beans on sand, sandy loam or loamy sand soils in Minnesota or Wisconsin.

---

## APPLICATION PROCEDURES

---

Refer to the **CROP USE DIRECTIONS** section for specific crop instructions. and listed tank mixes.

### For Ground Applications:

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

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

Apply Halex GT Herbicide in a spray volume of 10-30 gal/A. Use a pump that can maintain a pressure of at least 35-40 psi at the nozzles (check nozzle manufacturer's instructions) and provide proper agitation within the tank to keep the product dispersed.

Lower pressures may be used with extended range or drift reduction nozzles. When weed foliage is dense, use a minimum of 15 gal/A.

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

### **For Aerial Applications:**

Halex GT may be applied aerially for postemergence weed control in Glyphosate Tolerant corn and preplant or preemergence weed control in grain sorghum only in the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Nebraska, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming.

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

---

## **MIXING PROCEDURES**

---

Always refer to labels of other pesticide products for mixing directions and precautions which may differ from those outlined here. Use in accordance with the most restrictive of label limitations and precautions. Do not exceed any label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing. Do not tank mix Halex GT Herbicide with any other insecticide, fungicide, fertilizer solution, or adjuvant not listed on the label without testing compatibility, as poor mixing may result. Test the compatibility of any tank-mix combination on a small scale such as a jar test before actual tank mixing.

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

Follow the mixing instructions for adding Halex GT Herbicide to the spray tank:

Only use sprayers in good running condition with good agitation. Ensure the sprayer is cleaned according to instructions on label of the product used prior to Halex GT Herbicide. Use only clean water for the spray solution. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser. Avoid using screens finer than 50-mesh.

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

1. Fill tank  $\frac{1}{2}$  full of clean water and start agitation.
2. Add ammonium sulfate (AMS).
3. Add nonionic surfactant (NIS).
4. Add atrazine – make sure atrazine is fully dispersed before other products are added to the mix.
5. Add fungicide (if applicable).
6. Add Halex GT.
7. Add EC products (e.g. insecticides) last. Be aware that adding any EC type product will increase the risk for crop injury.
8. Fill tank with water to the desired level.

## **ADJUVANTS**

For postemergence applications to Glyphosate Tolerant (GT) corn or burndown applications to grain sorghum, add a nonionic surfactant (NIS) at 1-2 qt/100 gallons of water (0.25-0.5% v/v) to the spray solution. Use the higher rate of NIS when weeds are growing under stress conditions (e.g. cool temperatures, dry weather, etc.).

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

The use of Halex GT Herbicide with urea ammonium nitrate (UAN) instead of ammonium sulfate (AMS) will result in postemergence glyphosate-tolerant corn injury and reduced grass weed control.

## **CLEANING EQUIPMENT AFTER APPLICATION**

For best results, quantifiably pattern test each specific aerial application vehicle used for aerial application of Halex GT initially and every year thereafter.

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

Flush tank, hoses, boom, and nozzles with clean water.

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

## SPRAY DRIFT MANAGEMENT

### MANDATORY SPRAY DRIFT MANAGEMENT

#### **Aerial Applications:**

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

#### **Ground Boom Applications:**

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

#### **Boomless Ground Applications:**

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

## **SPRAY DRIFT ADVISORIES**

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

## **IMPORTANCE OF DROPLET SIZE**

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

### **CONTROLLING DROPLET SIZE – Ground Boom**

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

### **CONTROLLING DROPLET SIZE – Aircraft**

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

### **BOOM HEIGHT – Ground Boom**

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

### **RELEASE HEIGHT - Aircraft**

- Higher release heights increase the potential for spray drift.

## **SHIELDED SPRAYERS**

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

## **TEMPERATURE AND HUMIDITY**

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

## **TEMPERATURE INVERSIONS**

- Drift potential is high during a temperature inversion.
- Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind.

- The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator.
- Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
- Avoid applications during temperature inversions.

#### **WIND**

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

#### **Boomless Ground Applications**

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

#### **Handheld Technology Applications**

- Take precautions to minimize spray drift.

---

### **CROP USE DIRECTIONS – GLYPHOSATE TOLERANT FIELD CORN**

---

Halex GT Herbicide may be applied postemergence only in Glyphosate Tolerant (e.g. Roundup Ready, Agrisure GT) corn for control of the weeds listed in Table 1.

When Glyphosate Tolerant corn is grown under no-till conditions, control all emerged weeds at the time of corn planting with a glyphosate or paraquat based herbicide program. Following a burndown weed control application and after Glyphosate Tolerant corn emergence, Halex GT Herbicide can be applied postemergence to control the weeds listed in Table 1.

#### **PREEMERGENCE**

Halex GT Herbicide is specifically formulated for postemergence in crop use and does not contain a corn safener. Therefore, Halex GT Herbicide is not labeled for early preplant or preemergence applications.

#### **POSTEMERGENCE – HALEX GT HERBICIDE ALONE**

Halex GT Herbicide may be applied at a rate of 3.6-4.0 pt/A from corn emergence up to 30 inches in height or the 8-leaf stage of corn growth. Apply Halex GT Herbicide to actively growing weeds listed in Table 1. For the best protection of the corn crops yield potential, apply Halex GT Herbicide before weeds exceed 4 inches in height, length or diameter. Use the higher end of the Halex GT Herbicide use rate range (4.0 pt/A) when weeds are stressed or weed populations are dense.

Apply Halex GT Herbicide with a non-ionic surfactant (NIS) and ammonium sulfate (AMS). See the **ADJUVANTS** section for specific adjuvant instructions.

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

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

Applying Halex GT Herbicide at rates less than 3.6 pt/A may result in incomplete weed control, as well as less residual weed control. Using reduced rates of Halex GT Herbicide also increases the risk for the development of weed resist biotypes. See the **WEED RESISTANCE MANAGEMENT** section of this label for specific instructions.

#### **HALEX GT HERBICIDE – SEQUENTIAL WEED CONTROL**

Halex GT Herbicide may be applied as the postemergence component of a two-pass weed control program. Apply Zemax (1.6 qt/A maximum rate), Lexar (2.25 qt/A maximum rate) or Lumax (2 qt/A maximum rate) preemergence and follow with a postemergence application of Halex GT Herbicide at 3.6-4.0 pt/A. Do not reduce the rate of Halex GT Herbicide when applied in a sequential program with these mesotrione containing products.

Halex GT Herbicide can also be applied at a rate of 3.6-4.0 pt/A postemergence following a preemergence application of Expert®, Bicep II Magnum®, Bicep Lite II Magnum® and Dual II Magnum®.

Apply Halex GT Herbicide with a non-ionic surfactant (NIS) and ammonium sulfate (AMS). See the **ADJUVANTS** section for specific adjuvant instructions.

#### **HALEX GT HERBICIDE – TANK MIX WITH AATREX® 4L OR AATREX® NINE-O®**

In tank mix with AAtrex, apply Halex GT Herbicide at 3.6-4.0 pt/A. If weeds are more than 4 inches tall, or for improved broadleaf weed control add AAtrex 4L or AAtrex Nine-O. Atrazine rates above 0.5 lb ai/A may result in glyphosate antagonism and reduced grass control.



Apply the tank mix of Halex GT Herbicide plus AAtrex with a non-ionic surfactant (NIS) and ammonium sulfate (AMS). See the **ADJUVANTS** section of this label for specific instructions.

When tank mixing or sequentially applying atrazine or products containing atrazine with Halex GT Herbicide to Glyphosate Tolerant corn, do not exceed an application rate of 2.0 pounds active ingredient of atrazine per acre for any single application and the total pounds of atrazine applied (lb ai per acre) must not exceed 2.5 pounds active ingredient per acre per year.

If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 lb ai/A broadcast. If a postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 lb ai/A per calendar year.

**Do not apply any atrazine formulation if the corn is greater than 12 inches tall.**

### **HALEX GT HERBICIDE – TANK MIX WITH NORTHSTAR® CUSTOMPAK, CLARITY®, DISTINCT® OR STATUS® HERBICIDES**

Tank mix Halex GT at 3.6 to 4 pt/A + Northstar CustomPak herbicide or Clarity herbicide or Distinct herbicide or Status herbicide + nonionic surfactant (NIS) at 1 qt/100 gal + spray grade ammonium sulfate (AMS) for improved control of difficult broadleaf weeds as a postemergence application in GT corn. Refer to applicable tank mixture product label for specific application rates, precautions and restrictions.

### **CORN USE RESTRICTIONS**

1. Pre-Grazing Interval (PGI): Do not graze or feed forage from treated areas for 45 days following application.
2. Pre-Harvest Interval (PHI): Do not harvest forage, grain, or stover within 45 days after application.
3. Do not apply more than 4 pt per acre per year (0.1 lb ai/A mesotrione, 1.05 lb ai/A s-metolachlor, and 1.05 lb ae/A glyphosate).
4. Do not make more than 1 application per year.
5. Do not make applications of Halex GT Herbicide past the 8-leaf stage of growth (or >30 inches tall) in glyphosate-tolerant corn.
6. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

## CORN USE PRECAUTIONS

1. Temporary crop response (transient bleaching) from postemergence applications to Glyphosate Tolerant corn may occur under extreme weather conditions or when the crop is suffering from stress. Corn quickly outgrows these effects and develops normally.
2. If additional glyphosate is tank mixed or applied sequentially with Halex GT Herbicide as a postemergence treatment in Glyphosate Tolerant corn, refer to the specific glyphosate label for in crop rate restrictions.

Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

---

## GRAIN SORGHUM USE DIRECTIONS

---

Halex GT can be applied preplant non-incorporated (up to 21 days before planting) up through preemergence for weed control in sorghum. Halex GT will control the emerged weeds listed in the Table 1 and will provide residual control of the weeds listed in Table 3.

The sorghum seed must be treated with a protectant that is effective for safening S-metolachlor to sorghum. Applying Halex GT preplant or preemergence to sorghum that is not seed protected for applications to S-metolachlor will result in crop death. Applying Halex GT postemergence to sorghum will result in crop death.

Apply Halex GT as a broadcast non-incorporated spray at a rate of 4-6 pt/A beginning at 21 days before planting and up through planting but prior to sorghum emergence. Applying Halex GT less than 7 days before sorghum planting will increase the risk of crop injury, especially if irrigation or rainfall is received following the application. Injury symptoms include temporary bleaching of newly emerging sorghum leaves or in extreme conditions, stunting or partial stand loss. Applying Halex GT more than 7 days (but not more than 21) prior to sorghum planting will reduce the risk of crop injury.

If Halex GT is applied prior to planting, minimize disturbance of the herbicide treated soil barrier during the planting process in order to lessen the potential for poor weed control in the disturbed soil zone.

**Halex GT Sorghum Split Application:** Halex GT may also be applied as a split application to grain sorghum. For a split application program, apply the first application as a non-incorporated early preplant (7-21 days before planting) treatment followed by a second Halex GT application as a preemergence application prior to sorghum emergence. The total amount of Halex GT applied in the split application program cannot exceed 6 pt/A per season.

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

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

**Restrictions:**

1. Do not apply more than 6 pt per acre per year (s-metolachlor 1.57 ai lb/A + mesotrione 0.16 lb ai/A + glyphosate 1.57 lb ae/A).
2. Do not apply Halex GT to sorghum grown on sandy soils (sand, sandy loam or loamy sand).
3. Do not apply Halex GT to emerged grain sorghum or plant death will occur.
4. Do not use Halex GT in the production of forage sorghum, sweet sorghum (sorgo), sudangrass, sorghum-sudangrass hybrids, or dual purpose sorghum.
5. Sorghum seed must be treated with Concep® III herbicide safener prior to planting, or severe crop injury may occur.

**WEEDS CONTROLLED IN GRAIN SORGHUM**

When applied as directed in this label at 6 pt/A, Halex GT will provide preemergence control or partial control the weeds listed in Table 3. Optimum weed control will be obtained if Halex GT is applied according to all label directions.

If a significant rainfall does not occur within 7 days after application, weed control may be decreased. If irrigation is available, apply ½ to 1 inch of water. If irrigation is not available, a uniform shallow cultivation as soon as weeds emerge will provide improved control.

**Table 3. Weeds Controlled or Partially Controlled by Preemergence Applications of Halex GT**

Common Name	Weed Type <sup>1</sup>	Scientific Name	Control or Partial Control <sup>2</sup>
Amaranth, Palmer	B	<i>Amaranthus palmeri</i>	C
Amaranth, Powell	B	<i>Amaranthus powellii</i>	C
Barnyardgrass	G	<i>Echinochloa crus-galli</i>	C
Buffalobur	B	<i>Solanum rostratum</i>	C
Carpetweed	B	<i>Mollugo verticillata</i>	C
Cocklebur, common	B	<i>Xanthium strumarium</i>	PC
Crabgrass, large	G	<i>Digitaria sanguinalis</i>	C
Crowfootgrass	G	<i>Dactyloctenium aegyptium</i>	C
Cupgrass, prairie	G	<i>Eriochloa contracta</i>	C
Cupgrass, Southwestern	G	<i>Eriochloa acuminata</i>	C
Cupgrass, woolly	G	<i>Eriochloa villosa</i>	PC
Foxtail, giant	G	<i>Setaria faberi</i>	C
Foxtail, green	G	<i>Setaria viridis</i>	C
Foxtail, robust (purple, white)	G	<i>Setaria viridis</i>	C
Foxtail, yellow	G	<i>Setaria pumila</i>	C
Galinsoga	B	<i>Galinsoga parviflora</i>	C
Goosegrass	G	<i>Eleusine indica</i>	C
Horseweed (marestail)	B	<i>Conyza canadensis</i>	PC
Jimsonweed	B	<i>Datura stramonium</i>	C
Johnsongrass, seedling	G	<i>Sorghum halepense</i>	PC
Kochia	B	<i>Kochia scoparia</i>	PC
Lambsquarters, common	B	<i>Chenopodium album</i>	C
Millet, foxtail	G	<i>Setaria italica</i>	C
Millet, wild proso	G	<i>Panicum miliaceum</i>	PC
Morningglory, ivyleaf	B	<i>Ipomoea hederacea</i>	PC
Morningglory, entireleaf	B	<i>Ipomoea hederacea</i>	PC
Nightshade, black	B	<i>Solanum nigrum</i>	C
Nightshade, Eastern black	B	<i>Solanum ptycanthum</i>	C
Nightshade, hairy	B	<i>Solanum sarachoides</i>	C
Nutsedge, yellow	S	<i>Cyperus esculentus</i>	C
Panicum, browntop	G	<i>Panicum fasciculatum</i>	C
Panicum, fall	G	<i>Panicum dichotomiflorum</i>	C
Panicum, Texas	G	<i>Panicum texanum</i>	PC
Pigweed, redroot	B	<i>Amaranthus retroflexus</i>	C
Pigweed, smooth	B	<i>Amaranthus hybridus</i>	C
Purslane, common	B	<i>Portulaca oleracea</i>	C
Pusley, Florida	B	<i>Richardia scabra</i>	C
Ragweed, common	B	<i>Ambrosia artemisiifolia</i>	PC
Ragweed, giant	B	<i>Ambrosia trifida</i>	PC
Rice, red	G	<i>Oryza sativa</i>	C
Sandbur, field	G	<i>Cenchrus incertus</i>	PC
Shattercane	G	<i>Sorghum bicolor</i>	PC
Sida, prickly	B	<i>Sida spinosa</i>	PC
Signalgrass, broadleaf	G	<i>Brachiaria platyphylla</i>	PC

Common Name	Weed Type <sup>1</sup>	Scientific Name	Control or Partial Control <sup>2</sup>
Smartweed, ladysthumb	B	<i>Polygonum persicaria</i>	C
Smartweed, Pennsylvania	B	<i>Polygonum pensylvanicum</i>	C
Sprangletop, red	G	<i>Leptochloa filiformis</i>	C
Velvetleaf	B	<i>Abutilon theophrasti</i>	C
Waterhemp, common	B	<i>Amaranthus rudis</i>	C
Waterhemp, tall	B	<i>Amaranthus tuberculatus</i>	C
Witchgrass	G	<i>Panicum capillare</i>	C

<sup>1</sup> B=Broadleaf, G=Grass, S=Sedge

<sup>2</sup> C = Control, PC = Partial Control

---

## STORAGE AND DISPOSAL

---

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

### Pesticide Storage

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

### Pesticide Disposal

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

### Container Handling [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 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 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 use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. 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. If the container is damaged, leaking or obsolete, contact Syngenta Crop Protection, LLC at 1-800-888-8372.

### **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  $\frac{1}{4}$  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.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.**

---

### **CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

---

<p><b>NOTICE:</b> 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.</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

---

AAtrex®, Agrisure™ GT, Bicep II Magnum®, Bicep Lite II Magnum®, Callisto®, Callisto® Xtra, Concep®, Dual II Magnum®, Expert®, Halex® GT, Lexar®, Lexar® EZ, Lumax®, Lumax® EZ, Northstar®, Warrior®, Zemax®, the ALLIANCE FRAME, the SYNGENTA Logo, and the PURPOSE ICON are Trademarks of a Syngenta Group Company

Armezon™, Clarity®, Counter®, Distinct®, and Status® are trademarks of BASF Corporation

Impact® is a trademark of Amvac Chemical Corporation

Balance® Flexx, Capreno®, Corvus® and Laudis® are trademarks of Bayer CropScience

Lorsban® is a trademark of Dow AgroSciences

Roundup Ready® is a trademark of Monsanto Company

©20XX Syngenta

For non-emergency (e.g., current product information), call  
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, North Carolina 27419-8300

Halex GT 1282 MAS 1216 AMEND-E JUN2021-CL - di - 12/9/22  
000100-01282.20210610E.Halex\_GT.AMEND.JUN2021-CL