

100-1359

11/21/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

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

NOV 21 2012

Subject: Notification; Per PR-Notice 98-10  
Callisto Xtra.  
EPA Reg. No. 100-1359  
Date Submitted: November 13, 2012

Dear Mr. Dixon:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated November 13, 2012 for the product referenced above. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions regarding this letter, please contact me at (703) 306-0415 or [davis.kable@epa.gov](mailto:davis.kable@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis", enclosed in a large, loopy oval.

Kable Bo Davis  
Product Manager 25  
Herbicide Branch  
Registration Division (7505P)

Please read instructions on reverse before completing form.

	United States <b>Environmental Protection Agency</b> Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number <b>NOTIFICATION</b>
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**Application for Pesticide - Section I**

1. Company/Product Number <b>100-1359</b>	2. EPA Product Manager <b>Mr. Kable Bo Davis</b>	3. Proposed Classification <input type="checkbox"/> None <input checked="" type="checkbox"/> Restricted
4. Company/Product (Name) <b>Callisto® Xtra</b>	PM# <b>25</b> <b>Team 23, Herbicide Branch</b>	
5. Name and Address of Applicant (Include ZIP Code) Syngenta Crop Protection, LLC P. O. Box 18300 Greensboro, NC 27419  <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:  EPA Reg. No. _____  Product Name _____

**Section - II**

<input type="checkbox"/> Amendment - Explain below.  <input type="checkbox"/> Resubmission in response to Agency letter dated _____  <input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application.  <input checked="" type="checkbox"/> Other - Explain below.	<b>NOTIFICATION</b>  <b>NOV 21 2012</b>
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**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.).  
 Syngenta Crop Protection, LLC is submitting a label amendment for Callisto® Xtra (EPA Reg. No. 100-1359) to add a statement prohibiting sale of this product in Nassau and Suffolk counties in New York State. In addition to this restriction, references to Syngenta Crop Protection, Inc., have been revised to Syngenta Crop Protection, LLC. No changes have been made to this product label. *notification*  
 This action qualifies as a NON-PRIA Fast Track Amendment and as such, no fee for service is required per the Pesticide Registration Improvement Act of 2012 (PRIA III).  
 This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Section - III**

<b>1. Material This Product Will Be Packaged In:</b>				<b>2. Type of Container</b>	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	
*Certification must be submitted		If "Yes" Unit Packaging wgt.      No. per Container	If "Yes" Unit Packaging wgt.      No. per container		
<b>3. Location of Net Contents Information</b> <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		<b>4. Size(s) Retail Container</b> 2.5, 120, 220 gallon, Bulk		<b>5. Location of Label Directions</b> <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
<b>6. Manner in Which Label is Affixed to Product</b>				<input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input checked="" type="checkbox"/> Other <u>Pressure sensitive</u>	

**Section - IV**

<b>1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)</b>		
Name <b>Montague Dixon</b>	Title <b>Sr. Regulatory Product, Manager</b>	Telephone No. (Include Area Code) <b>(336) 632-7055</b>
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		<b>6. Date Application Received (Stamped)</b>
2. Signature 	3. Title <b>Sr. Regulatory Product Manager</b>	
4. Typed Name <b>Montague Dixon</b>	5. Date <b>November 13, 2012</b>	

3/34

Montague Dixon  
Sr. Regulatory Product Manager  
Regulatory Affairs  
(336) 632-7055 (phone)  
(336) 632-5688 (fax)  
(336) 686-3586 (mobile)  
[monty.dixon@syngenta.com](mailto:monty.dixon@syngenta.com)

Syngenta Crop Protection, LLC.  
P.O. Box 18300  
Greensboro, NC 27419-8300  
[www.syngenta.com](http://www.syngenta.com)



FedEx

November 13, 2012

Document Processing Desk (AMEND)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
One Potomac Yard, Room S-4900  
2777 South Crystal Drive  
Arlington, VA 22202-4501

Attn: Mr. Kable Bo Davis, PM 25, Herbicide Branch

SUBJECT: SUBMISSION OF A NON-PRIA ~~EAST TRACK LABEL AMENDMENT~~ <sup>notification</sup>  
FOR CALLISTO® XTRA (EPA REG. NO. 100-1359) TO ADD A  
STATEMENT TO THE LABEL RESTRICTING SALES IN NASSAU AND  
SUFFOLK COUNTIES IN NEW YORK STATE

Dear Mr. Davis,

Syngenta Crop Protection, LLC is submitting a label amendment for Callisto® Xtra (EPA Reg. No. 100-1359) to add a statement prohibiting sale of this product in Nassau and Suffolk counties in New York State. In addition to this restriction, references to Syngenta Crop Protection, Inc., have been revised to Syngenta Crop Protection, LLC. No other changes have been made to this product label.

For your consideration of this action, please find enclosed the following documents:

1. Five copies of the revised draft labeling for Callisto® Xtra Herbicide (EPA Reg. No. 100-1359), four clean and one highlighting the changes to the label.
2. EPA Form 8570-1 Application for Pesticide Registration/Amendment.
3. A CD of the label for "Electronic Comparison and Review".
4. Certification With Respect to Label Integrity Form.

**Fees for Services**

This action qualifies as a NON-PRIA Fast Track Amendment and as such, no fee for service is required per the Pesticide Registration Improvement Act of 2012 (PRIA III).

Please contact me at (336) 632-7055 if there are any questions regarding this submission.

With Kind regards,

Montague Dixon  
Senior Regulatory Product Manager

cc: [illegible]

Enclosures

cc: [illegible]

[Booklet]

**RESTRICTED USE PESTICIDE  
(GROUND AND SURFACE WATER CONCERNS)**

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION. THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

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

**GROUP 5 27 HERBICIDE**

Callisto® Xtra

Herbicide

Postemergence Herbicide for use in Field Corn, Seed Corn, Silage Corn, Sweet Corn, Yellow Popcorn and Sugarcane.

Active Ingredient\*:

Atrazine** (CAS No. 1912-24-9).....	34.30%
Related Compounds.....	0.70%
Mesotrione (CAS No. 104206-82-8).....	5.36%
Other Ingredients:	59.64%
Total:	100.00%

\*This product contains 0.5 pounds of mesotrione pounds per gallon and 3.2 pounds of atrazine and related triazines per gallon.

\*\*Atrazine with a maximum of 1.4% related triazines.

**NOTIFICATION**

**KEEP OUT OF REACH OF CHILDREN**

**NOV 21 2012**

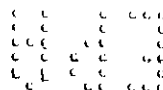
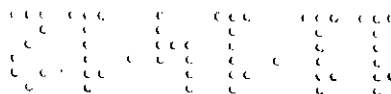
**CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1359  
EPA Est.



\_\_ gallons  
Net Contents



<b>FIRST AID</b>	
<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>
<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>
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) <b>Call 1-800-888-8372</b>	

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

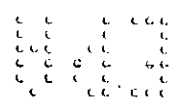
**CAUTION**

Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Harmful if swallowed or inhaled.

**Personal Protective Equipment (PPE)**

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as 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



- Chemical-resistant apron when mixing/loading, cleaning up spills, cleaning equipment, or otherwise exposed to the concentrate.

See **Engineering Control Statements** for additional requirements.

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

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Wash hands 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.

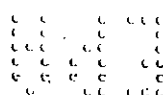
**Engineering Control Statements**

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.

**Environmental Hazards**

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

This product must not be mixed/loaded, or used within 50 feet 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 feet of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and 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 sites.

Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

This product must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 foot buffer or setback from runoff entry points must be planted to crop, seeded with grass or other suitable crop.

**Tile-Outletted Terraced Fields Containing Standpipes**

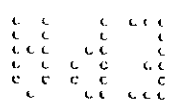
One of the following restrictions must be used in applying atrazine to tile-terraced fields containing standpipes:

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

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

**Surface Water Advisory**

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several weeks after application. Poorly draining soils and







**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, Inc. 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.

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### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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

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 12 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material – Category A (e.g., natural rubber ≥ 14 mils)

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**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.

**USE INFORMATION**

Callisto Xtra is a selective herbicide for the control of broadleaf weeds and certain grasses in field corn, seed corn, field corn grown for silage, yellow popcorn, sweet corn and sugarcane. Callisto Xtra is a systemic postemergence herbicide and is absorbed through the foliage of emerged weeds and also by soil uptake. Susceptible weeds cease growth soon after application. Complete death of the weeds may take up to 2 weeks.

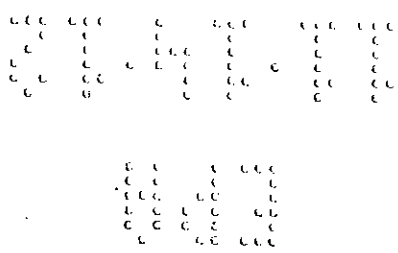
When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is recommended.

**Use Restrictions**

- Do not apply Callisto Xtra to white popcorn or ornamental (Indian) corn.
- Do not apply Callisto Xtra to corn that is greater than 12" in height.
- Do not apply this product through any type of irrigation system.
- Do not apply Callisto Xtra postemergence in a tank mix with emulsifiable concentrate grass herbicides, unless specifically addressed under one of the tank mix sections of this label, or injury may occur.
- When tank mixing or sequentially applying other atrazine or mesotrione containing products, do not exceed the following single application or annual use rates (pounds of active ingredient (a.i.) per acre):

	Maximum Annual Application Rate per Acre	
	Corn (all types)	Sugarcane
Atrazine	2.5 lb a.i.	10.0 lb a.i.
Mesotrione	0.24 lb a.i.	0.334 lb a.i.

- Do not use aerial application to apply Callisto Xtra.



### Use Precautions

- Applying this product in a carrier other than water (e.g. fertilizers) will result in significant crop injury.
- Severe corn injury resulting in yield loss may occur if Callisto Xtra is applied:
  - 1) postemergence to corn crops that were treated with Counter® or Lorsban®
  - 2) postemergence to corn crops in a tank mix with any organophosphate or carbamate insecticide
  - 3) postemergence within 7 days before or 7 days after any organophosphate or carbamate insecticide.

### Resistance Management

Callisto Xtra is a combination of mesotrione and atrazine (**Group 27 and 5 Herbicides**).

Naturally occurring biotypes of certain broadleaf weed species with resistance to triazines, glyphosate, or ALS inhibiting herbicides are known to exist. However, no known resistance to HPPD herbicide exists, and there are no known instances of cross resistance between HPPD inhibitors and other classes of herbicides, or modes of action. Performance of Callisto Xtra is not affected by the presence of biotypes resistant to triazines, glyphosate, or ALS inhibiting herbicides.

To help prevent the development of resistance to mesotrione (or other HPPD herbicides), always use full labeled rates of Callisto Xtra. Apply full labeled rates of Callisto Xtra to help prevent selection for, or population shifts toward, marginally tolerant weed species and/or species biotypes. No more than 0.24 lb of mesotrione active ingredient should be applied per acre of corn per year. If additional herbicides must be applied, it is recommended that a different mode of action be used, i.e., other than an HPPD inhibitor (Group 27 Herbicide).

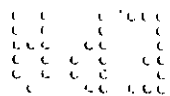
### Integrated Pest (Weed) Management

Callisto Xtra should be integrated into an overall weed and pest management strategy whenever the use of a herbicide is required. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

## 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 deliver medium to coarse



droplet size to provide good coverage and avoid drift. Good spray coverage is essential for optimum weed control. Boom height for broadcast over-the-top applications should be based on the height of the crop and according to the nozzle type, nozzle spacing and manufacturer's specifications.

Apply Callisto Xtra in a spray volume of 10-30 gallons/acre. Use a pump that can maintain adequate pressure at the nozzles to maintain an effective spray pattern and provide proper agitation within the tank to keep the product dispersed. Low pressures may be used with extended range or drift reduction nozzles but ensure a droplet size of medium to coarse. When weed foliage is dense, use a minimum of 15 gallons/acre.

Flat fan nozzles of 80° or 110° are recommended for optimum postemergence coverage. Do not use flood-jet nozzles or controlled droplet application equipment for postemergence applications. Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser.

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.

### **Aerial Application**

Do not use aerial application to apply Callisto Xtra.

### **Mixing Procedures**

Refer to the tank mixture section of this label for recommended mixtures with Callisto Xtra.

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 label rates specified. This product cannot be mixed with any product containing a label prohibition against such mixing. Do not tank mix Callisto Xtra with any other insecticide, fungicide, fertilizer solution, or adjuvant not recommended on the label without testing compatibility, as poor mixing may result. It is recommended that the compatibility of any tank mix combination be tested on a small scale such as a jar test before actual tank mixing.

Follow the mixing instructions for adding Callisto Xtra to the spray tank:

- 1) Only use sprayers in good operating condition with adequate agitation. Ensure the sprayer is cleaned according to instructions on label of the product used prior to Callisto Xtra. For postemergence applications, 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. Screens finer than 50-mesh should not be used.

- 2) Begin to fill sprayer tank or premix tank with clean water and engage agitator. Agitation must be continued throughout the entire mixing and spraying procedure.
- 3) When the sprayer or premix tank is half full of water, add ammonium sulfate (AMS) and agitate until completely dispersed.
- 4) Next add Callisto Xtra slowly and agitate until completely dissolved. Wait at least 1 minute after the last of the Callisto Xtra has been added to the tank to allow for complete dispersion. A longer agitation period may be required to disperse Callisto Xtra when using cold water from sources such as deep drilled wells.
- 5) If tank mixing, add the tank mix product next.
- 6) Finally, add adjuvant (COC or NIS) and UAN, if needed, and then continue to fill tank to desired level with water.

### **Spray Drift Management**

Do not apply when weather conditions may cause drift to non-target areas. Drift may result in injury to adjacent crops and vegetation. To avoid spray drift, DO NOT apply when wind speed is greater than 10 mph or during periods of temperature inversions. Use of larger droplet sizes will also reduce spray drift.

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

The interaction of equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making a decision.

### **Information on Droplet Size**

The most effective way to reduce spray drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions.

### **Controlling Droplet Size**

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher rate nozzles instead of increasing pressure.

- **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.

### **Sensitive Areas**

The pesticide must only be applied when the potential for drift to adjacent sensitive areas, (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

### **Cleaning Equipment after a Callisto Xtra Application**

Special attention must be given to cleaning equipment before spraying a crop other than field corn, seed corn, silage corn, sweet corn, yellow popcorn or sugarcane. Mix only as much spray solution as needed.

Use the following procedure for cleaning spray equipment:

- 1) Flush tank, hoses, boom, and nozzles with clean water.
- 2) Prepare a cleaning solution of 1 gallon of household ammonia per 25 gallons 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 re-circulate the cleaning solution for at least 15 minutes. All visible deposits must be removed 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.

**WEEDS CONTROLLED**

Callisto Xtra applied as directed in this label will control or suppress the weeds listed in Table 1.

Optimum weed control will be obtained if an application of Callisto Xtra is made following label directions when weeds are actively growing. When weeds are stressed and not actively growing due to drought, heat, lack of fertility, flooding, or prolonged cool temperatures, control can be reduced or delayed.

Do not cultivate corn within 7 days before or after an Callisto Xtra application, as weed control from the Callisto Xtra application may be reduced.

**Table 1. Weeds Controlled with Postemergence Applications of Callisto Xtra**

Common Name	Scientific Name	20 fl oz/A	24 fl oz/A	24 fl oz/A
		Weeds <5" Tall	Weeds <5" Tall	Weeds 5-10" Tall
Amaranth, Palmer	<i>Amaranthus palmeri</i>	C <sup>1</sup>	C <sup>2</sup>	C <sup>2</sup>
Amaranth, Powell	<i>Amaranthus powellii</i>	C	C	C
Amaranth, spiny	<i>Amaranthus spinosus</i>	C	C	C
Atriplex	<i>Chenopodium orach</i>	C	C	C
Buckwheat, wild	<i>Polygonum convolvulus</i>	PC	PC	PC
Buffalobur	<i>Solanum rostratum</i>	C	C	C
Burcucumber	<i>Sicyos angulatus</i>	C <sup>1</sup>	C	C
Carpetweed	<i>Mollugo verticillata</i>	C	C	C
Carrot, wild	<i>Daucus carota</i>	C	C	C
Chickweed, common	<i>Stellaria media</i>	C	C	C
Cocklebur, common	<i>Xanthium strumarium</i>	C	C	C
Crabgrass, large	<i>Digitaria sanguinalis</i>	C <sup>1</sup>	C <sup>1</sup>	PC
Dandelion	<i>Taraxacum officinale</i>	PC	PC	PC
Dock, curly	<i>Rumex crispus</i>	PC	PC	PC
Galinsoga	<i>Galinsoga parviflora</i>	C	C	C
Hemp	<i>Cannabis sativa</i>	C	C	C
Horsenettle	<i>Solanum carolinense</i>	C	C	C
Horseweed (maretail)	<i>Conyza Canadensis</i>	C	C	PC
Jimsonweed	<i>Datura stramonium</i>	C	C	C
Knotweed, prostrate	<i>Polygonum aviculare</i>	PC	PC	PC
Kochia	<i>Kochia scoparia</i>	C	C	PC
Lambsquarters, common	<i>Chenopodium album</i>	C	C	C
Mallow, Venice	<i>Hibiscus trionum</i>	C	C	PC
Morningglory, entireleaf	<i>Ipomoea hederacea</i>	C <sup>1</sup>	C	PC



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Common Name	Scientific Name	20 fl oz/A	24 fl oz/A	24 fl oz/A
		Weeds <5" Tall	Weeds <5" Tall	Weeds 5-10" Tall
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>	C <sup>1</sup>	C	PC
Morningglory, pitted	<i>Ipomoea lacunose</i>	C <sup>1</sup>	C	PC
Mustard, wild	<i>Brassica kaber</i>	C	C	C
Nightshade, black	<i>Solanum nigrum</i>	C	C	C
Nightshade, Eastern black	<i>Solanum ptycanthum</i>	C	C	C
Nightshade, hairy	<i>Solanum sarrachoides</i>	C	C	C
Nutsedge, yellow	<i>Cyperus esculentus</i>	PC	PC	PC
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C	C	C
Pigweed, smooth	<i>Amaranthus hybridus</i>	C	C	C
Pigweed, tumble	<i>Amaranthus albus</i>	C	C	C
Pokeweed, common	<i>Phytolacca americana</i>	PC	PC	PC
Potatoes, volunteer	<i>Solanum spp.</i>	C	C	C
Pusley, Florida	<i>Richardia scabra</i>	C <sup>1</sup>	C <sup>1</sup>	PC
Ragweed, common	<i>Ambrosia artemisiifolia</i>	C <sup>2</sup>	C	C
Ragweed, giant	<i>Ambrosia trifida</i>	C <sup>2</sup>	C	C
Sesbania, hemp	<i>Sesbania exaltata</i>	C	C	C
Sida, prickly (teaweed)	<i>Sida spinosa</i>	C <sup>1</sup>	C <sup>1</sup>	PC
Signalgrass, broadleaf	<i>Bracharia platphylla</i>	C <sup>1</sup>	C <sup>1</sup>	PC
Smartweed, ladythumb	<i>Polygonum persicaria</i>	C	C	C
Smartweed, pale	<i>Polygonum lapathifolium</i>	C	C	C
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>	C	C	C
Sunflower, common	<i>Helianthus annuus</i>	C	C	C
Thistle, Canada	<i>Cirsium arvense</i>	PC	C	PC
Velvetleaf	<i>Abutilon theophrasti</i>	C	C	C
Waterhemp, common	<i>Amaranthus rudis</i>	C <sup>2</sup>	C	C
Waterhemp, tall	<i>Amaranthus tuberculatus</i>	C <sup>2</sup>	C	C

<sup>1</sup>Apply before weed exceeds 2 inches in height.

<sup>2</sup>Apply before weed exceeds 3 inches in height.

C = Control PC = Partial Control

### ROTATIONAL CROPS

When Callisto Xtra is applied as directed on this label, follow the crop rotation intervals in Table 2. If Callisto Xtra is tank mixed with other products, follow the most restrictive product's crop rotation interval.

**Table 2. Crop Rotational Intervals**

Crop	Rotational Interval <sup>1</sup>
Corn (field, pop, seed, sweet), sorghum (grain) and sugarcane	Immediately
Alfalfa, barley, canola, cotton, flax, peanuts, potatoes, soybeans, sunflower, tobacco, and wheat	Spring following application
All other rotational crops	18 months

<sup>1</sup>Time between Callisto Xtra application and replanting of the rotational crop.

**CORN – CALLISTO XTRA APPLIED ALONE**

Callisto Xtra is a selective postemergence herbicide for the control of broadleaf weeds and certain grasses in field corn, seed corn, field corn grown for silage, sweet corn and yellow popcorn. Callisto Xtra is systemic and is absorbed through the foliage of emerged weeds and also by soil uptake. For best weed control results, apply Callisto Xtra to actively growing weeds. Susceptible weeds which emerge soon after application of Callisto Xtra may be controlled after they absorb the herbicide from the soil.

Callisto Xtra is not effective for the control of many grass weeds. For control of emerged grasses or additional broadleaf weed control, refer to the tank mixing recommendation section on this label.

**Crop Timing**

Apply Callisto Xtra to corn after crop emergence but before corn exceeds 12" in height.

Temporary crop response (transient bleaching) from postemergence applications to field corn may occur under extreme weather conditions or when the crop is suffering from stress. Field corn quickly outgrows these effects and develops normally.

**Use Rates**

Apply Callisto Xtra postemergence at a rate of 20-24 fl oz/acre for control or partial control of the weeds listed in Table 1. The 20 fl oz/acre rate may be used for weeds that are less than 5 inches in height. The 24 fl oz/acre rate may be used for increased residual control on weeds less than 5 inches in height and for weeds 5-10 inches in height. Application of Callisto Xtra at rates less than 20 fl oz/acre postemergence will result in incomplete weed control and loss of residual control. Applications to weeds larger than specified in Table 1 will likely result in incomplete control.

## Corn Use Restrictions

- Maximum of one application per year
- Do not exceed 24 fl oz per year
- 60 day PHI field corn
- 45 day PHI sweet corn

## Application to Field Corn, Seed Corn, Field Corn Grown for Silage

Prior to applying Callisto Xtra postemergence to seed corn, refer to seed company recommendations for use on field corn inbred lines. Applications of Callisto Xtra to sensitive corn inbreds can result in significant crop injury.

Applications of Callisto Xtra must include either a crop oil concentrate or a non-ionic surfactant. In addition, a spray grade urea ammonium nitrate or ammonium sulfate is also recommended.

**Crop Oil Concentrate (COC):** Add at a rate of 1.0 gallon/100 gallons of spray solution (1.0% v/v). Using a crop oil concentrate will provide consistently better weed control than NIS but will increase the risk of corn injury.

**Non-Ionic Surfactant (NIS):** Add at a rate of 1 qt/100 gallons of spray solution (0.25% v/v). Using a non-ionic surfactant instead of a crop oil concentrate is allowed but the weed control achieved with crop oil is consistently better than NIS.

**Nitrogen Fertilizer:** Add a spray grade urea ammonium nitrate (UAN) such as 28-0-0 at a rate of 2.5 gallons/100 gallons of spray solution (2.5% v/v) or spray grade ammonium sulfate (AMS) at 8.5-17 lb/100 gallons of spray solution.

The use of methylated seed oil (MSO) adjuvants or MSO blend adjuvants for applications of Callisto Xtra may result in severe crop injury. Therefore, MSO adjuvants are not recommended.

## Application to Sweet Corn and Yellow Popcorn

Postemergence applications (after crop emergence) of Callisto Xtra may cause crop bleaching in some sweet corn and yellow popcorn hybrids. Crop bleaching is typically transitory and has no affect on final yield or quality. However, herbicide sensitivity in sweet corn and yellow popcorn varies widely, and all sweet corn and yellow popcorn hybrids have not been tested. Contact your sweet corn or popcorn company, Agronomist, or University Specialist about hybrid recommendations before making a postemergence application of Callisto Xtra to sweet corn or yellow popcorn.

Applications of Callisto Xtra to sweet corn or popcorn must include either a non-ionic surfactant or a crop oil concentrate. Do not add UAN or AMS when making postemergence applications of Callisto Xtra to sweet corn or yellow popcorn or severe

crop injury will likely occur. Because the adjuvant benefits of urea ammonium nitrate (UAN) or ammonium sulfate (AMS) are not available in sweet corn or yellow popcorn, weeds less than five inches should be targeted.

**Non-Ionic Surfactant (NIS):** Add at a rate of 1 qt/100 gallons of spray solution (0.25% v/v). Using a non-ionic surfactant is recommended to minimize the risk of crop injury.

**Crop Oil Concentrate (COC):** Add at a rate of 1.0 gallon/100 gallons of spray solution (1.0% v/v). A COC may be used instead of NIS to increase the level of weed control, especially under dry growing conditions, but the risk of crop injury is increased significantly under lush growing conditions.

**CORN – CALLISTO XTRA TANK MIXTURES**

For additional postemergence weed control, Callisto Xtra can be tank mixed with the herbicides listed in Table 3. Apply Callisto Xtra at 20-24 fl oz/acre as described in the Callisto Xtra applied alone corn section on this label. Applying Callisto Xtra at rates less than 20 fl oz/acre in tank mixture may result in incomplete weed control or reduced residual control.

Always add the appropriate adjuvant to the spray tank as described in the Callisto Xtra alone corn application section on this label. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled. When applying Callisto Xtra in tank mixture, follow the most restrictive label directions.

Not all of the tank mix pesticides listed are registered for field corn, sweet corn or yellow popcorn.

**Table 3: Callisto Xtra Postemergence Tank Mixtures.**

Tank Mix Partner <sup>1</sup>	Rate (Max)	Purpose
AAtrex® 4L, AAtrex® Nine-O or other solo atrazine products	0.25-1.4 lb ai/acre	Improved or faster control of broadleaf weeds
Accent®, Accent® Q, Basis®, Require® Q, Resolve® Q, Steadfast®, Steadfast® Q, Steadfast® ATZ or Stout™	Per product label	Improved control of grass weeds
Basagran®	Per product label	Improved control of broadleaf weeds
Bicep II Magnum® or Bicep Lite II Magnum®	Per product label	Improved control of broadleaf weeds plus residual grass and broadleaf control
Buctril®, Moxy™ or other 2 lb/gallon solo bromoxynil products	6 fl oz/acre	Improved control of broadleaf weeds
Clarity® or Status®	4 fl oz/acre	Improved control of broadleaf

Tank Mix Partner <sup>1</sup>	Rate (Max)	Purpose
	(Clarity) 5 oz/acre (Status)	weeds
Dual Magnum® or Dual II Magnum®	Per product label	Residual grass control
Liberty® or Ignite® 280 SL	Per product label	Improved control of grass and broadleaf weeds
Northstar®	5 oz/acre	Improved control of grass and broadleaf weeds
Touchdown® brands, Roundup® brands or other solo glyphosate products	Per product label	Improved control of grass and broadleaf weeds

<sup>1</sup>Refer to the appropriate tank mixture section below for specific details.

**Tank Mixed with AAtrex® 4L or AAtrex® Nine-O**

Callisto Xtra at 20-24 fl oz/A can be tank-mixed with AAtrex for improved or faster control of broadleaf weeds including common ragweed, Florida pusley, kochia, large crabgrass, annual morningglory spp., Palmer amaranth, prickly sida, prostrate knotweed, Venice mallow, and wild buckwheat.

The total amount of atrazine allowed per single application is 2 lb/acre. If the rate of Callisto Xtra applied is 20 fl oz/A, do not add more than 1.5 pt/A of AAtrex 4L (1.5 lb ai/acre or equivalent). If the rate of Callisto Xtra applied is 24 fl oz/A, do not add more than 1.4 pt/A of AAtrex 4L (1.4 lb ai/acre or equivalent). If atrazine was applied to the corn crop prior to the application of Callisto Xtra, adjust the atrazine mixture rate such that the total amount per season does not exceed 2.5 lb ai/acre.

Do not use any atrazine formulation if corn is greater than 12 inches tall. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

**Tank Mixed with Accent®, Accent® Q, Basis®, Require® Q, Resolve® Q, Steadfast®, Steadfast® Q, Steadfast® ATZ, or Stout™ (Only for Use on Field Corn)**

Callisto Xtra at 20-24 fl oz/A can be tank-mixed with Accent®, Accent® Q, Basis®, Require® Q, Resolve® Q, Steadfast®, Steadfast® Q, Steadfast® ATZ, or Stout™. These tank mixtures are recommended for improved control of emerged grass weeds. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

**Tank Mixed with Basagran®**

Callisto Xtra at 20-24 fl oz/A can be tank-mixed with Basagran for improved broadleaf weed control. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

**Tank Mixed with Bicep II Magnum® or Bicep Lite II Magnum®**

Callisto Xtra at 20-24 fl oz/A can be tank-mixed with Bicep II Magnum or Bicep Lite II Magnum, but special attention must be paid to adjuvant selection and/or application method. If either of these tank mixtures are used, the user should either leave the nitrogen based adjuvant (UAN or AMS) out of the mix or apply as a post-directed spray to minimize contact with crop foliage. There is still a risk of temporary crop injury in the form of corn leaf burn with these mixtures. To further reduce the risk of crop injury, the user may also leave out the crop oil concentrate (COC), or replace it with a nonionic surfactant (NIS). In all cases, the control of emerged weeds may be reduced somewhat due to less than optimum adjuvant effect or weed coverage. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

The total amount of atrazine allowed per single application is 2 lbs/acre and not more than a total 2.5 lb/acre per year. Do not apply either of these tank mixtures to corn greater than 12 inches tall.

**Tank Mixed with Buctril® or Moxy™ (2 lb/gallon)**

Callisto Xtra at 20-24 fl oz/A can be tank-mixed with Buctril or Moxy to aid in the control of certain broadleaf weeds (e.g. ragweeds), at a rate up to 6 fl oz/A. In addition to Buctril or Moxy, Callisto Xtra can be tank mixed with other 2 lb/gallon bromoxynil alone products. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled. Not for use in sweet, seed, or silage corn.

**Tank Mixed with Clarity® or Status®**

Callisto Xtra at 20-24 fl oz/A can be tank-mixed with Clarity at 4 fl oz/A or Status at 2.5-5 oz/acre for improved control of certain broadleaf weeds (e.g. kochia and or Russian thistle). The recommended adjuvants for the Callisto Xtra plus Clarity or Status tank mix is NIS at 1 qt/100 gallons of spray solution (0.25%v/v) plus ammonium sulfate (AMS) at 8.5 lb/100 gallons of spray solution. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled. Clarity is not registered for use on sweet corn.

### **Tank Mixed with Dual Magnum® or Dual II Magnum®**

Callisto Xtra at 20-24 fl oz/A can be tank-mixed with Dual Magnum or Dual II Magnum, but special attention must be paid to adjuvant selection and/or application method. As EC formulations, Dual Magnum and Dual II Magnum can act like an adjuvant in certain combinations and thus increase the risk of crop injury. If either of these tank mixtures are used, the user should either leave the crop oil concentrate (COC) out of the adjuvant mix or apply as a post-directed spray to minimize contact with crop foliage. In either case, the control of emerged weeds may be reduced somewhat due to less than optimum adjuvant effect or weed coverage and there is still a risk of temporary crop injury in the form of leaf burn with these mixtures. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

### **Tank Mixed with Liberty® or Ignite® 280 SL in LibertyLink® Corn**

Callisto Xtra at 20-24 fl oz/A can be tank-mixed with Liberty or Ignite 280 SL for improved grass and broadleaf control in LibertyLink corn.

Use tank mixes with Liberty or Ignite 280SL only on seed designated as LibertyLink or warranted by Bayer Crop Science as being tolerant to Liberty or Ignite 280SL herbicides. Failure to follow these directions will lead to severe crop injury and possibly crop death. Follow all other directions for use, including adjuvants, as specified on the Liberty or Ignite 280SL product labels. Do not use crop oil concentrate (COC) as an adjuvant when tank mixing Callisto Xtra with Liberty or Ignite 280SL, or severe crop injury may occur.

Always add spray-grade ammonium sulfate (AMS) at 8.5-17 lbs/100 gallons of spray solution to the tank mixture of Callisto Xtra plus Liberty or Ignite 280 SL. When using liquid ammonium sulfate (AMS) products, use a rate that delivers an AMS equivalent of 8.5-17 lb/100 gallons of spray solution.

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

### **Tank Mixed with Northstar®**

Callisto Xtra at 20-24 fl oz/A can be tank-mixed with Northstar at 2.5-5 oz/acre for improved control of certain broadleaf weeds (e.g. kochia and or Russian thistle). The recommended adjuvants for the Callisto Xtra plus Northstar tank mix is NIS at 1 qt/100 gallons of spray solution (0.25%v/v) plus ammonium sulfate (AMS) at 8.5 lb/100 gallons of spray solution. Apply the tank mixture of Callisto Xtra plus Northstar only when corn is between 4-12 inches in height. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled. Not for use on sweet corn.

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- **Tank Mixed with Glyphosate in GT Corn**
- Callisto Xtra at 20-24 fl oz/A can be tank-mixed with a solo glyphosate product (such as Touchdown® or Roundup® brands) that is registered for use over-the-top in glyphosate tolerant (such as Agrisure™ GT Corn or Roundup Ready®) field corn. Application of the tank mixture of Callisto Xtra plus glyphosate to a corn hybrid that is not glyphosate tolerant will result in crop death.

If the glyphosate product has a built-in adjuvant system (i.e. the product label does not recommend additional adjuvant), add only spray-grade ammonium sulfate (AMS). The recommended rate of AMS is 8.5-17 lb/100 gallons of spray solution. When using liquid AMS products, use a rate that delivers an AMS equivalent of 8.5-17 lb/100 gallons of spray solution.

If the glyphosate product label recommends an adjuvant in addition to ammonium sulfate (AMS), add a non-ionic surfactant (NIS) at 1-2 qt/100 gallons of spray solution (0.25-0.5%v/v). The recommended rate of AMS is 8.5-17 lb/100 gallons of spray solution.

Do not add urea ammonium nitrate (UAN) or methylated seed oil (MSO) type adjuvants to the tank mixture of Callisto Xtra plus glyphosate or crop injury may occur. The use of crop oil concentrate (COC) type adjuvants may also reduce the activity of glyphosate.

Read and follow the Roundup Ready Gene or Glyphosate Tolerant Gene requirements on the glyphosate product label.

## **SUGARCANE – USE DIRECTIONS**

Callisto Xtra is a selective postemergence herbicide for the control of broadleaf weeds and certain grasses in sugarcane. Callisto Xtra is systemic and is absorbed through the foliage of emerged weeds and also by soil uptake. For best weed control results, apply Callisto Xtra to actively growing weeds. Susceptible weeds which emerge soon after application of Callisto Xtra may be controlled after they absorb the herbicide from the soil.

### **Crop Timing**

Apply Callisto Xtra as a broadcast over-the-top or post-directed application to sugarcane after crop emergence. Broadcast over-the-top applications require a minimum of 114 day interval between Callisto Xtra application and sugarcane harvest. Post-directed applications require a minimum of 100 day interval between Callisto Xtra application and sugarcane harvest.

### **Use Rates**

Apply Callisto Xtra postemergence at 20-24 fl oz/A for control of the weeds listed in Table 1. Postemergence applications may be made as a broadcast over-the-top or a post-directed spray to the base of the sugarcane. Application of Callisto Xtra at rates less than 20 fl oz/A postemergence may result in incomplete weed control and loss of



residual control. For best results, Callisto Xtra should be applied to actively growing weeds. Applications to weeds larger than specified in Table 1 will likely result in incomplete control.

If a preemergence application of a mesotrione containing product was made earlier in the season, only one postemergence application of Callisto Xtra can be made. If no preemergence application of a mesotrione containing product was made earlier in the season, both a post-over-the-top and a post-directed application can be made.

### **Application to Sugarcane**

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.

Applications of Callisto Xtra must include either a crop oil concentrate or a non-ionic surfactant. In addition, a spray grade urea ammonium nitrate or ammonium sulfate is also recommended.

**Crop Oil Concentrate (COC):** Add at a rate of 1.0 gallon/100 gallons of spray solution (1.0% v/v). Using a crop oil concentrate will provide consistently better weed control than NIS.

**Non-Ionic Surfactant (NIS):** Add at a rate of 1 qt/100 gallons of spray solution (0.25% v/v). Using a non-ionic surfactant instead of a crop oil concentrate is allowed but the weed control achieved with crop oil is consistently better than NIS.

**Nitrogen Fertilizer:** Add a spray grade urea ammonium nitrate (UAN) such as 28-0-0 at a rate of 2.5 gallons/100 gallons of spray solution (2.5% v/v) or spray grade ammonium sulfate (AMS) at 8.5-17 lb/100 gallons of spray solution.

### **Tank Mixtures**

For additional postemergence weed control, Callisto Xtra can be tank mixed with the other herbicides. Apply Callisto Xtra at 20-24 fl oz/acre in tank mixtures. Applying Callisto Xtra at rates less than 20 fl oz/acre in tank mixture may result in incomplete weed control or reduced of residual control.

Always add the appropriate adjuvant to the spray tank as described in the Callisto Xtra sugarcane application section above. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled. When applying Callisto Xtra in tank mixture, follow the most restrictive label directions.

Callisto Xtra can be tank mixed with AAtrex® (or other solo atrazine products), Asulox® and/or Envoke®. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

**Restrictions for Sugarcane:**

1. Do not apply more than 24 fl oz/A of Callisto Xtra in a single application.
2. Do not make more than two applications of Callisto Xtra per year.
3. Do not make two Callisto Xtra applications less than 14 days apart.

**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 seed, fertilizers, or foodstuffs. Can be stored at temperatures as low as -20°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.

**Container Handling [less than 5 gallons]**

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment of a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For minor spills, leaks, etc. follow all precautions 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. If the container is damaged and leaking or material has been spilled follow these procedures:

1. Cover spill with absorbent material.

2. Sweep into disposal container.
3. Wash area with detergent and water and follow with clean water rinse.
4. Do not allow to contaminate water supplies.
5. Dispose of according to instructions.

### **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 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, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For minor spills, leaks, etc. follow all precautions 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. If the container is damaged and leaking or material has been spilled follow these procedures:

1. Cover spill with absorbent material.
2. Sweep into disposal container.
3. Wash area with detergent and water and follow with clean water rinse.
4. Do not allow to contaminate water supplies.
5. Dispose of according to instructions.

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

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

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[Base Label]

**RESTRICTED USE PESTICIDE  
(GROUND AND SURFACE WATER CONCERNS)**

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION. THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

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

**GROUP 5 27 HERBICIDE**

Callisto® Xtra

Herbicide

Postemergence Herbicide for use in Field Corn, Seed Corn, Silage Corn, Sweet Corn, Yellow Popcorn and Sugarcane.

Active Ingredient\*:

Atrazine** (CAS No. 1912-24-9).....	34.30%
Related Compounds.....	0.70%
Mesotrione (CAS No. 104206-82-8).....	5.36%
Other Ingredients:	59.64%
Total:	100.00%

\*This product contains 0.5 pounds of mesotrione pounds per gallon and 3.2 pounds of atrazine and related triazines per gallon.

\*\*Atrazine with a maximum of 1.4% related triazines.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

See additional precautionary statements, directions for use and complete storage and disposal instructions in booklet.

EPA Reg. No. 100-1359

EPA Est.

2.5 gallons  
120 gallons  
Net Contents

<b>FIRST AID</b>	
<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>
<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>
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 1-800-888-8372	

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Harmful if swallowed.

**Environmental Hazards**

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

This product must not be mixed/loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes.\*

This product must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 foot buffer or setback from runoff entry points must be planted to crop, seeded with grass or other suitable crop.

#### **Tile-Outletted Terraced Fields Containing Standpipes**

One of the following restrictions must be used in applying atrazine to tile-terraced fields containing standpipes:

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

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

\*For exceptions to this restriction, see the **Environmental Hazards** section of the **Precautionary Statements** in the attached booklet.

### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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

[Bulk]

**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, Inc. 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.



## 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 seed, fertilizers, or foodstuffs. Can be stored at temperatures as low as -20°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.

**Container Handling:** 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 of a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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1. Cover spill with absorbent material.
2. Sweep into disposal container.
3. Wash area with detergent and water and follow with clean water rinse.
4. Do not allow to contaminate water supplies.
5. Dispose of according to instructions.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

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

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