

# POTTED FLOWERING CROPS APPLICATION GUIDELINES

October 2002

## Anthracnose

*Azalea*

The *Colletotrichum azaleae* fungus causes leaf spotting and defoliation on azalea. Warm, moist conditions favor infection and spread of anthracnose on azalea.

**Control** - Apply 1.5 to 2.5 fluid ounces Phyton-27<sup>®</sup> per 10 gallons water as a foliar spray. Removing infected leaves and leaf debris from the growing area may help control anthracnose by lowering the inoculum concentration.

## Botrytis

*All Flowering Potted Crops*

*Botrytis*, commonly referred to as gray mold, is found virtually everywhere plants are grown causing leaf spot and blight. The spores persist in crop debris and readily attack fading flower parts and damaged plant tissue. Cool, humid conditions are favorable for disease development and spread.

**Control** - For optimal control of *Botrytis*, combine applications of Phyton-27<sup>®</sup> with good sanitation and environmental controls to reduce humidity and free moisture on the plant surfaces.

**Resistance Management** - Control of *Botrytis* has been complicated by the appearance of resistant strains. Phyton-27<sup>®</sup> is an invaluable tool for control of *Botrytis* without inducing resistance. Use Phyton-27<sup>®</sup> by itself or in rotation with other fungicides for effective resistance management in a broad-spectrum disease control program.

## Cylindrocladium

*Azalea & Roses*

The *Cylindrocladium* fungus causes a cutting rot and wilt that hampers production of florist azalea and miniature rose. When conditions are very moist and warm, the disease develops rapidly and spores of the fungus can splash onto the leaves resulting in leaf spots.

**Control** - Apply Phyton-27<sup>®</sup> as a foliar spray or soil drench. Remove visibly infected cuttings prior to treatment. See the label for crop specific rates.

## Powdery Mildew

*African Violet, Chrysanthemum, Gerbera, Hydrangea, Kalanchoe, Poinsettia, & Roses*

Powdery mildew infection is favored by high relative humidity with no free moisture on the plant surfaces.

**Control** - Apply Phyton-27<sup>®</sup> as a wet foliar spray to control powdery mildew. Use of low volume equipment is effective for preventive applications but may not be effective against established powdery mildew infections. See label for specific rates on various crops.

## Rhizoctonia

*Azalea & Poinsettia*

*Rhizoctonia* causes damping-off, root rot, crown rot and stem rot on azalea and poinsettia. Web blight, occurs under warm, humid conditions where the mycelial growth of the fungus covers the foliage with a cob-web appearance. Poinsettia are most susceptible just before and after rooting and again as the plant reaches maturity.

**Control** - Apply 2.0 to 3.5 fluid ounces Phyton-27<sup>®</sup> per 10 gallons water as a soil drench, saturating the growing media thoroughly.

## Crown Gall

*Chrysanthemum*

Crown gall on chrysanthemum is caused by the soil-borne bacterium *Agrobacterium tumefaciens*. Galls usually form at the crown of the plant but occasionally occur on roots or on a stem or branch. The bacterium enters the plant through wounds on the root or at the crown just under the soil surface.

## Erwinia

*Calla Lily, Chrysanthemum, Cyclamen, Holiday Cactus, Iris, Orchid, Poinsettia, & Primula*

The soft rotting *Erwinia* bacteria are fast growing, opportunistic bacteria capable of causing serious losses within a few days. *Erwinia* can infect and rot cuttings, crowns, corms (or other fleshy storage organs), and cause vascular infections.

## Pseudomonas *Holiday Cactus & Orchid*

*Pseudomonas* sp. cause leaf spots on a variety of potted flowering crops. These bacteria prefer warm, moist conditions for infection and spread.

## Xanthomonas

*Holiday Cactus, Orchid, & Poinsettia,*

The *Xanthomonas* bacterium causes leaf spot and blight on a wide range of potted flowering crops.

## Bacterial Disease Control

Apply Phyton-27<sup>®</sup> as a wet foliar spray. Use of low volume equipment is effective for preventive applications but may not be effective against established bacterial infections. See label for specific rates on various crops.

## Partner in Propagation

A clean start in propagation is the first step towards a healthy crop. Whether it's cuttings from stock plants, seedlings, or tissue culture, Phyton-27<sup>®</sup> is an ideal partner in propagation.

- Keep stock plants clean
- Gentle on seedlings, cuttings and microcuttings coming out of tissue culture
- Systemic - absorbed by the plant within hours so it won't be washed off by mist, irrigation or rain

## Invisible

Phyton-27<sup>®</sup> leaves no residue to mar the beauty of flowering potted plants, including poinsettia bracts in color and ready to ship.

## Gentle & Effective

Phyton-27<sup>®</sup> is gentle and effective from start to finish. Use it on cuttings, stock plants and finished material heading out the door. Open flowers can be sprayed without damage (with the exception of gloxinia), but should be trialed first. Older or diseased flowers are likely to be desiccated.

## Crop-Specific Directions

Additional Technical Bulletins are available for disease control on Calla Lily, Chrysanthemum, Orchid, Poinsettia and Roses.

## Quality Plant "Insurance"

Phyton-27<sup>®</sup> protects plants in the cooler during storage, in the truck during shipping, and at the retailer awaiting sale.

## General Use Guidelines

**pH Level** - Preferred pH range for the spray or drench solution is 5.5 to 6.5. Use any acidification method to adjust to this range. Phyton-27<sup>®</sup> concentrate has a pH of 4.7 and will contribute to lowering the pH of the mixed solution.

**Tank Mixes** - Phyton-27<sup>®</sup> is reported compatible with many registered pesticides. Before using combinations for general applications, test for physical compatibility and noninjury under your conditions of use. Do not tank mix Phyton-27<sup>®</sup> with B-Nine and do not apply Phyton-27<sup>®</sup> within 7 days before or after applications of B-Nine. Do not tank mix Phyton-27<sup>®</sup> with strongly acidic compounds such as Aliette and do not apply Phyton-27<sup>®</sup> within 14 days either before or after the application of such products.

**Adjuvants** - Before using additives for general applications, test for physical compatibility and noninjury under your conditions of use. Most nonionic spreaders are compatible, but avoid stickers and horticultural oils. Use ionically active spreaders only at low rates.

**Metals Alert** - Phyton-27<sup>®</sup> can interact with some metals, such as galvanized metal, and cause phytotoxicity or possible defoliation. This interaction has not been reported with stainless steel, painted or coated steel, brass or plastic. Use aluminum equipment with caution.



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