58199-1 3/10/2000 1/13

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAR 10 2000

Dr. Jerry V. Mayeux
P.B.T., Inc.
HC 66, Box 74
Deming, NM 88030

Subject: Amendment-Label per 40CFR, Part 180 sec. 180.1157
Cytokin Bioregulator Concentrate
EPA Registration No.58199-1
Your Submission dated January 3, 2000

Dear Dr. Mayeux:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comments listed below. Five copies of the finished labeling must be submitted prior to releasing the product for shipment.

Under Ingredient Statement on the label revise:
....."inert ingredients".....
to read
....." other ingredients".....

A stamped copy of the label is enclosed for your records. If you have any questions, please contact Dr. Sheila Moats at (703) 308-1259.

Sincerely yours,

Janet L. Andersen, Ph.D., Director
Biopesticides and Pollution
Prevention Division (7511C)

Enclosure:

| CONCURRENCES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SYMBOL | 7511C | 7511C | | | | | | |
| SURNAME | Moats | Rully | | | | | | |
| DATE | 3/7/2000 | 3/7/00 | | | | | | |

EPA Form 1320-1A (1/90) *Printed on Recycled Paper* OFFICIAL FILE COPY

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Revised 3 January 2000

**Rates and timing of applications remain the same as on previously-approved label. Crop applications have been expanded to include all agricultural crops, all fruits and nuts, and all vegetables.**

# Cytokin® Bioregulator Concentrate

A Plant Bioregulator to Increase Crop Production Efficiency

| ACTIVE ingredients: | |
|---|---|
| Cytokinin, as kinetin, based on biological activity | 0.01% |
| Includes: | |
| 6-(4-hydroxy-3-methylbut-trans-2-enylamino)-purine | |
| $N^6$-methylaminopurine, | |
| $N^6$-dimethylaminopurine, | |
| $N^6$-isopentenylaminopurine | |
| INERT Ingredients | 99.99% |
| 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 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

**If in eyes:** Flush with plenty of water. Get medical attention if irritation persists.

**SEE INSIDE FOR ADDITIONAL PRECAUTIONARY STATEMENTS**

Produced for P.B.T., Inc.
Deming, NM 88030
EPA Registration Number 58199-1
EPA Establishment #3837-MO-1
Net contents: Lot No.:

®Cytokin is a registered trademark licensed to P.B.T., Inc.

ACCEPTED
with COMMENTS
In EPA Letter Dated:
MAR 10 2000
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg No. 58199-1

# PRECAUTIONARY STATEMENTS
# CAUTION

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### Personal Protective Equipment

**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:

Do not contaminate water when disposing of equipment wash water.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean highwater mark.

## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Before using Cytokin, read and follow the precautions appearing on the label.

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.

### Chemigation system

Apply Cytokin 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 system 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 pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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.

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.

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. Do not apply when wind speed favor drift beyond the area intended for treatment.

Supply pesticide tank agitation, especially if product is to sit in tank for over 6 hours.

Cytokin may be applied continuously for the duration of water application or with the first quarter to one-half of the watering period.

Mixing instructions: Fill supply tank to 1/4 to 1/2 full. Add Cytokin and complete filling.

## STORAGE AND DISPOSAL

**STORAGE:** Store in a cool place and out of direct sunlight. Keep from freezing. Do not contaminate water, food, or feed by storage or disposal.
**DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned stay out of smoke.

## 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.

**WARRANTY: The manufacturer warrants that this product shall be of its standard quality and shall conform to the label thereon. Recommendations for use of the product are based on tests believed to be reliable. The use of the product being beyond the control of the manufacturer, no guarantee expressed or implied is made as to the effects of such or the results to be obtained, except as expressly set forth on the label hereon. The BUYER must assume all responsibility if not used in accordance with directions or established safe practices, including injury or damage resulting from its misuse as such or in combination with other materials. The manufacturer's liability shall be limited to the replacement without charge, FOB warehouse, of all product shown to be otherwise than as warranted.**

# Cytokin® Bioregulator Concentrate
## Recommendations for Use

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

**Use Cytokin 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 20-20-20 or 12-48-8 along with chelated micronutrients.**

### APPLICATION INSTRUCTIONS
### SHAKE WELL BEFORE USING

Good growing conditions are necessary for the maximum utilization of Cytokin. For maximum gain from the use of Cytokin, a well-balanced plant nutrient program should always be used. Cytokin, in any of its applications, is not intended to replace fertilizer or to supply nutrients that would normally be added in a conventional fertility program. Timing of the foliar spray application is very important. Always follow directions precisely. Do not apply when temperatures are above 95° F (36° C) or within eight hours of forecast rain.

**For General Use,** mix 1 oz. CYTOKIN with 4 gallons water and spray plant foliage to dampness, almost to runoff. For best results, CYTOKIN 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 crop use rates below. Apply with sufficient water to get thorough foliage coverage, 3 to 10 gallons water per acre for aircraft sprayers and 10 to 100 gallons water per acre for ground driven spray equipment. CYTOKIN may be used with a surfactant and can be applied as a mixture with most pesticides. To be safe, run a "jar compatibility test" and treat a small area with any new mixture to test the chemical and crop reaction before large field application.

**For transplanting:** Drench soil around each plant with a mixture of 1 oz. CYTOKIN in 4 gallons water or transplant solution. Spray seedlings with a solution of 1 oz. Cytokin in 4 gallons water or 1/2 to one pint per acre 2 to 4 weeks after transplanting and follow with subsequent sprays at recommended intervals throughout the growing season.

**Chemigation application:** Dilute 1 part CYTOKIN with at least 5 parts water before adding to the supply tank. Continuous agitation of supply tank is recommended during application or injection into the chemigation system. Where practical, apply CYTOKIN through the drip system with the first 1/4 inch equivalent of water. In sprinkler systems, CYTOKIN may be applied over the watering cycle.

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# Cytokin Bioregulator Concentrate

## CROP USE GUIDELINES

A blanket exemption from the requirement of a tolerance has been issued by the U.S. EPA for the active ingredients in this product. This product is cleared for use on any and all crops.

For local use recommendations for major and minor crops, contact youir PCA or local distributor representative.

For optimum results, all foliar applications should include Calcium EDTA or other highly available calcium source in the tank mix..

| CROP | Broadcast Rate/Acre (each application) | TIMING AND FREQUENCY |
|---|---|---|
| Asparagus | 16 oz. | Spray Cytokin to fern about 2 weeks after last harvest and repeat monthly during fern growth. |
| Beans -fresh: edible, green, etc. and peas | 8 oz | First: apply at the 2 to 3 trifoliate leaf stage. Second: 7 to 15 days later. |
| Beans and peas - dry | 8 oz | Apply when plants have developed 3 to 7 trifoliate leaves, again at early bloom, and again at the beginning of pod fill. |
| Bell Peppers, Chile peppers Eggplant | 8 oz | Apply at the 6 to 8 leaf stage. Follow with applications at 7 to 14 day intervals for a total of four to six applications. |
| Broccoli, Cabbage, Cauliflower Celery, Lettuce | 8 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 to 4 oz/A applied with other spray mixtures of insecticides or foliar nutrients. |
| Carrot, Beet and other root crops. | 16 oz | Apply when the seedlings have 3 to 6 leaves. |
| Corn (field) | 8 oz | Apply to prolific (multiple ear) varieties only. Make first application at the 8 to 10 leaf stage. Follow with second application at tasseling. |
| Corn (sweet and popcorn) | 8 oz | Apply at the 5 to 7 leaf stage. Follow with second application at tasseling. |
| Cotton | 2 to 4 oz. OR 8 oz. | Pinhead square: Apply weekly for 4 weeks. Adjust for band width; OR First Bloom: Apply at first white flower and again two weeks later (mid bloom). |
| Cotton (stripper) | 8 oz. | Make single application during first 2 to 3 weeks of bloom. |

CROP USE GUIDELINES (CONTINUED)

| CROP | Broadcast Rate/Acre (each application) | TIMING AND FREQUENCY |
|---|---|---|
| Cucumber | 16 to 32 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 4 to 6 oz rate for the first application. |
| Forage crops- Legumes or grasses | 8 – 16 oz. | Treat seed with Arise Seedling Booster. Spray Cytokin 4 to 6 weeks after emergence And monthly thereafter. Mature Crop; Spray Cytokin as spring growth begins, 1 week before harvest and again 2 weeks after cutting. |
| Seed production | 8 – 16 oz. | On established crops: spray Cytokin at the Beginning of inflorescence development (early tillering) and again 2 weeks later. Spray 8 to 16 oz/acre at the beginning of bloom. |
| *Grapes* | 4 – 8 oz. | *General: Apply Cytokin at 4 oz with all* foliar nutritional or pesticidal sprays. Sizing: Apply as tank mix with all GA sizing sprays. Harvest: apply Cytokin with high potash fertilizer at 2 to 10 days before harvest to enhance sugar accumulation. |
| Melons (Cantaloupe, Muskmelon, Watermelon) | 16 to 32 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 Cytokin beginning at bloom and at weekly to 14 day intervals until 3 weeks before harvest. Banded rates at the 3 to 6 leaf stage should begin at the 4 oz rate for the first application. To enhance sugar accumulation, spray up to 16 oz/acre at 2 to 10 days before harvest. |
| Nut crops - Almonds, Pecans, *Pistachios, Filberts,* Walnuts, Cashews | 16 to 32 oz. | Apply Cytokin with 10 lb/acre low-biuret urea at mid-nut fill and again one month later. *Add 8 oz of Cytokin per acre to each zinc* or calcium spray. Apply 16 to 32 oz/acre prior to flowering. Ask your local PCA for specific regional timing. |
| Onions, Garlic | 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. |

CROP USE GUIDELINES (CONTINUED)

| CROP | Broadcast Rate/Acre (each application) | TIMING AND FREQUENCY |
|---|---|---|
| Peanuts | 8 oz | Apply at the 3rd trifoliate. Repeat at 10 day intervals for four applications. |
| Potatoes | Seed Treatment | Dip potato pieces in a solution of 1 part Cytokin to 400 parts water for 20 to 60 seconds. Cytokin can be used with a fungicide treatment. Follow with foliar spray program. |
| Potatoes (foliar) | 8 oz | Spray at tuber initiation (3-4 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) | 8 oz | Apply single spray during the 4 to 7 leaf stage. |
| Soybeans | 8 oz | Apply during the 3 to 5 trifoliate stage, and each of the R1 and R5 stages. |
| Spinach and Leafy Greens | 8 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 4 oz/A applied with other spray mixtures of insecticides or foliar nutrients. |
| Squash: Summer, Winter zucchini | 16 to 32 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 4 oz rate for the first application. |
| Strawberries | 8 to 16 oz | Transplants: See transplant instructions. Begin spray applications at 1 to 2 weeks after transplanting and continue at 7 to 14 day intervals throughout the production season. |
| *Beets, Sugar* | *8 to 16 oz* | *First application: Apply at the beginning of root* enlargement. |
| | 16 oz | Second: Apply at the beginning of sugar accumulation |
| | 16 oz | Final; Apply 1 to 4 weeks before harvest. |
| Sugarcane | 16 oz. | First: At beginning of ratoon bud extension. |
| | | Second: One month after ratoon growth begins. |
| | 32 oz. | Final: 1 to 4 weeks before harvest. |

CROP USE GUIDELINES (CONTINUED)

| CROP | Broadcast Rate/Acre (each application) | TIMING AND FREQUENCY |
|---|---|---|
| Tomatoes (Fresh market) Okra | 8 oz | Spray Cytokin 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. |
| Tomatoes (processing) | 8 oz. | Apply Cytokin at the beginning of bloom. Make subsequent applications at 2 to 4 week intervals until 3-4 weeks before harvest. |
| Spring Wheat, Barley, Rye and Oats | 8 oz | Apply when plants have 3 to 5 true leaves emerged. |
| Winter Wheat, Barley, and Rye | 8 oz | Spray in the spring after the plants break dormancy but before jointing. |
| Yams (sweet potatoes) | 8 – 16 oz. | Dip transplants in a solution of one part Cytokin To 4 parts water. Spray foliage at 2 and 4 weeks After transplanting. |
| All other crops | 8 – 32 oz. | Contact your local PCA or Distributor representative for specific crop uses. |

CROP USE GUIDELINES (CONTINUED)

**All Fruits: Apple, Cherry, Citrus (Orange, Lemon, etc.), Banana, Stonefruits (Peach, Plum, etc.), Pear, Mango, Papaya, Pineapple**

**Transplants:** Follow general transplant instructions.

**Fruit trees in production:** Spray fruit trees with a solution of 1 oz Cytokin in 4 gallons water (or 1 to 2 pints/A) at the following growth stages:

1. At bud break to increase pollination efficiency. (CYTOKIN will not harm bees or pollinating insects);
2. At 1 week after petal fall to promote cell division;
3. At 1 to 2 weeks before fruit drop to reduce physiological stress and reduce fruit drop;
4. At 20 to 30 days after petal fall to increase fruit size;
5. Monthly during fruit growth and development to promote nutrient translocation to produce larger and better quality fruit.

For best results apply Cytokin with foliar nutrients, micronutrients or secondary nutrient sprays such as calcium, iron, and zinc.

**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.

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

**Replant areas:** Spray the plants before cutting. Then spray Cytokin weekly at 1/2 to 1 ounce per 1500 square feet and irrigate in. Continue weekly to biweekly applications until the plants are established.

**Established Trees and Shrubs:** Spray 1 to 2 pints per acre, or a mixture of 1 oz CYTOKIN 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 terminal calyx;
4. Early to mid fall.

TURF

Spring application: Make an early application of ½ to 1 fl. oz. Cytokin per 1000 sq. ft. to promote tiller, rhizome or stolon growth, to develop a deep root system, and to give the turf a rapid start once winter dormancy is broken and growth begins. Continue monthly ½ fl. oz./1000 sq. ft. applications throughout spring and summer. Spring application is important to develop a deep root system which will condition the turf and reduce the stress of disease and summer heat or low rainfall. Apply Cytokin with iron sulfate for maximum root growth response.

Fall Application: Two to three applications of Cytokin (1/2 to 1 fl. oz. per 1000 sq. ft.) should be made in the fall beginning about eight weeks before the turf becomes dormant (eight weeks before first frost date in the northern states) to promote root growth and provide the grass with the vigor to better endure the stress of winter (reduce winter kill) and improve survival of a good healthy turf for the following spring.

Golf Greens, Fairways, Football and Soccer Fields, and Baseball Infields and outfields: At the beginning of spring growth apply l to 2 fl. oz. per 1000 square feet at the breaking of dormancy. Make successive maintenance applications of 1/2 to 1 fl. oz. per 1000 sq. ft. at monthly intervals or as needed to maintain root growth, tillering, appearance and vigor throughout the growing season. During periods of intensive use apply 1/2 to 1 fl. oz. per 1000 sq. feet weekly to the greens, infield or playing field to maintain root structure and renew growth and vigor between games. Make three applications of 1/2 fl. oz. per 1000 sq. ft. at 2 week intervals in the fall beginning about eight (8) weeks before turf becomes dormant to promote root growth and increase winter stamina to reduce winter kill.

Sod: Spray Cytokin to newly laid sod at ½ to 1 fl. oz. per 1000 sq. ft. to promote rooting and increase the rate of sod establishment. Maintain growth and vigor with monthly applications of ½ to 1 fl. oz. per 1000 square feet.

Sod Farming: Spray Cytokin at ½ to 1 pints/acre monthly to sod fields to promote root, tiller and rhizome growth and to bring the crop to harvest more quickly. Maintain accelerated growth with Cytokin applications of ½ to 1 pints/acre at 2 to 4 week intervals or as needed. Spray Cytokin at ½ to 1 pints per acre to sod 1 to 4 days before harvesting to initiate new root growth and speed up establishment when sod is laid.

Lawns, Playgrounds, Parks, Recreational Areas, Landscaped Roadways and Cemeteries: Apply 1 fl. oz. per 1000 square feet at the beginning of spring growth to promote a deep root system and tillering to fill sparse areas. Apply at 1/2 to 1 fl. oz. per 1000 square feet monthly to maintain health and vigor of the turf. Application can be made more frequently as needed to condition the turf for stress or for periods of heavy use.

Nutritional sprays: For better color response from nitrogen, iron, sulfur, zinc and other nutrient sprays use 1/2 to 1 pt Cytokin per acre with nutrient spray solution. For greens or smaller area, add 1/2 to 1 fl. oz. Cytokin per 3 to 5 gallons spray solution.

## NURSERY AND GREENHOUSE USE

To promote bud differentiation, cell division, root induction and growth and to reduce apical dominance. Use Cytokin HMS in your watering program or as a foliar spray.

Propagation of Cuttings: Dip cuttings in rooting hormone powder or solution and stick in rooting medium. Spray or mist cuttings with a solution of 1 fl. oz. Cytokin to 4 gallons water (1 qt./100 gallons) at weekly intervals until root buds initiate. Then spray at 2 to 4 week intervals.

Transplanting: Add 1 fl. oz. Cytokin per 4 gallons of transplant solution (fertilizer-water). Drench the root zone. Follow with spray to foliage or add through irritation system at 2 to 4 week intervals at the rate of 1 quart per 100 gallons..

Production: To increase growth rate, improve quality and resilience of nursery and greenhouse crops, add 1 fl. oz. Cytokin per 4 gallons (1 quart/100 gallons) of fertilizer or water solution and apply through the irrigation system or via foliar spray.

Nutritional Deficiencies: To promote rapid uptake and correction of nutrient deficiencies in ornamentals and turf, add Cytokin to iron, nitrogen fertilizers, zinc or other nutrient solutions at the rate of 1 fl. oz. per 4 gallons (1 qt/128 gallons). Apply as a foliar spray or soil drench.

## LANDSCAPE MANAGEMENT (see Turf uses also)

Bedding Plants: Spray bedding plants at 2 to 4 week intervals with a solution of 1 fl. oz. Cytokin per 4 gallons water (1 quart per 128 gallons), fungicide or nutrient spray to promote growth, flowering and maximum color development.

Lawn Care: Spray Cytokin to lawns at the rate of ½ fl. oz. per 1000 sq. ft. Cytokin can be added to liquid fertilizer, insecticide, fungicide, or herbicide sprays.

Transplanting of trees, shrubs or bedding plants: See transplanting instructions under nursery use.

Maintenance: To promote growth and reduce stress from drought, disease or nutrient deficiency. Spray Cytokin to foliage at the rate of 1 fl. oz. per 4 gallons of water or fertilizer or pesticide solution (1 quart per 128 gallons).

Nutritional Deficiencies: To promote rapid uptake and correction of nutrient deficiencies in ornamentals and turf, add Cytokin to iron, nitrogen fertilizer, zinc or other nutrient spray solutions at the rate of 1 fl. oz. per 4 gallons (1 qt/128 gallons). Apply as a foliar spray or soil drench.

Root Feeding: Mix Cytokin with root feeding solutions at the rate of 1 fl. oz. per 4 gallons of nutrient solution (1 quart per 128 gallons).