

# **GLYPHOSATE TOLERANT CORN**

## General Information

### PRODUCT INFORMATION

Callisto GT is a systemic, postemergence herbicide for control of emerged grass and broadleaf weeds plus residual control of broadleaf weeds in glyphosate tolerant (GT) corn.

Following a postemergence application, susceptible weeds take up the herbicide through the treated foliage and cease growth soon after application. Complete death of the weeds may take up to 2 weeks.

Callisto GT will provide 2-4 weeks residual control of newly emerging broadleaf weeds listed in Table 1. Callisto GT will not provide residual control of grass weeds.

### USE PRECAUTIONS

1. Callisto GT can be applied postemergence to glyphosate tolerant (e.g. Roundup Ready, Agrisure GT) corn only. An application of Callisto GT to a corn hybrid that is not glyphosate tolerant will result in crop death.
2. Severe corn injury resulting in yield loss may occur if Callisto GT is applied postemergence to corn that was treated with Counter, Lorsban or other organophosphate-containing soil insecticides.
3. Severe corn injury resulting in yield loss may occur if Callisto GT is applied in a foliar postemergence tank mix with any organophosphate or carbamate insecticide.
4. 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 Callisto GT application.
5. Severe corn injury resulting in yield loss may occur if Callisto GT is applied postemergence in a tank mix with emulsifiable concentrate grass herbicides.

6. Callisto GT may be tank mixed or sequentially applied with pyrethroid insecticides such as Warrior.
7. Cultivation of corn within 7 days before or after application may result in reduced weed control from the Callisto GT application.
8. 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.
9. When tank mixing, follow the most restrictive label limitations and precautions.

#### USE RESTRICTIONS

1. Do not apply more than one time per year.
2. Do not apply this product through any type of irrigation system.
3. Do not apply this product with suspension fertilizers or urea ammonium nitrate (UAN) as the carrier.
4. Do not apply more than 2 pints of Callisto GT per acre per growing season.
5. Do not apply this product by aerial application.
6. To avoid possible illegal residues, do not graze or feed forage from treated areas for 45 days following application.
7. Do not apply to corn taller than 30 inches in height or showing more than 8 leaves, whichever is more restrictive.
8. Do not harvest forage, grain, or stover within 45 days after application.
9. No more than 0.24 lb. of mesotrione active ingredient may be applied per acre of corn per year as a result of application of all mesotrione-containing products (for example, Callisto).

10. No more than 6.0 lbs. of glyphosate acid may be applied per acre per year as a result of all glyphosate-containing products (for example, Touchdown Total Herbicide).

## WEED RESISTANCE MANAGEMENT

Naturally occurring biotypes of certain grass and broadleaf weed species with resistance to triazines, glyphosate, PPO, HPPD and/or ALS inhibiting herbicides are known to exist. The repeated use of herbicides with the same mode of action is known to lead to the selection of herbicide resistant weeds. Therefore, a good weed resistance management strategy includes a program that contains multiple herbicide modes of action. Sound agronomic practices are also essential to reduce the likelihood that resistant weed populations will develop and integrated strategies are known to manage such problem weeds.

Callisto GT contains two active ingredients (glyphosate - a group 9 herbicide and mesotrione - a group 27 herbicide) and two modes of action. Because of the two modes of action, this product is an effective component of a weed resistance management strategy. This product must be applied at full label rates to reduce selection for, or population shifts toward, marginally tolerant weed species and/or species biotypes.

## APPLICATION INFORMATION

### GROUND APPLICATION

Spray nozzles should be uniformly spaced, the same size and type, and should provide accurate and uniform application. Use spray nozzles that provide medium to coarse droplet size to provide good coverage and avoid drift. Good weed coverage is essential for optimum weed control. Boom height for broadcast over-the-top applications should be based on the height of the crop.

Flat fan or Turbo Tee Jet nozzles are recommended for optimum coverage. Do not use flood jet nozzles or controlled droplet application equipment for applications of this product. Applications of this product with air induction nozzles may result in nonuniform spray coverage and less than optimum weed control.

Ensure that all inline strainer and nozzle screens in the sprayer are 50-mesh or coarser.

Apply this product in a spray volume of 10-30 gals./A. Use a pump that can maintain the nozzle manufacturer's recommendations and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles. When weed foliage is dense, use a minimum of 15 gals./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, recirculate the spray solution by running on full agitation prior to spraying.

Limitations, Restrictions, and Exceptions

#### CROP USE DIRECTIONS - GLYPHOSATE TOLERANT CORN

Apply Callisto GT postemergence only in glyphosate tolerant corn (e.g. Roundup Ready, Agrisure GT) for control of the weeds listed in Table 1. When glyphosate tolerant corn is grown under minimum or no-till conditions, control all emerged weeds at the time of corn planting with a glyphosate or paraquat based herbicide program.

#### USE RATE

Apply Callisto GT at a rate of 2.0 pts./A as a postemergence application. Consult Syngenta technical bulletins or supplemental labeling for additional application rate information. Only one application may be made. Applying Callisto GT at rates less than 2.0 pts./A may result in incomplete weed control, as well as less residual weed control. Using reduced rates of this product also increases the risk for the development of weed resist biotypes. See the WEED RESISTANCE MANAGEMENT section of the label for specific instructions.

#### TIMING TO THE CROP

Apply Callisto GT from emergence up to corn that is 30 inches tall. Do not apply to corn taller than 30 inches in height or showing more than 8 leaves, whichever is more restrictive. While Callisto GT has a wide window of application in corn, the best results for maximizing yield and controlling weeds are obtained when

applications are made postemergence to small (<4") weeds. For even more consistent weed control and yield protection, apply a preemergence herbicide such as Lumax EZ, Lexar EZ or Zemax followed by a timely postemergence application of Callisto GT.

## TIMING TO THE WEEDS

Apply Callisto GT postemergence to actively growing weeds listed in Table 1. For the best combination of postemergence weed control and protection of yield potential, apply before weeds exceed 4 inches in height, length or diameter. While Callisto GT may control weeds that are larger than 4 inches, consistency of performance may be reduced.

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.

## SPRAY ADJUVANTS

For effective control of weeds listed in Table 1, Apply Callisto GT with a non-ionic surfactant (NIS) and ammonium sulfate (AMS).

**Non-Ionic Surfactant (NIS):** Apply at 1-2 qts./100 gals. (0.25-0.5% v/v) of spray solution. Use the higher rate of NIS when weeds are growing under stress (e.g. cool temperatures, dry weather, etc.). Products must contain a minimum of 80% surface active NIS

**Ammonium Sulfate (AMS):** Apply spray grade AMS at 8.5-17.0 lbs./100 gals. of spray solution. Liquid AMS or blended product may be used but the final use rate must deliver an AMS equivalence of 8.5-17.0 lbs./100 gals. of water.

**Crop Oil Concentrate (COC):** Crop oil concentrate may be substituted for NIS and applied at a rate of 1 gals./100 gals. (1% v/v) of spray solution. The use of COC will increase the risk for crop injury. If crop injury occurs, it is transient and corn will recover fully within 5-7 days following application.

**Methylated Seed Oil (MSO) Products:** Due to crop injury risk, MSO or MSO based product are not recommended for use with this product

**Blended Adjuvant Products:** Products that contain more than one component (e.g.

AMS plus NIS) are acceptable provided that the product delivers the full recommended rate of each adjuvant. Use of blended products that deliver less than the full recommended rate may result in unacceptable weed control

## SEQUENTIAL WEED CONTROL

Callisto GT should be applied as the postemergence component of a two-pass weed control program. An example of this sequential approach would be the following: apply Lexar EZ or Lumax EZ or Zemax preemergence and follow with a postemergence application of Callisto GT at 2.0 pts./A. Another example of sequential weed control would be to apply Callisto GT at 2.0 pts./A postemergence following a preemergence application of Expert, Bicep II Magnum, Bicep Lite II Magnum or Dual II Magnum.

Do not reduce the rate of Callisto GT when applied in a sequential program. Refer to the individual product labels and follow all use directions, precautions and restrictions.

Callisto GT must be applied with a non-ionic surfactant (NIS) and ammonium sulfate (AMS). See the Spray Adjuvants section for specific recommendations.

### Method

[Broadcast/Foliar Ground](#)

### Rates

[field rates 0](#)

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### Restricted Entry Interval

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.

### Timings

[Postemergence \(Weed\)](#)