



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

NOV 28 2000

Source Technology Biologicals, Inc.
7449 Cahill Road
Edina, MN 55439

Dear Will Hartfeldt

Subject: Phyton-27 Bactericide & Fungicide
EPA Registration No. 49538-2
Amended Labeling
Your Application Dated August 17, 2000

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 comment listed below.

Under the header "Nursery Crops", insert the following text immediately following the subheader "Non-Bearing Fruit Trees and Vines": "Do not apply to trees that will bear fruit within one year."

One copy of the finished labeling must be submitted prior to releasing the product for shipment. A stamped copy is enclosed for your records.

Sincerely yours,

Dan Kenny
Acting Product Manager 22
Fungicide Branch
Registration Division (H7505C)

Enclosure

**PRECAUTIONARY STATEMENTS
HAZARD TO HUMANS (& DOMESTIC ANIMALS)**

Precautionary Statements

DANGER: Corrosive. Causes irreversible eye damage and skin burns. May be fatal if swallowed. Harmful if absorbed through the skin. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

Coveralls over long-sleeved shirt and long pants

Waterproof gloves

Chemical-resistant footwear plus socks

Protective eyewear. After product is diluted in accordance with the directions for use, protective eyewear is not required.

Chemical-resistant headgear for overhead exposure

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

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.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. 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 when disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

For spills, you may contact CHEMTREC at 1-800-424-9300.

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.

USE DIRECTIONS FOR CHEMIGATION

The following precautions must be observed when using this product in any type of irrigation system:

Apply this product only through overhead sprinklers, mist-type irrigation such as fog systems, and hand-held calibrated irrigation equipment such as the hand-held wand with injector.

Do not apply this product through any other type of irrigation equipment.

Metal piping or equipment used for application should be brass or stainless steel.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension specialists, equipment manufacturers or other experts.

Do not connect an irrigation system, (including greenhouse system), used for pesticide application to a public water system unless the pesticide safety devices for public water systems are in place.

A person knowledgeable of 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.

Agitation in the pesticide supply tank is recommended once every 2 hours and may be more frequent or continuous.

The dosage rate should not be diluted by additional water applied as irrigation. Apply the prescribed rate and allow foliar surfaces to dry before irrigating. If irrigation precedes Phytion-27® application, allow foliage to drip off before beginning the application.

To optimize dilution of the pesticide in the supply tank, first add Phytion-27® to a small amount of water, room temperature or warmer, and mix gently until evenly dispersed.

Phytion[®]
27

**BACTERICIDE & FUNGICIDE
MITICIDE & INSECTICIDE & NEMATOCIDE**

ACTIVE INGREDIENT

Copper Sulphate Pentahydrate*.....21.36%

INERT INGREDIENTS.....70.64%

100.00%

*Copper as Metallic.....5.5%

Contains 2.06 lbs. Active Ingredient per gallon

**KEEP OUT OF REACH OF CHILDREN
DANGER PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle (If you do not understand the label, find someone to explain it to you in detail.)

U.S. PAT. NO. 4,673,687
E.P.A. REG. NO. 49538-2
E.P.A. EST. NO. 49538-MN-001

Source Technology Biologicals, Inc.

7449 Cahill Road
Edina, MN 55439 800-356-8733

STATEMENT OF PRACTICAL TREATMENT:

If in Eyes: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention.

If on Skin: Wash with plenty of soap and water. Get medical attention. If product diluted in accordance with the directions for use gets on skin, medical attention is not required.

If Swallowed: Call a physician or poison control center. Drink promptly a large quantity of milk, egg white, gelatin solution, or, if these are unavailable, 1 or 2 glasses of water. If person is unconscious, do not give anything by mouth and do not induce vomiting. Avoid alcohol.

Note to Physician: Skin symptoms may be similar to copper allergic reactions and can be treated similarly, including the use of steroid-containing lotion. If swallowed, probable mucosal damage may contraindicate the use of gastric lavage. Have patient drink large quantities of milk, egg white, gelatin solution, or if these are unavailable, 1 or 2 glasses of water.

See side panel for additional precautionary statements.

Phytion[®]
27

**BACTERICIDE & FUNGICIDE
MITICIDE & INSECTICIDE & NEMATOCIDE**

INGREDIENTE ACTIVO..... 21.36%

Sulfato pentahidrato de cobre *

INGREDIENTES INERTES 78.64%

*Cobre en forma metálica 5.5%

Contiene 2.06 lbs de ingrediente activo por galon

**MANTENGASE FUERA DEL
ALCANCE DE LOS NIÑOS
PELIGRO**

**ADVERTENCIAS PRECAUTORIAS
PELIGROSO PARA SERES HUMANOS Y
ANIMALES DOMESTICOS**

PELIGRO: Producto corrosivo. Causa daños irreversibles en los ojos y quemaduras en la piel. Es peligroso si se absorbe a través de la piel. No deje que entre en contacto con sus ojos, su piel ni su ropa.

TRATAMIENTO PRACTICO:

En los ojos: Mantenga los ojos abiertos y enjuague los con agua abundante por no menos de 15 minutos y busque atención médica inmediatamente.

En la piel: Lávese con abundante agua y jabón. Obtenga atención médica. Si el producto ya deliudo debidamente contacta la piel, no se requiere atención médica.

Si se Ingiere: Contacte al médico o centro de control de venenos. Beba inmediatamente una gran cantidad de leche, claro de huevo, solución de gelatina o, si no se encuentran disponibles estas cosas, 1 o 2 vasos de agua. Evite el alcohol. Nunca dé de beber o de comer a personas inconscientes, ni inducir el vómito.

Nota al médico: Los síntomas del piél pueden ser parecidos a alergia al cobre, y se pueden tratar de manera parecida, incluyendo el uso de lociones con esteroides. Si se ingiere, los daños probables a la mucosa pueden hacer que se contraindique el lavado gástrico.

Ver panel vecino para instrucciones adicionales de precaución.

PROTECCION PERSONAL

Llevo siempre lentes protectoras y guantes de gauto. Lávese de modo cuidadoso con agua y jabón después de usar este producto. Quite la ropa contaminada y lávela bien antes de volverla a usar.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not allow workers to enter into treated areas during the restricted entry interval (REI) of 24 hours.

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, wear:

Coveralls over long-sleeved shirt and long pants
Chemical-resistant footwear plus socks
Waterproof gloves

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses 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 children and pets off treated area until dry.

Do not enter treated area without protective clothing until the sprays have dried.

STORAGE AND DISPOSAL

STORAGE—Do not freeze or store below 45° F. Store in original container. Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not reuse these containers.

PESTICIDE DISPOSAL—Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

CONTAINER DISPOSAL—Triple rinse (or equivalent). Then offer for recycling or reconditioning or dispose of in a sanitary landfill, or by incineration if allowed by state and local authorities.

GENERAL—Consult federal, state or local disposal authorities for approved alternative procedures such as limited open burning.

NOTICE:

Our recommendations for use of this product are based upon tests believed to be reliable. The use of this 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 if not used in accordance with directions or established safe practice, including but not limited to over-fertilization or senescing plant tissue. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions, abnormal conditions, presence of other materials, the manner of application, or other factors, all of which are beyond the control of the manufacturer. All such risks shall be assumed by the buyer. The exclusive remedy is the product purchase price. Phyton-27® is reported compatible with many registered pesticides. However, before adopting the use of additives and/or combinations for general applications, test for physical compatibility and noninjury under your conditions of use. The buyer must assume all responsibility, including injury or damage, resulting from its misuse as such or in combination with other materials as tank mix or applied separately.

REQUIREMENTS FOR SPRINKLER CHEMIGATION

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.

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.

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 favors drift beyond the area intended for treatment.

SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

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 the year.

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.

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.



POSTING

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes, or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corner of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

GENERAL DIRECTIONS

1. Shake well before mixing with water. Use within 48 hours after mixing.
2. Adjust pH of solution to 5.5 - 6.5.
3. Phytol-27® can be applied with any type of application equipment that gives uniform coverage of all foliage, including ground, aerial, and low volume sprayers and chemigation equipment specified on this label. The volume of water needed will depend on the spray equipment and the size of the crop. Use in sufficient water to provide thorough coverage.
4. Low volume applications require conversion of ounces/volume to ounces/area.
5. Phytol-27® can be used up to the time of harvest.
6. Metal  or equipment used for application should be brass or stain- steel.
7. Compatible with most fungal and insecticidal biopesticides when applied at least 2 days before or after application of the biopesticide.
8. Do not tank mix Phytol-27® with B-NINE and do not apply Phytol-27® within seven (7) days either before or after applications of B-NINE, as burning of leaves may result.
9. Do not tank mix Phytol-27® with strongly acidic compounds such as Allette, and do not apply Phytol-27® within 14 days either before or after applications of such products.

10. Phytotoxicity: Phytol-27® has been tested on a wide variety of herbaceous and woody ornamental plants without phytotoxicity symptoms. However, because it is not possible to test all ornamental plant species, varieties and cultivars and because environmental factors and varietal stage of growth may affect phytotoxic expression, it is recommended that a small group of test plants be treated at the anticipated dosage rate and observed for 5 to 7 days to determine phytotoxicity before treating large numbers of those plants.
11. Liquid equivalents: one fluid ounce = 29.5 milliliters = 6 teaspoons.

SPECIFIC DIRECTIONS for Spray Applications in Greenhouse, Field, Landscape and Interior:

Annual & Perennial Bedding Plants, Potted Flowering Crops, Tropical Foliage, Cut Flower Crops, Nursery Crops & Propagation Spray for thorough foliage coverage. Re-spray rates and intervals vary with severity of disease and adversity of environmental conditions. In the event of heavy disease pressure, intervals can be shortened to 3 to 5 days. Lower rates may be as effective as higher rates and should be tried first. Routine preventive programs may be maintained at the lower rates. Rates above 1.5 fl. oz. Phytol-27® per 10 gallons water may damage some tender, open blooms. Rates up to 7 fl. oz. Phytol-27® per 10 gallons water can be used for powdery mildew on roses if no blooms are open. Use of low volume equipment is effective against Botrytis and not effective against established powdery mildew and Xanthomonas infections. Applications on actively growing tissue may be more effective than applications on dormant tissue.

Propagation: Cuttings and Stock Plants

When harvesting cuttings on site, spray or fog stock plants 1 to 2 days prior to taking cuttings. Spray cuttings to drench again at same rate 2 to 3 days after sticking in rooting media.

When using rooted, callused, or unrooted cuttings shipped in, spray cuttings to drench 2 to 3 days after planting or sticking. Under severe disease pressure, repeat in 7 to 10 days.

Dosages in fluid ounces Phytol-27® per 10 gallons water

CROP	PATHOGEN	RATE
Azalea	Botrytis	1.3 - 2.5
	Cylindrocladium	1.5 - 3.5
Chrysanthemum	Botrytis	1.5 - 2.5
	Erwinia	1.5 - 2.5
Geranium	Botrytis	1.5 - 2.0
	Xanthomonas	1.5 - 5.0
Holiday Cactus	Botrytis	1.3 - 2.5
	Erwinia	1.5 - 2.0
Mini-Rose	Botrytis	1.5 - 2.0
	Cylindrocladium	1.5 - 5.0
Poinsettia	Botrytis	1.5 - 2.0
	Erwinia	2.0 - 3.5
	Xanthomonas	2.0 - 3.5
Tropical Foliage	Botrytis	1.3 - 2.5
	Cylindrocladium	1.5 - 2.5
	Erwinia	2.0 - 5.0

Annual & Perennial Bedding Plants

such as but not limited to:

Dosages in fluid ounces Phytol-27® per 10 gallons water

CROP	PATHOGEN	RATE
Alyssum	Botrytis	1.0 - 2.0
	Downy Mildew	1.0 - 2.0
Begonia	Botrytis	1.3 - 2.0
	Powdery Mildew	1.5 - 3.0
	Xanthomonas	1.5 - 3.0
Chrysanthemum	Pseudomonas	1.5 - 2.5
Fuchsia	Botrytis	1.3 - 2.0
	Powdery Mildew	1.3 - 2.5
Geranium	Botrytis	1.5 - 2.0
	Rust (preventive)	1.5 - 2.0
	Rust (therapeutic)	2.5 - 5.0
	Pseudomonas (preventive)	1.5 - 4.5
	Pseudomonas (therapeutic)	5.0
	Xanthomonas (preventive)	1.5 - 4.5
	Xanthomonas (therapeutic)	5.0
	Erwinia	1.5 - 3.0
Hosta	Botrytis	1.5 - 2.0
	Erwinia	1.5 - 3.0
	Alternaria	1.5 - 3.5
Impatiens	Botrytis	1.3 - 1.5
	Powdery Mildew	1.3 - 2.5
	Pseudomonas	1.5 - 3.5
New Guinea Impatiens	Botrytis	1.3 - 1.5
	Powdery Mildew	1.3 - 2.0
Pansy	Botrytis	1.3 - 2.0
	Phytophthora	1.3 - 2.0
Periwinkle	Botrytis	1.3 - 2.0
	Phytophthora	1.5 - 2.0
Snapdragon	Botrytis	1.3 - 2.0
	Downy Mildew	1.3 - 2.5
	Rust	1.3 - 2.5
Zinnia	Botrytis	1.3 - 2.0
	Powdery Mildew	1.3 - 2.5
	Pseudomonas	1.3 - 2.5
	Xanthomonas	1.3 - 2.5

Potted Flowering Crops

such as but not limited to:

Dosages in fluid ounces Phytol-27® per 10 gallons water

CROP	PATHOGEN	RATE
African Violet	Botrytis	1.3 - 1.5
	Powdery Mildew	1.3 - 1.5
Azalea	Botrytis	1.3 - 2.5
	Colletotrichum	1.5 - 2.5
Calla Lily	Cylindrocladium	1.5 - 3.5
	Botrytis	1.3 - 2.0
Chrysanthemum	Erwinia	1.3 - 2.0
	Botrytis	1.5 - 2.5
	Crown Gall	1.5 - 2.5
	Erwinia	1.5 - 2.5
	Powdery Mildew	1.5 - 2.5
Cineraria	Botrytis	1.3 - 2.0
	Erwinia	1.5 - 2.0
Cyclamen	Botrytis	1.5 - 2.0
	Erwinia	1.5 - 2.0
Daffodil	Botrytis	1.3 - 2.0
Easter Lily	Botrytis	1.3 - 2.0
Exacum	Botrytis	1.3 - 2.0
Gerbera	Botrytis	1.5 - 2.5
	Powdery Mildew	1.5 - 2.5
Gloxinia	Botrytis	1.3 - 2.0
	Erwinia	1.5 - 5.0
Holiday Cactus	Botrytis	1.3 - 2.5
	Pseudomonas	1.5 - 5.0
	Xanthomonas	1.5 - 5.0
Hyacinth	Botrytis	1.3 - 2.0
Hydrangea	Botrytis	1.3 - 2.5
	Powdery Mildew	1.3 - 2.5
Iris	Botrytis	1.3 - 2.0
	Erwinia	1.5 - 2.0
Kalanchoe	Botrytis	1.5 - 2.5
	Erwinia	1.5 - 3.5
	Powdery Mildew	1.5 - 3.5
Lisianthus	Botrytis	1.3 - 2.0
Orchid	Botrytis	1.3 - 1.5
	Erwinia	1.5 - 4.0
	Pseudomonas	1.5 - 4.0
	Xanthomonas	1.5 - 4.0

SPECIFIC DIRECTIONS for Bulb Dip Applications

Dip bulbs for 5 minutes and allow to dry before planting.

Dosages in fluid ounces Phytol-27® per 10 gallons water

CROP	PATHOGEN	RATE
Calla Lily	Erwinia	3.0

Annual and Perennial Bedding Plants (cont.)			
Dosages in fluid ounces of Phyton-27® per 10 gallons water			
CROP	PATHOGEN		RATE
Additional Annuals and Perennials:	Botrytis		1.3 - 2.0
	Powdery Mildew		1.5 - 2.5
Anemone	Aster	Carnation	Coleus
Columbine	Coneflower	Coreopsis	Cuphea
Dahlia	Daisy	Dianthus	Daylily
Delphinium	Echinacea	Hollyhock	Lantana
Liatris	Lobelia	Lupine	Marigold
Monarda	Ornamental Grasses	Pentas	Petunia
Phlox	Poppy	Primrose	Ranunculus
Rudbeckia	Salvia	Sedum	Verbena
Veronica	Vinca	Viola	

Soil Drench Applications - Greenhouse, Field, Landscape & Interior		
Dosage in fluid ounces of Phyton-27® per 10 gallons water		
CROP	PATHOGEN	RATE
Azalea	Cylindrocladium	2.0 - 3.5
	Rhizoctonia	2.0 - 3.5
Cyclamen	Erwinia	1.5
Ferns	Rhizoctonia	1.5 - 3.0
Geranium	Botrytis	2.0 - 3.5
Impatiens	Phytophthora	2.0 - 3.5
Japanese Maple	Verticillium	2.5
Periwinkle	Phytophthora	1.5 - 2.0
Poinsettia	Rhizoctonia	2.0 - 3.5
Rhododendron	Rhizoctonia	2.0 - 3.5
Rose	Black Spot	2.0 - 3.5
	Cylindrocladium	2.0 - 3.5
Spathiphyllum	Cylindrocladium	2.0 - 3.5
	Phytophthora	2.0 - 3.5

SPECIFIC DIRECTIONS for Post-Harvest Dip Applications on Cut Flower Crops		
Dip cut flowers/buds for a few seconds soon after cutting.		
Dosages in teaspoons Phyton-27® per 5 gallons water		
CROP	PATHOGEN	RATE
Astromeria	Botrytis	3/4-1 tsp.
Carnation	Botrytis	2-3 tsp.
Chrysanthemum	Botrytis	2-3 tsp.
Delphinium	Botrytis	1-2 tsp.
Freesia	Botrytis	3/4-1 tsp.
Gerbera	Botrytis	2-3 tsp.
Orchid	Botrytis	2-3 tsp.
Rose	Botrytis	3-3 3/4 tsp.
Snapdragon	Botrytis	1-2 tsp.
Sweetpea	Botrytis	1-2 tsp.

Potted Flowering Crops (cont.)			
Dosage in fluid ounces Phyton-27® per 10 gallons water			
CROP	PATHOGEN	RATE	
Poinsettia	Botrytis	1.5 - 2.0	
	Powdery Mildew (preventive)	1.5 - 2.0	
	Powdery Mildew (therapeutic)	2.0 - 3.5	
	Erwinia (preventive)	1.5 - 2.0	
	Erwinia (therapeutic)	2.0 - 3.5	
	Xanthomonas (preventive)	1.5 - 2.0	
	Xanthomonas (therapeutic)	2.0 - 3.5	
	Primula	Botrytis	1.3 - 2.0
	Erwinia	1.5 - 2.0	
Rose bush	Black Spot (preventive)	1.5 - 3.0	
	Black spot (therapeutic)	3.5 - 5.0	
	Botrytis (preventive)	1.5 - 2.0	
	Botrytis (therapeutic)	2.5 - 5.0	
	Cylindrocladium (preventive)	1.5 - 2.0	
	Cylindrocladium (therapeutic)	2.5 - 5.0	
	Downy Mildew (preventive)	1.5 - 2.0	
	Downy Mildew (therapeutic)	2.5 - 5.0	
	Powdery Mildew (preventive)	1.5 - 3.0	
	Powdery Mildew (therapeutic)	3.5 - 5.0	
Tulip	Botrytis	1.3 - 2.0	

Tropical Foliage Crops		
such as but not limited to:		
Dosages in fluid ounces Phyton-27® per 10 gallons water		
CROP	PATHOGEN	RATE
Ferns	Botrytis	1.3 - 2.0
	Erwinia	1.3 - 2.0
Hibiscus	Botrytis	1.3 - 2.5
	Pseudomonas	1.5 - 2.5
	Xanthomonas	1.5 - 2.5
	Botrytis	1.3 - 2.0
Ivy	Xanthomonas	1.5 - 5.0
	Botrytis	1.3 - 2.0
Palms	Erwinia	1.3 - 2.0
	Pseudomonas	1.3 - 2.5
	Xanthomonas	1.3 - 2.5
	Botrytis	1.3 - 2.5
Spathiphyllum	Cylindrocladium	1.5 - 2.5
	Phytophthora	1.5 - 3.0
	Botrytis	1.3 - 2.5
Tropical Foliage (general)	Botrytis	1.3 - 2.5
	Powdery Mildew	1.3 - 2.5
	Erwinia	2.0 - 5.0
	Pseudomonas	2.0 - 5.0
	Xanthomonas	2.0 - 5.0

Cut Flower Crops		
such as but not limited to:		
Dosages in fluid ounces Phyton-27® per 10 gallons water		
CROP	PATHOGEN	RATE
Astromeria	Botrytis	1.3 - 1.5
Carnation	Botrytis	1.3 - 2.0
Chrysanthemum	Botrytis	1.5 - 2.5
Delphinium	Botrytis	1.3 - 1.5
Freesia	Botrytis	1.3 - 1.5
Gerbera	Botrytis	1.5 - 2.5
Lisianthus	Botrytis	1.3 - 2.0
Orchid	Botrytis	1.3 - 1.5
Rose	Botrytis	1.5 - 5.0
Snapdragon	Botrytis	1.3 - 2.0
Sweetpea	Botrytis	1.3 - 1.5

Nursery Crops			
such as but not limited to:			
Dosages in fluid ounces Phyton-27® per 10 gallons water			
CROP	PATHOGEN	RATE	
Azalea	Anthraxnose	1.5 - 2.5	
	Botrytis	1.3 - 2.5	
	Cylindrocladium	1.5 - 3.5	
Cherry Laurel	Xanthomonas	2.0 - 3.5	
Conifers	Botrytis	1.3 - 2.5	
	Diplodia	1.0 - 1.3	
Crape Myrtle	Botrytis	1.3 - 2.5	
Dogwood	Powdery Mildew	2.0 - 3.0	
	Botrytis	1.3 - 2.5	
Elm	Powdery Mildew	2.0 - 3.0	
	Erwinia	2.0 - 4.0	
Hydrangea	Botrytis	1.3 - 2.5	
	Powdery Mildew	1.3 - 2.5	
Indian Hawthorn	Botrytis	1.3 - 2.5	
	Entomosporium	1.5 - 3.0	
Japanese Maple	Botrytis	1.3 - 2.5	
	Verticillium	1.5 - 2.5	
	Pseudomonas	1.5 - 2.5	
Lilac	Botrytis	1.3 - 2.5	
	Pseudomonas	1.3 - 2.5	
	Powdery Mildew	1.5 - 2.5	
Oak	Anthraxnose	3.5	
	Botrytis	1.3 - 2.5	
Photinia	Entomosporium	1.5 - 3.0	
Pinus	Dothistroma	1.5 - 2.5	
Rosaceae such as: Cotoneaster, Malus, Mountain Ash, Ornamental Crabapple, Ornamental Pear, Pyracantha	Apple Scab	4.0	
	Botrytis	1.3 - 2.5	
	Fireblight	2.0 - 4.0	
	Pseudomonas	1.5 - 3.5	
Rhododendron	Botrytis	1.3 - 2.5	
	Cylindrocladium	1.5 - 3.5	
Rose	See Flowering Potted Crops for Rates		
Sycamore	Anthraxnose	3.5	
	Botrytis	1.3 - 2.5	
Additional Nursery Crops such as:	Botrytis	1.3 - 2.5	
Shrubs/Vines			
Barberry	Bougainvillea	Clematis	Cornus
Euonymus	Forsythia	Holly	Paeonia
Philadelphus	Physocarpus	Potentilla	Ribes
Rosa	Spiraea	Viburnum	Weigela
Wisteria			
Deciduous			
Acer	Betula	Celtis	Cercis
Crataegus	Ficus	Fraxinus	Ginkgo
Gleditsia	Magnolia	Malus	Populus
Prunus	Pyrus	Tilia	
Conifers			
Abies	Juniper	Picea	Pinus
Pitosporum	Pseudotsuga	Taxus	Thuja
Tsuga			
Non-Bearing Fruit Trees and Vines			
Apple	Pear	Grape	Citrus

**SPECIFIC DIRECTIONS for Injection Applications:
Shade & Ornamental Trees**

ELM. Trunk injection. Dutch elm disease and Cankers (Botryodiplodia Cytospora Tubercularia). Inject once during the growing season for control or prevention. Injection sites should be six inches or less above the soil line. Injection should not be done against Dutch elm disease if the elm appears more than 20% diseased or if the disease may have entered through root grafts from another diseased tree or stump. Remove dead and diseased limbs within 10 days after treatment.

Dosage by elm size (diameter at breast ht.)	Phyton-27* fl. oz.	Water gallons
12 to 19 inches dbh	2	2
20 to 26 inches dbh	3	3
27 to 33 inches dbh	4	4
34 to 40 inches dbh	5	5
41 to 48 inches dbh	6	6

Use the red oak dosage for red (slippery) elm.

OAKS, Oak Wilt and Phytophthora. Trunk injection. On red oak, use preventively only. Follow injection directions for elm, taking care that holes are not too deep on shallow-barked oaks. Treatment is best in the month before fall color in northern climates.

Dosage by tree variety and size	Fluid Ounces Phyton-27*			Water
	Red Oaks/Red Elm	Oaks		
12 to 19 inches dbh	1 ounce	1.5 ounces		3 gallons
20 to 26 inches dbh	1.5 ounces	2 ounces		4.5 gallons
27 to 33 inches dbh	2 ounces	3 ounces		6 gallons
34 to 40 inches dbh	2.5 ounces	3.5 ounces		7.5 gallons
41 to 48 inches dbh	3 ounces	4.5 ounces		9 gallons

OAKS and SYCAMORE, Anthracnose. Trunk injection. Follow injection directions for elm, taking care that holes are not too deep on shallow barked oaks.

Dosage by tree variety and size	Fluid ounces Phyton-27*			Water
	Red Oak	White Oak	Sycamore	
12 to 19 inches dbh	1 ounce	1.5 ounces	1.5 ounces	3 gallons
20 to 26 inches dbh	1.5 ounces	2 ounces	2 ounces	4.5 gallons
27 to 33 inches dbh	2 ounces	3 ounces	3 ounces	6 gallons
34 to 40 inches dbh	2.5 ounces	3.5 ounces	3.5 ounces	7.5 gallons
41 to 48 inches dbh	3 ounces	4.5 ounces	4.5 ounces	9 gallons

SHADE TREE CANKERS. Cytospora on GREEN ASH, PAPER BIRCH, COTTONWOOD; Botryodiplodia and Cytospora on HACKBERRY, SILVER MAPLE; Nectria on HONEY LOCUST. Trunk injection. Follow injection directions for elm.

Dosage by tree size	Phyton-27* fl. oz.	Water
10 inches dbh	1.3 ounces	1 gallon
20 inches dbh	2.5 ounces	2 gallons

SPECIFIC DIRECTIONS: MITICIDE, INSECTICIDE
Greenhouse, Field, Landscape and Interior
Dosages in fluid ounces of Phyton 27 per 10 gallons water

	Two-spotted Spider Mite	White Fly Adults
All hosts on this label	2.5	2.5

This dosage rate may damage open blooms. Where fungicide, bactericide dosage rate for host is lower, this higher rate may result in plant damage. Lower rates may be effective.

SPECIFIC DIRECTIONS: NEMATICIDE
Greenhouse, Field, Landscape and Interior
Dosages in fluid ounces of Phyton 27 per 10 gallons water

	Foliar Nematodes
All hosts on this label	3.2

This dosage rate may damage open blooms. Where fungicide, bactericide dosage rate for host is lower, this higher rate may result in plant damage. Spray for thorough coverage. Make 3 applications at 2-week intervals.

**ACCEPTED
with COMMENTS
in EPA Letter Dated:**

NOV 28 2000

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

49538-2

7/10