



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

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

April 9, 2021

Greg Ruff  
Consultant  
Stoller Enterprises, Inc.  
c/o Spring Regulatory Sciences  
6620 Cypresswood Drive Suite 250  
Spring, TX 77379

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment – Acceptable Revisions to Add Optional Marketing Claims, Not for Use in California Statements, Addition of nut crops, citrus, berries and row crops and reformatting of the Directions for Use section.  
Product Name: X-Cyte  
EPA Registration Number: 57538-15  
Application Date: 12/31/2020  
Action Code Case Number: 00147885

Dear Mr. Ruff:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this 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 18 months from the date of this letter. After 18 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.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or

Page 2 of 2  
EPA Reg. No. 57538-15  
Action Code Case No. 00147885

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 EPA 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 Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Alex Horansky by phone at (703) 347-0128 or via email at [Horansky.alex@epa.gov](mailto:Horansky.alex@epa.gov).

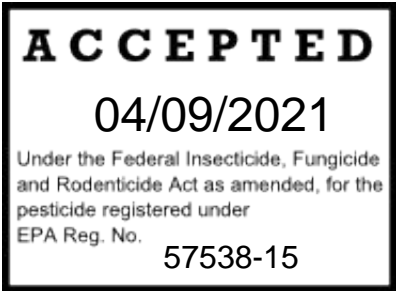
Sincerely,

A handwritten signature in blue ink that reads "Andrew C. Bryceland". The signature is fluid and cursive, with the first name being the most prominent.

Andrew Bryceland, Team Leader  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)  
Office of Pesticide Programs

Enclosure

[Denotes Optional Text]  
{Denotes Notes to EPA Reviewer}  
{Front Panel start}



# X-CYTE™

## A Plant Growth Regulator and Yield Stimulant

ACTIVE INGREDIENT(S):	
Cytokinin, as kinetin, based on biological activity .....	.04%
INERT INGREDIENT(S): .....	<u>99.96%</u>
TOTAL: .....	100.00%

(Contains 0.0064 oz. cytokinin/pint)  
CONTAINS NON-PLANT FOOD INGREDIENT:  
0.04% Cytokinin

### KEEP OUT OF REACH OF CHILDREN CAUTION

See additional Precautionary Statements and Directions for Use [inside booklet] [on [back panel] [side panel] [other panel].

< Z-XCYTE >

EPA Reg. No. 57538-15

EPA Est. No.  57538-TX-2  
 57538-FL-1  
 57538-IA-1

**DENSITY::** 8.37 lbs/gal or 1.00 kg/L

#### NET CONTENTS:

1 Gal (3.8 L)     2.5 Gal (9.5 L)     5 Gal (19 L)     55 Gal (209 L)]

#### [NET WEIGHT:]

8.3 lb (3.7 kg)     20.7 lb (9.4 kg)     41.5 lb (18.8 kg)     456.5 lb (207 kg)]

[\*Not for use in California] –  
[Lot Number:]  
[Manufacture Date:]  
[Best if used by: ]  
[1.0 Quart (0.95 L) and 2.0 lb ( 0.9kg)]

[30 Gal (114 L) and 249 lb (112.9 kg)]

[275 Gal (1045 L) and 2282.5lb ( 1035.1kg) ]

[Rev: [21D06]] {will change if non-amendment label changes occur}

{End Front Panel}

**{Optional Marketing Claims – can appear anywhere on the label}**

[X-Cyte™ provides cytokinin, which is [critical] [crucial] for vegetative growth, reproductive development and abiotic stress mitigation.]

[X-Cyte is the market-leader in consistency and performance limiting yield loss due to cytokinin deficiency.]

[X-Cyte is an EPA-registered plant growth regulator and yield stimulant.]

[Product Benefits for Corn:

[Increases pollen production]

[Increases fertility]

[Increases kernel weight]

[Increases grain density]

[Reduces kernel abortion]]

[Product Benefits for Soybeans:

[Increases seed size]

[Increases seed weight]

[Reduces pod loss]]

[Product Benefits for Wheat and Small Grains:

[Increases grains per head]

[Increases stalk strength]]

[Product Benefits for Cotton:

[Increases bolls per plant]]

[Product Benefits for Fruits and Vegetables:

[Promotes larger fruit development]]

[X-Cyte is tank-mix compatible with many leading fungicides]

[Protects yields during periods of high temperature]

[X-Cyte works to [restore hormonal balance,] [improve carbohydrate storage capacity,] [and increase cell division in plants for enhanced uniformity,] [density and quality of fruit / grain].

[[Optimizes] [Protects] [Enables] [Enhances] yield potential]

[X-Cyte works to optimize plant's health, physiology and vigor at each critical growth stage.]

[X-Cyte provides increased sugar storage capacity]

[Up-regulates genes associated with sugar transport, increasing sugars in the reproductive parts of the plant]

[Produces more cells for higher density and higher kernel and seed weight]

[Helps produce a thicker cell wall more resistant to breakdown and seed abortion]

[Increases cell division]

[Protects yield potential]

[Maximizes yield potential]

[Improves pollination, flowering and fruit set in high temperatures]

[Increases tillers on tillering crops]

[Improves small grain stalk strength]

[Improves grain fill, reduces tip back and increases test weight on corn]

[Holds more pods on soybean, more bolls on cotton]

[X-Cyte promotes larger fruit development in fruits, vegetables and nut crops]

[X-Cyte promotes plant physiological development through participation in cell division and enlargement]

<b>FIRST AID</b>	
If on skin or clothing	<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>
If swallowed	<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>
If inhaled	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
If in eyes	<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>HOT LINE NUMBER</b>	
-Have the product container or label with you when calling a poison control center or doctor or are going for treatment. -For general information on product use, call the National Pesticides Information Center at 1-800-858-7378. -For emergencies, call the Poison Control Network at 1-800-222-1222	
<b>FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure or accident, call CHEMTREC at 1-800-424-9300.</b>	

## **PRECAUTIONARY STATEMENTS**

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

**CAUTION:** Harmful if absorbed through the skin or swallowed. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Wear the appropriate Personal Protective Equipment (PPE).

### **Personal Protective Equipment (PPE)**

Some materials that are chemical resistant to this product are any waterproof material. If you want more options, follow instructions for category A on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- long-sleeved shirt and long pants,
- chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride,
- shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. When handlers use closed systems, enclosed cabs or aircraft 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**

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

## **ENVIRONMENTAL HAZARDS**

**For terrestrial uses:** Do not apply directly to water or areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water by cleaning of equipment or disposal of equipment wash water or rinsate. Exposed treated seed may be hazardous to birds and other wildlife. Treat

only those seeds needed for immediate use and planting. Dispose of all excess treated seed and seed packaging by burial away from streams and bodies of water.

**Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.**

#### GENERAL USE INSTRUCTIONS

For best results, apply X-CYTE before noon or after 4 p.m. Use a spreader-sticker (surfactant) cleared for application to growing crops with the product. Before using, clean thoroughly with soap and water any spigot or pump put into an X-CYTE drum. Mix X-CYTE with enough water to get thorough coverage of plant surfaces. X-CYTE is compatible with most other spray materials, but always conduct a jar test when using an untried combination to ensure compatibility.

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. 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 and in 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 (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Do not enter or allow worker entry into treated areas during the REI of 4 hours unless wearing the appropriate PPE.

For early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water, wear:

- long-sleeved shirt and long pants,
- chemical-resistant gloves made of any waterproof material, such as polyethylene or polyvinyl chloride,
- shoes plus socks.

#### CHEMIGATION[\*]

##### Application and Calibration Techniques for Sprinkler Irrigation

Apply this product only through the following types of irrigation systems: sprinkler including center pivot, traveler, big gun, motorized lateral move, end tow, side (wheel) roll, solid set, or hand move irrigation; furrow; or drip (trickle) irrigation systems. Do not apply through any other types of irrigation systems. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Experiment Station specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise.

- A. Center Pivot, Traveler, Big Gun, Motorized Lateral Move, End Tow, and Side (Wheel) Roll Irrigation Equipment:** Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank of injection equipment with water. Operate system for

one complete circle for center pivot or one complete run for the other recommended equipment, measuring time required, amount of water injected, and acreage contained in circle or run. Mix recommended amount of product for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run, but continue to operate irrigation system until product has been cleared from last sprinkler head. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur.

- B. Solid Set and Hand Move Irrigation Equipment:** Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty–five minute period. Mix desired amount of product for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that product will remain in suspension during the injection cycle. Product can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until pesticide is cleared from last sprinkler head.

[\*Not for Use in California]

#### **Safety Devices for Sprinkler Chemigation**

- (1) The systems designated above must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- (2) All pesticide injection pipelines must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- (3) The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- (4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- (5) The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- (6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- (7) Do not apply when wind speed favors drift beyond the area intended for treatment.

#### **Systems Connected to Public Water Sources**

- (1) Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of a year.
- (2) Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- (3) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- (4) The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- (5) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or, in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- (6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- (7) Do not apply when wind speed favors drift beyond the area intended for treatment.



### **In-Furrow Chemigation[\*]**

- (1) Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.
- (2) Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
  - a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
  - b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
  - c. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
  - d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
  - e. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
  - f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Apply X-CYTE with sufficient water to penetrate into the root zone without excessive leaching into deeper soil.  
[\*Not for Use in California]

### **Drip (Trickle) Chemigation[\*]**

- (1) The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- (2) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- (3) The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- (4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- (5) The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- (6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Apply X-CYTE with sufficient water to penetrate into the root zone without excessive leaching into deeper soil.  
[\*Not for Use in California]

### **CROP USAGE – ALL CROPS FOR STRESS RELIEF[\*]**

Use 1 pint X-CYTE per acre (1.2 liters/hectare) on any crop prematurely dying down (loss of color) due to stress caused by one or more of the following conditions: weather (frost, drought, excessive moisture), insect infestation, fungus attack, and/or herbicide burn.

[\*Not for Use in California]

**CROP USAGE – ALL CROPS LISTED FOR TRANSPLANTING[\*] AND SEED BED TREATMENT[\*]**

Use 2 pints X-CYTE per acre (2.4 liters/hectare) or 1 part X-CYTE to 1000 parts water (approximately 1 tablespoon X-CYTE (15 ml) to 1 gallon (3.8 liters) water) as a root dip and watering solution when transplanting.

Use 2 pints X-CYTE per acre (2.4 liters/hectare) applied to the seedbed at time of seeding or up to 20 days thereafter.

[\*Not for Use in California]

**MIXING INSTRUCTION:** Follow this mixing order 1. Water 2. X-CYTE3. Other Fertilizer / Pesticide. X-CYTE will disperse in water with little agitation. X-CYTE is compatible with most fertilizers, herbicides, fungicides, insecticides, and pesticides. Always conduct a jar test when using new or untried combinations.

**USE RATES FOR FOLIAR, SOIL, IN-FURROW AND/OR CHEMIGATION[\*] APPLICATION:**

**FOR ALL CROPS LISTED BELOW**

Use the higher rate listed in the use rates below by crop, for single planned foliar applications or through in furrow or chemigation (single or multiple) applications. With planned multiple foliar applications, the lower rates in the range below by crop applied multiple times is acceptable.

**FOR FOLIAR AND FERTIGATION APPLICATION**

Please reference the table below.

**COMMERCIAL AGRICULTURE-APPLICATION RATES**

**TREE NUT AND TREE FRUIT**

CROP	USE RATE	APPLICATION	MAXIMUM APPLICATION RATES
ALMONDS[*]	0.5 to 2.0 pints/acre (0.6 to 2.4 liters/hectare)	1st application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) applied at petal fall. 2nd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) four weeks post petal fall. 3rd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) 8 weeks post petal fall. 4th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud initiation. 5th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud development.	2 pints/acre (2.4 liters/hectare) per application
APPLE[*],PEAR[*]	1 pint/acre (1.2 liters/hectare)	1 <sup>st</sup> application: at full pink. 2 <sup>nd</sup> application: at calix (petal fall). 3 <sup>rd</sup> application: 3 weeks after 2 <sup>nd</sup> spraying. 4 <sup>th</sup> application: 4 weeks after 3 <sup>rd</sup> spraying.	1 pint/acre (1.2 liters/hectare) per application
AVOCADOS[*]	1 pint/acre (1.2 liters/hectare)	1 <sup>st</sup> application: at full pink. 2 <sup>nd</sup> application: at calix (petal fall). 3 <sup>rd</sup> application: 3 weeks after 2 <sup>nd</sup> spraying.	1 pint/acre (1.2 liters/hectare) per application

		4 <sup>th</sup> application: 4 weeks after 3 <sup>rd</sup> spraying.	
BANANAS[*]	0.85 to 8.5 pints per acre (1 to 10 liters/hectare)	To reduce stress: Apply when stress conditions are anticipated. Rates and timing must be determined for each site. Make applications at least 14 days apart using ground sprayers, aerial sprayers, or by plant injection.	8.5 pints/acre (10 liters/hectare)
CASHEWS[*]	0.5 to 2.0 pints/acre (0.6 to 2.4 liters/hectare)	1st application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) applied at petal fall. 2nd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) four weeks post petal fall. 3rd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) 8 weeks post petal fall. 4th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud initiation. 5th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud development.	2 pint/acre (2.4 liters/hectare) per application
CHERRY[*], PRUNES[*]	1 pint/acre (1.2 liters/hectare)	1st application: at prebloom. 2nd application: at calyx (petal fall). 3rd application: 3 weeks after 2nd spraying. 4th application: 4 weeks after 3rd spraying.	1 pint/acre (1.2 liters/hectare) per application
CHESTNUTS[*]	0.5 to 2.0 pints/acre (0.6 to 2.4 liters/hectare)	1st application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) applied at petal fall. 2nd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) four weeks post petal fall. 3rd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) 8 weeks post petal fall. 4th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud initiation. 5th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud development.	2 pint/acre (2.4 liters/hectare) per application
CITRUS CROPS[*] (grapefruit[*], lemons[*], limes[*], oranges[*], tangelos[*], tangerines[*], Etc[*])	1 pint/acre (1.2 liters/hectare)	1st application: at prebloom. 2nd application: at calyx (petal fall). 3rd application: 3 weeks after 2nd spraying. 4th application: 4 weeks after 3rd spraying	1 pint/acre (1.2 liters/hectare) per application

FIGS[*]	0.5 to 2.0 pints/acre (0.6 to 2.4 liters/hectare)	1st application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) applied at petal fall. 2nd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) four weeks post petal fall. 3rd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) 8 weeks post petal fall. 4th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud initiation. 5th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud development.	2 pint/acre (2.4 liters/hectare) per application
HAZELNUT[*]	0.5 to 2.0 pints/acre (0.6 to 2.4 liters/hectare)	1st application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) applied at petal fall. 2nd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) four weeks post petal fall. 3rd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) 8 weeks post petal fall. 4th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud initiation. 5th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud development.	2 pint/acre (2.4 liters/hectare) per application
MACADAMIAS[*]	0.5 to 2.0 pints/acre (0.6 to 2.4 liters/hectare)	1st application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) applied at petal fall. 2nd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) four weeks post petal fall. 3rd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) 8 weeks post petal fall. 4th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud initiation. 5th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud development.	2 pint/acre (2.4 liters/hectare) per application
MANGOES[*]	1 pint/acre (1.2 liters/hectare)	1st application: at prebloom. 2nd application: at calyx (petal fall). 3rd application: 3 weeks after 2nd spraying. 4th application: 4 weeks after 3rd spraying.	1 pint/acre (1.2 liters/hectare) per application

OLIVES[*]	2 to 8 fl. Oz./acre (0.15 to 0.6 liters/hectare)	Every 7 to 21 days from bud break through harvest.	8 fl. Oz./acre (0.6 liters/hectare) per application
PEACHES[*], NECTARINES[*]	1 pint/acre (1.2 liters/hectare)	1st application: at prebloom. 2nd application: at calyx (petal fall). 3rd application: 3 weeks after 2nd spraying. 4th application: 4 weeks after 3rd spraying.	1 pint/acre (1.2 liters/hectare) per application
PECANS[*]	0.5 to 2.0 pints/acre (0.6 to 2.4 liters/hectare)	1st application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) applied at petal fall. 2nd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) four weeks post petal fall. 3rd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) 8 weeks post petal fall. 4th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud initiation. 5th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud development.	2 pint/acre (2.4 liters/hectare) per application
PISTACHIOS[*]	0.5 to 2.0 pints/acre (0.6 to 2.4 liters/hectare)	1st application: use 0.5-2 pints per acre (0.6 to 2.4 liters/hectare) applied at petal fall. 2nd application: use 0.5-2 pints per acre (0.6 to 2.4 liters/hectare) four weeks post petal fall. 3rd application: use 0.5-2 pints per acre (0.6 to 2.4 liters/hectare) 8 weeks post petal fall. 4th application: use 0.5-2 pints per acre (0.6 to 2.4 liters/hectare) at bud initiation. 5th application: use 0.5-2 pints (0.6 to 2.4 liters/hectare) per acre at bud development.	2 pint/acre (2.4 liters/hectare) per application
POMEGRANATES[*]	2 to 8 fl. Oz./acre (0.15 to 0.6 liters/hectare)	Every 7 to 21 days from bud break through harvest.	8 fl. Oz./acre (0.6 liters/hectare) per application
QUINCE[*]	1 pint/acre (1.2 liters/hectare)	1st application: at prebloom. 2nd application: at calyx (petal fall). 3rd application: 3 weeks after 2nd spraying. 4th application: 4 weeks after 3rd spraying	1 pint/acre (1.2 liters/hectare) per application
WALNUTS[*]	0.5 to 2.0 pints/acre	1st application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) applied	2 pint/acre

	(0.6 to 2.4 liters/hectare)	at petal fall. 2nd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) four weeks post petal fall. 3rd application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) 8 weeks post petal fall. 4th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud initiation. 5th application: use 0.5 to 2 pints per acre (0.6 to 2.4 liters/hectare) at bud development.	(2.4 liters/hectare) per application
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[\*Not for use in California]

**FRUIT AND VEGETABLE CROPS**

<b>CROP</b>	<b>USE RATE</b>	<b>APPLICATION</b>	<b>MAXIMUM APPLICATION RATES</b>
ARTICHOKES (GLOBE)[*]	1 to 2 pints/acre (1.2 to 2.4 liters/hectare)	1 <sup>st</sup> application: spray crowns when growth begins. 2 <sup>nd</sup> application: spray crowns after each cutting.	2 pint/acre (2.4 liters/hectare) per application
ASPARAGUS[*]	1 to 2 pints/acre (1.2 to 2.4 liters/hectare)	1 <sup>st</sup> application: spray crowns when growth begins. 2 <sup>nd</sup> application: spray crowns after each cutting.	2 pint/acre (2.4 liters/hectare) per application
BERRIES[*] (Blackberries[*], boysenberries[*], dewberries[*], Loganberries[*], blueberries[*], gooseberries[*], huckleberries[*], raspberries[*], currants[*], Etc[*])	2 to 8 fl. Oz./acre (0.15 to 0.6 liters/hectare)	Every 7 to 21 days from bud break through harvest	8 fl. Oz./acre (0.6 liters/hectare) per application
CARROTS[*]	1 pint/acre (1.2 liters/hectare)	1 <sup>st</sup> application: at tuber initiation. 2 <sup>nd</sup> application: 2 to 3 weeks after first spraying.	1 pint/acre (1.2 liters/hectare) per application

CELERY[*]	1 to 2 pints/acre (1.2 to 2.4 liters/hectare)	1 <sup>st</sup> application: Use 2 pints X-CYTE per acre (2.4 liters/hectare) applied to the seed bed at time of seeding or up to 20 days thereafter. 2 <sup>nd</sup> application: Use 2 pints X-CYTE per acre (2.4 liters/hectare) at the time seedlings are transplanted. See transplanting instructions above. 3 <sup>rd</sup> application: Use 1 pint X-CYTE per acre (1.2 liters/hectare) 2 to3 weeks after transplanting	2 pint/acre (2.4 liters/hectare) per application
CRUCIFEROUS CROPS[*] (Broccoli[*], Brussels sprouts[*], cabbage[*], cauliflower[*], collards[*], kale[*], mustard greens[*], rutabagas[*], turnips[*]Etc[*])	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	1 <sup>st</sup> application: 3 to 4 inch (8-10 cm) stage. Repeat at 10 to 14 day intervals.	1 pint/acre (1.2 liters/hectare) per application
CUCURBITS[*] (cantaloupe[*], cucumbers[*], honeydew[*], melons[*], muskmelon[*], pumpkins[*], squash[*], watermelon[*], Etc[*])	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	1 <sup>st</sup> application: 4 to 8 inch (10 to 20 cm stage. 2 <sup>nd</sup> application: at early bloom. 3 <sup>rd</sup> application: start of fruiting.	1 pint/acre (1.2 liters/hectare) per application
EGGPLANT[*]	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	1st application: just prior to 1st bloom. 2nd application:10 days after 1st spraying. 3rd application: 10 days after 2nd spraying.	1 pint/acre (1.2 liters/hectare) per application
FLAX[*]	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	1 <sup>st</sup> application: 4 to 8 inch (10 to 20 cm) stage. 2 <sup>nd</sup> application: at early bloom.	1 pint/acre (1.2 liters/hectare) per application
GRAPES[*], Wine Grapes[*] Table Grapes[*]	1 pint/acre (1.2 liter/hectare)	1st application: between leafout and prebloom. 2nd application: at petal fall. 3rd application: 30 days before harvest.	1 pint/acre (1.2 liters/hectare) per application
LETTUCE[*] (head[*] and leaf[*])	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	Application: 3 to 4 inch (8-10 cm) stage	1 pint/acre (1.2 liters/hectare) per application
OKRA[*]	1 to 2 pints/acre (1.2 to 2.4 liters/hectare)	1 <sup>st</sup> application: spray fruit when growth begins.	2 pint/acre

			(2.4 liters/hectare) per application
ONIONS[*], GARLIC[*], DRY ONIONS[*], DRY SHALLOTS[*]	1 pint/acre (1.2 liters/hectare)	1st application: at bulb initiation. 2nd application: 2 to 3 weeks after 1st spraying.	1 pint/acre (1.2 liters/hectare) per application
PARSLEY[*]	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	Application: During early growth	1 pint/acre (1.2 liters/hectare) per application
PEAS[*]	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	1st application: 3 to 4 inch (8-10 cm) stage. 2nd application: Prebloom. 3rd application: at early pod set.	1 pint/acre (1.2 liters/hectare) per application
PEPPERS[*]	0.5 to 1 pint/acre (0.6 to 1.2 liter/hectare)	1st application: just prior to 1st bloom. 2nd application: 10 days after 1st spraying. 3rd application: 10 days after 2nd spraying.	1 pint/acre (1.2 liters/hectare) per application
PINEAPPLE[*]	2 to 6 pints/acre (2.4 to 7.2 liters/hectare)	To reduce plant stress*: Apply to vegetative growth according to climate and crop needs at the site of proposed application. To improve fruit growth*: Apply post bloom according to climate and crop needs at the site of proposed application. *Allow at least 14 days between applications.	6 pint/acre (1.2 liters/hectare) per application
SPEARMINT[*], PEPPERMINT[*]	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	Application: During early growth	1 pint/acre (1.2 liters/hectare) per application
SPINACH[*]	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	Application: 3 to 4 inch (8-10 cm) stage	1 pint/acre (1.2 liters/hectare) per application
STRAWBERRIES[*]	2 pints/acre (2.4 liters/hectare)	1st application: As a transplant solution. See "Transplanting Instructions" above. 2nd application: At prebloom. 3rd application: At petal fall. 4th application: After harvest	2 pint/acre (2.4 liters/hectare) per application
TOMATOES[*]	1 to 2 pints/acre (1.2 to 2.4 liters/hectare)	1st application: use 2 pints per acre (2.4 liters/hectare) applied to the seed bed at time of seeding or up to 20 days thereafter. 2nd application: use 2 pints per acre (2.4 liters/hectare) at the time seedlings are transplanted. See "Transplanting Instructions".	2 pint/acre (2.4 liters/hectare) per application



		3rd application: use 1 pint per acre (1.2 liters/hectare) 2 to 3 weeks after 1st bloom.	
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[\*Not for use in California]

### ROW CROPS

CROP	USE RATE	APPLICATION	MAXIMUM APPLICATION RATES
ALFALFA[*] including seed alfalfa	1 pint/acre (1.2 liters/hectare)	1 <sup>st</sup> application: after cutting, with repeat sprays at 14 to 21 day intervals.	1 pint/acre (1.2 liters/hectare) per application
BEANS CROPS[*] (dry[*], colored[*], green[*], snap[*], lima[*], lentils[*],Etc[*])	1.0 to 2.0 pints/acre (1.2 to 2.4 liters/hectare)	1 <sup>st</sup> application: 4 to 5 inch (10 to 13 cm) stage. 2 <sup>nd</sup> application: at early bloom. 3 <sup>rd</sup> application: at early pod set.	2 pint/acre (2.4 liters/hectare) per application
BARLEY[*]	1 pint/acre (1.2 liters/hectare)	Application: 1 to 2 weeks before boot stage.	1 pint/acre (1.2 liters/hectare) per application
BEETS[*] (Sugar Beets[*],Table Beets[*],Etc[*])	1 pint/acre (1.2 liters/hectare)	1st application: at tuber initiation. 2nd application: 2 to 3 weeks after 1st spraying.	1 pint/acre (1.2 liters/hectare) per application
CANOLA[*]	1 pint/acre (1.2 liters/hectare)	1st application: at first flower. 2nd application: 2 to 3 weeks after 1st spraying.	1 pint/acre (1.2 liters/hectare) per application
CORN[*]	1 pint/acre (1.2 liters/hectare)	1 <sup>st</sup> application: At the 1 to 1.5 foot (31 to 46 cm) stage. 2 <sup>nd</sup> application: at tassel time.	1 pint/acre (1.2 liters/hectare) per application
COTTON[*]	1 pint/acre (1.2 liters/hectare)	1 <sup>st</sup> application: At pinhead square with repeat applications at 14 to 21 day intervals.	1 pint/acre (1.2 liters/hectare) per application
HEMP[*]	1 pint/acre (1.2 liters/hectare)	1st application: at bud formation. 2nd application: 2 to 3 weeks after 1st spraying.	1 pint/acre (1.2 liters/hectare) per application
HOPS [*]	1 pint/acre (1.2 liters/hectare)	Application: 1 to 2 weeks before boot stage.	1 pint/acre (1.2 liters/hectare) per application
OATS[*]	1 pint/acre (1.2 liters/hectare)	Application: 1 to 2 weeks before boot stage.	1 pint/acre (1.2 liters/hectare) per application
PEANUTS[*]	1 pint/acre	1 <sup>st</sup> application: at pegging.	1 pint/acre

	(1.2 liters/hectare)	2 <sup>nd</sup> application: 2 to 3 weeks after 1 <sup>st</sup> spraying.	(1.2 liters/hectare) per application
POTATOES[*]	1 pint/acre (1.2 to 2.4 liters/hectare)	1 <sup>st</sup> application: at tuber set. The time of application is determined by pulling an average size plant in the field 4 weeks (and every 7 days thereafter if necessary) after planting. Observe the roots to see if tubers are forming. Anytime you see the small tubers forming, it is time for the 1 <sup>st</sup> application. Usually tubers start to set 5 to 6 weeks after planting.  2 <sup>nd</sup> application: at full blossom. Spray Russet Burbanks, which do not show full blossom, should be sprayed 2 to 3 weeks after 1 <sup>st</sup> spray.	1 pint/acre (1.2 liters/hectare) per application
RICE[*]	1 pint/acre (1.2 liters/hectare)	1 <sup>st</sup> application: at 2 to 5 leaf stage with repeat application 14 to 21 days after.	1 pint/acre (1.2 liters/hectare) per application
RYE[*]	1 pint/acre (1.2 liters/hectare)	Application: 1 to 2 weeks before boot stage.	1 pint/acre (1.2 liters/hectare) per application
SORGHUM[*]	1 pint/acre (1.2 liters/hectare)	1 <sup>st</sup> application: At the 1 to 1.5 foot (31 to 46 cm) stage. 2 <sup>nd</sup> application: at tassel time.	1 pint/acre (1.2 liters/hectare) per application
SOYBEANS[*]	1 pint/acre (1.2 liters/hectare)	Application: at first bud formation	1 pint/acre (1.2 liters/hectare) per application
SUGAR CANE[*]	1 pint/acre (1.2 liters/hectare)	1 <sup>st</sup> application: At the 1 to 1.5 foot (31 to 46 cm) stage. 2 <sup>nd</sup> application: at tassel time.	1 pint/acre (1.2 liters/hectare) per application
SUNFLOWERS[*]	1 pint/acre (1.2 liters/hectare)	Application: 1 to 2 weeks before flowering.	1 pint/acre (1.2 liters/hectare) per application
SWEET POTATOES[*]	1 pint/acre (1.2 to 2.4 liters/hectare)	1 <sup>st</sup> application: at tuber set. The time of application is determined by pulling an average size plant in the field 4 weeks (and every 7 days thereafter if necessary) after planting. Observe the roots to see if tubers are forming. Anytime you see the small tubers forming, it is time for the 1 <sup>st</sup> application. Usually tubers start to set 5 to 6 weeks after planting.	1 pint/acre (1.2 liters/hectare) per application

		2nd application: at full blossom. Spray Russet Burbanks, which do not show full blossom, should be sprayed 2 to 3 weeks after 1st spray.	
WHEAT[*]	1 pint/acre (1.2 liters/hectare)	Application: 1 to 2 weeks before boot stage.	1 pint/acre (1.2 liters/hectare) per application

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### GRASS, FORAGE, AND ORNAMENTALS

CROP	USE RATE	APPLICATION	MAXIMUM APPLICATION RATES
<b>GRASS, FORAGE, and Ornamentals</b>			
CLOVER[*]	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	Application: During early growth	1 pint/acre (1.2 liters/hectare) per application
GRASS SEED CROPS[*]	0.5 to 1 pint/acre (0.6 to 1.2 liters/hectare)	1 <sup>st</sup> application: 4 to 8 inch (10 to 20 cm stage). 2 <sup>nd</sup> application: at early bloom.	1 pint/acre (1.2 liters/hectare) per application
ORNAMENTAL TREES[*] AND HERBACEOUS PLANTS[*]	<u>1.0 to 2.0 pints/acre (1.2 to 2.4 liters/hectare)</u>	<u>Apply 2 pints per acre (2.4 liters/hectare) in transplant water.</u> <u>Apply 1 pint per acre (1.2 liters/hectare) as a foliar spray when growth begins in the early spring.</u> <u>Apply 1 pint per acre (1.2 liters/hectare) at bud burst. Apply 1 pint per acre (1.2 liters/hectare) at bud set. Apply 1 pint per acre (1.2 liters/hectare) at the end of summer to maintain color through autumn.</u>	2 pints/acre (2.4 liters/hectare) per application

[\*Not for use in California]

### SEED TREATMENT[\*]

Use only on seeds for crops listed elsewhere on the label. Do not use treated seed for food, feed or oil purposes. Commercially treated seed must be labeled in accordance with the requirements of the Federal Seed Act and applicable State seed laws. An approved dye must be added to distinguish treated seed and prevent inadvertent use for food, feed, or oil purposes.

Per hundredweight (cwt.) of seed (45 kg), dilute 2 fl.Oz (59 ml) of X-CYTE in equal amounts of water and mist spray on seed. X-CYTE can be poured on or mixed with the seed in the hopper at planting.

[\*Not for Use in California]

## STORAGE AND DISPOSAL

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

**STORAGE:** Store in a cool place and out of direct sunlight.

**PESTICIDE DISPOSAL:** To avoid wastes, use all of the material in this container by application according to label directions. If waste cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**CONTAINER HANDLING:**

Nonrefillable container. Do not reuse or refill this container. Clean container 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 container ¼ full with water and recap.

For containers 5 gallons (19 liters) or less: Shake for 10 seconds. 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 procedure two more times. For containers larger than 5 gallons (19 liters): Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand 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 procedure two more times.

All sizes: Offer the container for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

## WARRANTY

To the fullest extent permitted by law, neither the manufacturers nor the seller make any warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use of this material when such use is contrary to label instructions. Read and follow the label directions carefully.

### Manufactured by:

STOLLER ENTERPRISES, INC.

9090 Katy Frwy., Suite 400

Houston, TX 77024 U.S.A.

Toll Free 1-800-539-5283 • Tel.: 1(713) 461-1493