

PM 92

58199-10

2/10/98

PT 1710

**ACCEPTED**  
 FEB 10 1998  
 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 58199-10

# CYZER™

Plant Growth Regulator

**ACTIVE INGREDIENTS:**

CYZERin, as kinetin, based on biological activity 0.02%

INERT Ingredients	99.98%
Total	100.00%

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

Harmful if swallowed or absorbed through the skin! Causes skin irritation! Do not breath vapor or spray mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling.

**Statement of Practical Treatment**

If in eyes: Flush with plenty of water. Get medical attention if irritation persists.  
 If swallowed: call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.  
 If on skin: Wash skin with soap and water. Get medical attention if irritation persists.

**SEE INSIDE FOR ADDITIONAL PRECAUTIONARY STATEMENTS**

EPA Reg. No. 58199-10  
EPA Est. No. 45246-ME-1

Net Contents:	gallons/	liters	Lot No.
	lbs./	kgs.	

Plant BioTech, Inc.  
Corrales, NM 87048

FEB 10 1998

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 58199-10

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**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Applicators and other handlers must wear long-sleeved shirt and long pants and shoes plus socks.

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

**User Safety Recommendations:  
Users should:**

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

**ENVIRONMENTAL HAZARDS:**

For terrestrial uses. Do not apply directly to water, to 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.

Exposed treated seed may be hazardous to birds and other wildlife. Dispose of all excess treated seed and seed packaging by burial away from bodies of water.

**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.

**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), notification to workers 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 4 hours.

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, waterproof gloves and shoes plus socks.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.

**Chemigation system**

Apply CYZER only through the following types of systems: sprinkler, including center pivot, lateral move, end tow, side roll, traveler, big gun, solid set, or hand move; or drip (trickle) irrigation systems. Do not apply this product through any other type of system.

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, contact State Extension Service 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 about the chemigation systems and responsible for its operation, or under supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

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 at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone (RPZ), back flow preventer 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.

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. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

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.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. 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.



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### Recommendations for Use

CYZER is a plant growth regulator product containing natural plant hormones formulated to improve nutrient utilization, promote bud initiation and development, flower set and retention, improve fruit size, and increase efficiency of production.

Use CYZER in combination with a well-balanced fertility program and good management practices. The Company recommends the use of soil and tissue testing, and additional nutrients and micronutrients as needed. For maximum benefit, add 0.1 to 0.25 lbs. Calcium to spray solution with a complete fertilizer, such as Nutrileaf (20-20-20) or Sol-U-Gro (12-48-8) along with chelated micronutrients.

## SHAKE WELL BEFORE USING

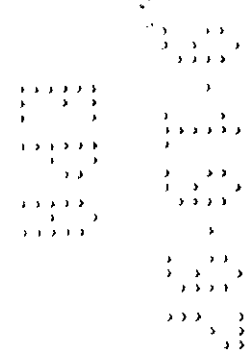
### GENERAL USE INSTRUCTIONS

For best results, CYZER should be applied before noon or after four p.m. A spreader/sticker/surfactant cleared for application to growing crops should be used with the product. Store CYZER in a cool dry place and out of direct sunlight. Any spigot or pump put into a CYZER drum should be cleaned with disinfectant (bleach and water, etc.) before using, unless the whole drum is to be used at one time. Mix CYZER with enough water to get thorough coverage of plant surfaces. CYZER is compatible with most other spray materials.

Good growing conditions are necessary for the maximum utilization of CYZER. Timing of the foliar spray application is very important. Always follow directions precisely. Do not apply within eight hours of forecast rain.

For General Use, mix 1 oz. CYZER with 5 gallons water and spray plant foliage and flowers to dampness, almost to runoff. For best results, CYZER should be applied in the morning or late afternoon.

For larger areas where aircraft or power driven sprayers are used to apply the spray, follow the specific use rates below. Apply with sufficient water to get thorough foliage coverage, 3 to 10 gallons water per acre for aircraft sprayers and 20 to 200 gallons water per acre for ground driven spray equipment. CYZER may be used with a surfactant and can be applied as a mixture with most pesticides. To be safe, run a "jar compability test" and treat a small area with any new mixture to test the chemical and crop reaction before large field application.



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### APPLICATION INSTRUCTIONS FOR TREE FRUITS

**Transplant:**

**Soil Drench:** Mix 12 ounces CYZER and 5 lbs. Sol-U-Gro\* (12-48-8) in 100 gallons water and apply 1 gallon of solution to each tree at time of planting after the roots are covered with soil.

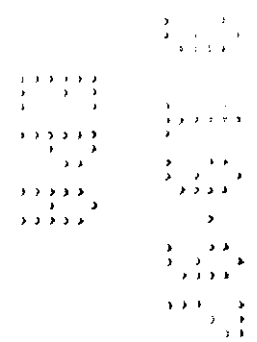
#### **APPLES**

1. **TO INCREASE POLLINATION EFFICIENCY:** At prebloom (stage 3 to 5), apply 2 to 4 ounces of CYZER per acre.
2. **TO INCREASE SIZE:** Make two applications of CYZER. The first application should be made at bloom to one week after bloom at rate of 1/2 pint CYZER per acre. (CYZER will not harm bees or pollinating insects). Make a second application at 1/2 pint per acre, 10 to 14 days after the first application. Both applications must be made to maximize the sizing benefit of CYZER.
3. **TO ENHANCE THE EFFECTS OF PROMALIN® ON RED DELICIOUS APPLES:** Apply CYZER at 1/2 pint/acre in combination with Promalin. Where split applications of Promalin are being used, 4 oz. of CYZER per acre per application should be used. Follow the directions on the Promalin label for the timing of and rates of Promalin to be used.
4. Monthly applications of CYZER beginning approximately 30 days after bloom at a rate of 2 to 4 ounces/acre, and continuing throughout the growing season to promote nutrient translocation and fruit development while at the same time supporting bud development to improve next year's return bloom.

The usual recommended rates of foliar calcium based on accepted local cultural practices should be included with the above applications of CYZER on apples to aid in reduction of calcium deficiency problems such as russeting and bitter pit.

**GENERAL:** Early applications of CYZER will promote the development of larger fruit while applications made 30+ days after bloom tend to strengthen buds and results in improved return bloom. The application of appropriate foliar nutrients may improve the overall performance of CYZER. This is especially true when calcium is included in the application.

When using foliar nutrients with CYZER, use materials and application timings that have shown they will not damage the trees or the fruit.



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## PEACHES

1. **TO INCREASE POLLINATION EFFICIENCY:** Prior to bloom (stage 4 & 5) apply 2 to 4 ounces CYZER per acre.
2. **TO INCREASE FRUIT SIZE:** Apply two, ½ pint applications of CYZER. Make the first application at bloom to one week after bloom using a rate of ½ pint CYZER per acre. (CYZER will not harm bees or pollinating insects.) Make a second application at ½ pint per acre, 10 to 14 days after the first application.
3. Monthly applications of CYZER beginning approximately 30 days after bloom at a rate of 2 to 4 ounces/acre, and continuing throughout the growing season to promote nutrient translocation and fruit development while at the same time supporting bud development to improve next year's return bloom.

The usual recommended rates of foliar calcium should be included with the above applications of CYZER on peaches to aid in reduction of calcium deficiency problems such as split pit. When using foliar nutrients with CYZER, use materials and application timings that have shown they will not damage the trees or the fruit.

## GRAPES

Spray with a solution of ½ pint CYZER per acre at the following growing stages:

First: Apply at the 12 to 18 inch cane stage to increase bunch size and length, and to support the flowers on the cluster.

Second: Apply during bloom to improve berry set.

Third: Apply during berry set to promote berry development.

Fourth: Apply 4 weeks before harvest to promote sugar accumulation and storage.

A light amount of an appropriate foliar calcium should be applied with the above applications of CYZER on grapes. Apply foliar potash (crop finisher) with the fourth application to increase sugar storage.

When using foliar nutrients with CYZER, use materials and application timings that have shown they will not damage the vines or the berries

## BANANAS

Make monthly applications of ½ pint per acre to promote growth, bunch development and increase fruit number and size.

## ORANGES

1. At bud differentiation stage (3 to 4 months before bloom), spray Cyzer at ½ to 1 pint per acre.
2. Repeat at early to mid-bloom.
3. Repeat 15 to 30 days after petal fall.
4. Repeat at monthly intervals thereafter.

### Non-Bearing Use for TREES, FRUITS, NUTS, BERRIES, SHRUBS AND WOODY ORNAMENTALS:

To aid in propagation of trees, fruits, berries, soft wood cuttings, shrubs and woody ornamentals and to reduce transplant shock, to promote growth and vigor and reduce stress in non-bearing fruit trees such as apple, peach; berry and vine crops such as cranberries; evergreen trees such as spruce, fir, pine; deciduous trees such as birch, elm, maple; flowering plants and shrubs such as poinsettia, rose, azalea, rhododendron, crepe myrtle; and for other flowering and non-flowering shrubs. Spray 1/2 to 1 pint per acre, or a mixture of 1 oz CYZER to 4 gallons water to thoroughly wet the foliage at any or all of the following growth stages:

1. Early spring to promote bud initiation;
2. At bud break;
3. At mid summer;
4. Early to mid fall.

**New cuttings:** Spray CYZER at 1/2 to 1 pint per acre on the stems, branches, vines or canes to be propagated from 1 to 7 days before cutting. After planting, spray CYZER at 1/4 to 1/2 pint or apply through the irrigation system at weekly intervals until the plants are established.

#### CROP USE GUIDELINES

<u>CROP</u>	<u>Broadcast Rate/Acre (each application)</u>	<u>TIMING AND FREQUENCY</u>
Alfalfa	8 oz	Spray CYZER immediately after cutting, at the beginning of bloom and at mid-bloom.
Asparagus	8 oz.	Spray CYZER to fern about 2 weeks after last harvest and repeat monthly during fern growth.
Beans and peas -fresh: Snap, string, pole, black-eyed, sweet green, English, etc.	4 oz	First: apply at the 2 to 3 trifoliolate leaf stage. Second: 7 to 15 days later.
Beans and peas - dry	4 oz	Apply when plants have developed 3 to 7 trifoliolate leaves, again at early bloom, and again at the beginning of pod fill.
Beets, Sugar	4 to 8 oz 8 to 16 oz 8 to 16 oz	First application: Apply at the beginning of root enlargement. Second: Apply at the beginning of sugar accumulation. Final: Apply 4 to 6 weeks before harvest.
Broccoli, Cabbage, Cauliflower Celery, Lettuce	4 oz	Make 4 to 6 applications at two week intervals beginning at the 3 leaf stage. Applications can be divided to provide weekly weekly application of 2 to 4 oz/A applied with other spray or mixtures of insecticides or foliar nutrients.
Carrot, radish	8 oz	Apply when the seedlings have 3 to 6 leaves. CYZER can be applied with Lorox® (Linuron).
Corn (field)	4 oz	Apply to prolific (multiple ear) varieties only. Make first application at the 8 to 10 leaf stage. Follow with second application at tasseling.



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**CROP USE GUIDELINES**

<u>CROP</u>	<u>Broadcast Rate/Acre (each application)</u>	<u>TIMING AND FREQUENCY</u>
Corn (sweet and popcorn)	4 oz	Apply at the 5 to 7 leaf stage. Follow with second application at tasseling.
Cotton	4 oz	Pinhead square: Apply weekly for 4 weeks, or First Bloom: Apply at first white flower and again two weeks later (mid bloom).
Cucumber	8 oz	Broadcast spray applications: To promote early female vigor and enhance yields, apply at the 3 to 6 leaf stage and continue at weekly to 14 day intervals for four applications. Banded rates at the 3 to 6 leaf stage should begin at the for 2 to 3 oz. rate for the first application.
Melons (Cantaloupe, Muskmelon, Watermelon)	8 oz	Broadcast spray applications: To promote early female vigor and enhance yields, apply at the 3 to 6 leaf stage and continue at weekly to 14 day intervals for four applications. To promote sugar development during cool growing conditions and enhance size of melons, apply CYZER beginning at bloom and at weekly to 14 day intervals until 3 weeks before harvest. Banded rates at the 3 to 6 leaf should begin at the 2 oz rate for the first application.
Onions	8 oz	Spray fall seeded onions in spring at bulb initiation and at weekly to 2 week intervals for 3 to 4 applications. Transplants: see transplant instructions. Spray transplants at bulb initiation (2 to 4 new blades) and again weekly for up to 4 applications.
Peanuts	8 oz	Apply at the 3rd trifoliolate. Repeat at 10 day intervals for four applications.
Peppers (Bell), Peppers (Chiles), Eggplant, Okra	4 oz	Apply at the 3 to 4 leaf stage. Follow with applications at 7 to 14 day intervals for a total of four to six applications.
Potatoes	Seed Treatment 4 oz	Dip potato pieces in a solution of 1 part CYZER to 0 400 parts water for 20 to 60 seconds. CYZER can be used with a fungicide treatment. Follow with foliar spray program. Spray at tuber initiation (about 2-4 weeks after emergence) and again two weeks later.
Rice	8 oz	Spray at the 3 to 7 leaf stage to increase tillers and panicles or at the PI/PD stage to reduce straight heads and increase panicle size.
Sorghum (Milo)	4 oz	Apply single spray during the 4 to 7 leaf stage;
Soybeans	4 oz	Apply during the 3 to 5 trifoliolate stage, and each of the R1 and R5 stages.
Spinach	4 oz	Make 4 to 6 applications at two week intervals beginning at the 3 leaf stage. Applications can be divided to provide weekly application of 2 oz/acre applied with other spray spray mixtures of insecticides or foliar nutrients.

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**CROP USE GUIDELINES**

<u>CROP</u>	<u>Broadcast Rate/Acre (each application)</u>	<u>TIMING AND FREQUENCY</u>
Squash: Summer, Winter Zucchini	8 oz	Broadcast spray applications: To promote early female vigor and enhance yields, apply at the 3 to 6 leaf stage and continue at weekly to 14 day intervals until 2 weeks before final harvest. Banded rates at the 3 to 6 leaf stage should begin at the 2 oz rate for the first application.
Strawberries	4 to 8 oz	Transplants: See transplant instructions. Begin spray spray applications at 1 to 2 weeks after transplanting and continue at 7 to 14 day intervals throughout the production season.
Tomatoes (fresh market)	4 to 8 oz	Spray CYZER at the 6 to 8 leaf stage. Follow with 7 to 14 day applications to promote set and continue production. Make final application about 3 to 4 weeks before final harvest.
Spring Wheat	4 oz	Apply when plants have 3 to 5 true leaves emerged.
Winter Wheat	8 oz	Spray in the spring after the plants break dormancy but before jointing.

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