October 2006 Canada Edition

PhytonNews

Growers rely on **Phyton27®**

Poinsettia: Disease Control Calendar

How do you keep a perfect poinsettia crop perfect? How do you turn around a crop that is less than perfect, disease-wise? Phyton-27® delivers broad-spectrum disease prevention and control with excellent plant safety and no residue to keep your crop flawless for a fantastic finish.

November

Weather conditions tend to deteriorate toward the end of the poinsettia crop and plants tend to be crowded and more susceptible to Powdery Mildew, Botrytis, and Rhizoctonia. Pay close attention to irrigation practices, airflow and humidity management to make the growing environment more conducive to healthy plants and less attractive to the fungi. Maintain a preventive spray program if your growing operation has a history of disease problems or if the weather is ripe for disease outbreaks.

December

December is time to package, ship and sell. Before you breath a sigh of relief, make a final Phyton-27® application before the plants are cooled, sleeved, boxed and/or shipped to keep the plants clean of any latent Botrytis and Powdery Mildew.

Phyton-27® doubles your protection with contact activity to shield your healthy plants, plus systemic activity to seek out and destroy active infections.

Poinsettia Problem Primer

Botrytis - brown spots, fluffy, gray mycelium on leaves, bracts and stems; pay close attention to senescing or damaged tissue
Powdery Mildew - white, fluffy fungal patches on leaves and bracts; spots are most obvious on red and pinks, but white varieties are just as susceptible and can harbor camouflaged infections
Scab - scabby, raised spots on stems and leaves, abnormally long branches
Rhizoctonia - stem cankers, near soil line, wilting, yellow lower leaves

Late Season Poinsettia Applications

While good pesticide coverage is important for optimal disease control, sometimes you can get too much of a good thing. Case in point, poinsettias and heavy applications to the underside of the leaves.

A few years back, a poinsettia grower from New York reported unusual yellowing and defoliation of his poinsettia crop after a heavy application directed at the underside of the leaves. Trials conducted by Margery Daughtrey at Cornell University, Dr.

In this Issue

Phyton® 27 BACTERICIDE & FUNGICIDE

Do Not Freeze! Cold Weather Storage

Phyton-27® is sensitive to cold temperatures and must be shipped and stored above 7 degrees Celsius. Check your storage facilities to guard against unexpected cold damage. If there is a possibility that a bottle of Phyton-27® has been exposed to cold temperatures, give us a call (800-356-8733) to discuss plant safety issues and possible disposal or soil drench use of damaged product.

Geranium Stock Plants

Here come the geranium stock plants along with those pesky diseases that threaten your stock plants and cuttings.

Phyton-27® delivers preventive and curative control of Xanthomonas and Botrytis. Apply as a post-plant spray on incoming cuttings. The bactericidal/fungicidal, systemic activity stays with the cuttings as they root and grow. Keep stock plants clean with regular preventive applications of Phyton-27®.

Xanthomonas bacterial blight - Look for systemic wilt of the leaves, while the root systems appears healthy. The petiole remains turgid, giving an "umbrella" appearance to the wilt. Other symptoms include yellow-to-brown, v-shaped lesions on the leaves, brown water soaked leaf spots and black stem lesions. On cuttings, look for failure to root and slow rot from the base upwards.

Xanthomonas likes warmer conditions and symptoms may not show up until later in the season. Infections can be present, but remain hidden in cooler growing conditions. These hidden, systemic infections can pass from stock plant to cuttings.

Botrytis - On foliage, look for brown, triangular lesions covered with the characteristic fluffy, gray-brown mycelium and spores. On cuttings, look for light-to-dark brown rotted areas covered with the gray-brown spores.

Botrytis is most destructive under low light, high humidity, cool temperatures and poor air circulation. Cuttings are particularly susceptible to infection due to presence of a wound.

Steve Nameth at the Ohio State University, and Dr. Harvey Lang at Fischer USA, show that there does appear to be a risk associated with Phyton-27® heavy applications directed at the undersurface of poinsettia leaves.

How can you avoid this risk? Margery Daughtrey's advice was to "caution poinsettia growers not to spray up into baskets…a bench level injury seems improbable with ordinary application technique. If this were a common problem you would know it already!"

Spray Early in the day

To avoid occasional leaf yellowing during dark, damp, short-day conditions of fall and winter, spray in the morning, preferably on a sunny day, so that the Phyton-27® dries promptly. Avoid Phyton-27® wettened leaf surfaces during the night. This yellowing generally appears 3 to 5 days after spraying, as a mottled yellowing on the middle leaves. The yellowing is not uniform and seems to be varietal in nature.

Poinsettia Production Diseases

Disease	Phyton-27 mL per 100 L water	Application Method
Botrytis	150	Spray
Erwinia	125 - 250	Cutting Dip
Rhizoctonia	150 - 250	Drench
Scab	200 - 250	Spray
Powdery Mildew	125	Spray

Holiday Crops & Holiday Hazards

Phyton-27® delivers broad-spectrum control of the holiday hazard pathogens that wait to attack your crops and steal your profits. The unique combination of tough disease control, gentleness on plants, and no residue make Phyton-27® the choice plant protectant for all your holiday crops including azalea, cyclamen, kalanchoe and miniature roses.

Botrytis

Botrytis loves the cooler temperatures found in many fall/winter greenhouses. It can even survive the lower temperatures found in storage and shipping, causing a nasty postharvest bud or blossom blight. Look for water-soaking or browning of leaves or flower petals. Under humid conditions, a tan to gray fuzzy mold develops on the infected tissue. Prevent and control Botrytis with well-timed sprays of Phyton-27®, environmental changes and good sanitation.

Powdery Mildew

Powdery Mildew infects are favored by warm days and cool nights. Spores are spread by air currents and splashing water. Look for fluffy, white patches of mycelium on the foliage. Use Phyton-27® as a preven-

tive or curative application against powdery mildew. When treating active infections, remove infected leaves before treatment to reduce inoculum potential. Apply Phyton-27® at labeled rates using a wet spray for thorough coverage.

Warm Weather Diseases in Winter?

Most growers aren't thinking of "hot-weather" or "summer" diseases in January. But inside the greenhouse, and particularly in the propagation area, growing conditions are warm and moist, very similar to the conditions found in the heat and humidity of summer. So watch out for the hot weather diseases like Cylindrocladium and Erwinia soft rot.

Cylindrocladium

The most common greenhouse crops infected by Cylindrocladium are miniature roses, spathiphyllum, and florist azalea. Damage may be seen on all host tissue including leaves, flowers, stems, crowns and roots and at all stages of plant production, but occurs primarily in propagation when high temperatures and moisture from frequent misting and the close spacing favor infection, disease development and spread.

Azalea and Miniature Roses - Cutting rot on florist azalea and miniature rose appears much like other cutting rots with a reddish-brown rot starting at the cut end and spreading upward into the stem and eventually the leaves. When conditions are very moist and warm, the disease spreads rapidly and spores can splash up onto the leaves resulting in small tan-to-brown lesions surrounded by a dark-purple halo.

Spathiphyllum - On spathiphyllum the first symptoms are slight wilting and chlorosis of lower leaves. Infected leaves become necrotic and petioles rot at the base and detach from the plant. Under moist conditions, conidia splash onto petioles and leaves causing dark-brown to black elongated lesions with bright yellow halos. In advanced stages, the entire top of the plant completely separates from the roots.

Phyton-27® controls Cylindrocladium on spathiphyllum, azalea, and miniature roses. In production, remove visibly infected plants then spray the remaining crop. In propagation, clean up stock plants with a Phyton-27® spray and follow-up with a spray on the cuttings a few days after sticking.

Erwinia Soft Rot

Wounded or stressed plants are prime targets for Erwinia infection, making cuttings in mist houses prime targets. Add some overhead irrigation or misting to spread the bacteria around and you have all the ingredients for a slimy, smelly Erwinia meltdown. A typical symptom of Erwinia infection is a soft, mushy rot that is often associated with a nasty odor. Erwinia is spread primarily by people handling infected plants, vegetative propagation and splashing water.

Erwinia infection on cyclamen causes a sudden wilt and plant collapse on cyclamen. Infected corms are soft and shiny with the characteristic unpleasant odor typically associated with Erwinia infection.

Phyton-27® works best as a preventive application. Once the disease is present, destroy infected plants material and treat the remaining crop with Phyton-27®.

Post-Harvest Protection Shipping and Storage

Botrytis is a serious threat during storage and shipping. Flower petals are one of its favorite foods. Sleeving and boxing plants or flowers promotes high humidity and may cause incidental mechanical damage that provides a point of entry for the fungus.

Phyton-27® gives your flowering holiday crops the protection they need going into the cooler for storage, the truck for shipping, or at the retailer awaiting sale. With no residue plus safety on most open blooms. Phyton-27® ensures a clean, top-quality holiday crop.

Any Questions?

When you buy Phyton-27®, you get first-rate customer service. No one knows more about Phyton-27® than we do. No question is too simple, and we do our best to deal with the tough ones. Each conversation is handled in a confidential manner. Call toll-free at 800-356-8733, email us at info@phytoncorp.com, or visit our website at www.phytoncorp.com.

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BACTERICIDE & FUNGICIDE

2007 Winter Show Schedule

MANTS **Baltimore, MD**	Jan. 10-12 Booth #737
MidAm **Chicago, IL**	Jan. 17-19 Booth #2438
TPIE **Ft. Lauderdale, FL**	Jan. 18-20 Booth #2102
NCAN **Greensboro, NC**	Jan. 18-20
Gulf States Hort Expo **Mobile, AL**	Feb. 2-3 Booth #1233
New England Grows **Boston, MA**	Feb. 6-8

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CORPORATION

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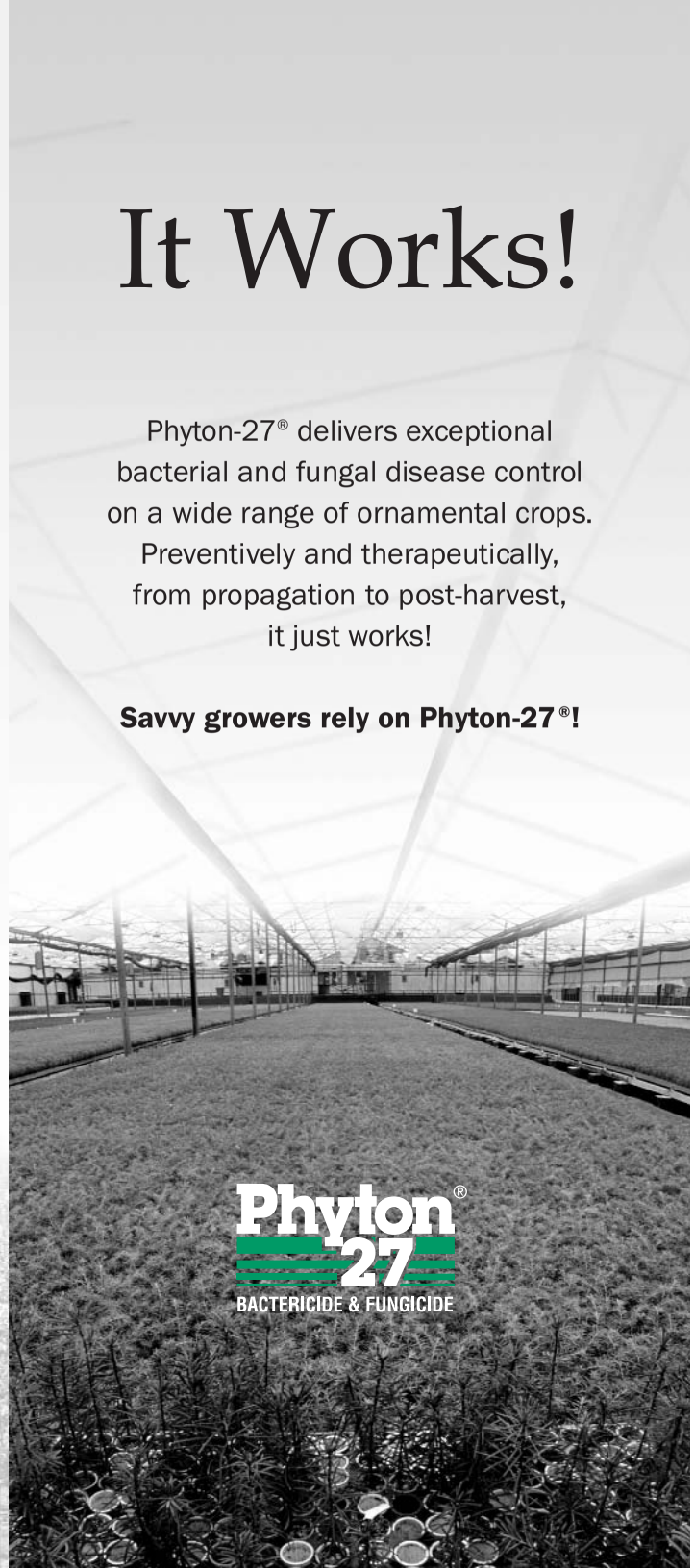
It Works!

Phyton-27® delivers exceptional bacterial and fungal disease control on a wide range of ornamental crops. Preventively and therapeutically, from propagation to post-harvest, it just works!

Savvy growers rely on Phyton-27®!



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