

PhytonNews

Growers rely on Phyton27®

Phyton-27, Your Propagation Partner

Stress, open wounds and a warm, moist environment make propagation a natural time to reach for Phyton-27®. With Phyton-27®, you get systemic control of the toughest diseases in a gentle formulation that is safe to use on cuttings and emerging roots, at grafting and on seeds and seedlings.

Cuttings: Hardwood & Softwood

November through February is the typical time for taking hardwood cuttings, from the current season's mature, dormant wood. Wounds from leaf removal, and in some cases basal wounding, provide the entrance for pathogens. Phyton-27® offers kill-on-contact plus long-lasting systemic activity against a wide-range of bacterial and fungal diseases, yet is surprisingly gentle on developing roots.

Softwood cuttings, taken in the spring, in general root easily. Some species are relatively difficult to propagate due to fungal and bacterial diseases. The long rooting time required for many woody species increases stress on softwood cuttings and their vulnerability to disease infection.

Phyton-27® can be used throughout the year to clean up stock plants and keep them clean, inside and out. Try to get a wet spray application on the stock plants 2 to 7 days before the plants go dormant to allow systemic uptake by the plant and ensure that Phyton-27's antibacterial and antifungal protection is in place to protect the cuttings in the propagation area.

Phyton-27® offers the flexibility of dipping the cuttings prior to storage, waiting to dip prior to sticking or waiting to spray (spray/drench) the cuttings a few days after transplant. If you have not treated the stock plants, or you are storing or sticking cuttings that you have shipped in, then a cutting dip is preferred for immediate protection.

Grafting

Most grafting is done in the winter and early spring while the scion and rootstock are still dormant, with some deciduous plant material grafted as bare rootstock during the winter and stored until spring planting. Phyton-27® can increase graft take by preventing disease infection at the graft site.

Before we started using Phyton-27® we were losing 80% of our maple grafts to a black rot. Now we apply Phyton-27® at a rate of 2.0 fluid ounces per 10 gallons for one application on the stock plants the day before we take our cuttings. We follow-up

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ABC's of WPS



Do Not Freeze - Cold Weather Storage

Phyton-27® concentrate is sensitive to cold temperatures and must be shipped and stored above 45 degrees F. 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 to discuss plant safety issues and possible disposal or soil drench use of damaged product.

PHYTON-27® IN TISSUE CULTURE

Microcuttings coming out of tissue culture are poorly adapted for life outside the flask and lab. They are vulnerable to invasion by whatever pathogens may be lurking in the growing area, mix or water.

Use Phyton-27® at low, preventive rates on plant material going into and coming out of tissue culture with no phytotoxicity. Propagators report success with dipping explants as they go into culture and microcuttings coming out of culture. To check for plant safety, start with the lowest labeled spray rate for the specific type of plant.

“We use a lot of Phyton-27® on tissue culture plants in propagation, especially for *Pseudomonas* on lilac. It's a good product and much easier to use in greenhouse propagation than other coppers.” - Wisconsin Grower

“We had 10-day old lilac microcuttings coming out of tissue culture infected with bacteria. We made one application of Phyton-27® at a low rate and the cuttings are looking much better.” - Minnesota Grower

CONTROL BOTRYTIS IN BARE ROOT COLD STORAGE

A variety of trees, shrubs and perennials are shipped and sold as bare root stock. The requirements for successful cold storage, moisture in the form of watering or misting to prevent desiccation, and cool temperatures to maintain dormancy and reduce disease problems, will actually promote infection by some fungi, like *Botrytis*.

Grower trials in Ontario and British Columbia have shown good results using Phyton-27® to prevent *Botrytis* infection on bare root material in cold storage. A nursery in British Columbia had success with a single application before bare root rose canes going into storage. A nursery in Ontario used a rotation of Phyton-27® and dicloran (2 applications of each for a total of 4 applications) to bare root roses with good results.

with two applications at 10-to-14 day intervals on the grafted material. We've cut our losses from 80% down to 15%. We use Phyton-27® on other species as well including conifers and boxwood. - Oregon Grower

Phyton-27® greatly improves graft take of Japanese maple by preventing the black disease that forms around the graft. We spray the root stock up to a month before making the graft, dip the cut end of the scion in a Phyton-27® slurry mix and follow-up with a couple of sprays on the newly grafted trees. - California Grower

At Seeding

Put the power of Phyton-27® to work for you at seeding to control root rots and damping off. A variety of pathogens can cause problems from seeding to early emergence, including *Phytophthora*, *Pythium*, *Rhizoctonia* and *Botrytis*.

Growers have reported experimenting with Phyton-27® on *Acer* species at seeding, spraying or misting the seeds before covering. An application of Phyton-27® seems to help with reducing root rot, damping off and dieback. Perennials growers have had success controlling seedborne diseases, such as anthracnose on lupine, with a preplant soaking of seeds in Phyton-27®. Phyton-27® was shown to help control the anthracnose and increase germination.

Read what Satisfied Customers are saying...

“Before Phyton-27®, my rooting success with Smoke Trees was 0 to 25%. With Phyton-27®, I have 50 to 60% rooting success. I spray the softwood cuttings right after sticking and reapply every 10 days until they are rooted.”

Terry Sjulín, formerly with Sjulín Nurseries in Hamburg, IA

“A rough comparison of rooting between treated greenhouse cuttings and untreated field cuttings was astonishing. Phyton-27® sprayed plants rooted near 96%. The rooting of untreated wood was estimated at 30%.” Patrick Peterson, formerly with John Holmlund Nursery in Gresham, OR

Propagation has always been a tough time in azalea production, and John would sometimes lose up to 50% of his cuttings. Results after using Phyton-27® were amazing. One spray on stock plants and a second spray on cuttings increased cutting yield to near 100%. John Migas at Woodlands Nursery in Saugatuk, MI

“We have been particularly pleased with Phyton-27® performance in the greenhouse for control of *Pseudomonas* in lilac propagation. We spray the newly stuck cuttings and it has definitely helped to cut back on our losses.”

Ron Amos at Evergreen Nursery in Sturgeon Bay, WI

Deciphering the Alphabet Soup of WPS

The Worker Protection Standard (WPS), has been with us for over twenty years. But sometimes it still may seem that you are swimming in alphabet soup when it comes to understanding and complying with the WPS. Here is a quick primer on decoding the acronyms, staying legal/compliant and maximizing the productivity of your operation.

What is WPS?

WPS refers to the set of regulations implemented by the Environmental Protection Agency (EPA) in 1992. The purpose of WPS is to protect agricultural employees, including general workers, early-entry workers, and pesticide handlers, from pesticide exposure and ensure their health and safety. It covers pesticide usage on production of agricultural plants on farms, nurseries, and greenhouses.

What is PPE?

PPE stands for Personal Protective Equipment and includes the apparel and devices worn to protect the body from contact with pesticides or pesticide residues, including coveralls, chemical-resistant suits, gloves, footwear, aprons, and headgear, protective eyewear, and respirators.

What is REI?

REI is the Restricted-Entry Interval. This is the period of time immediately after a pesticide application when employees may not enter a treated area without protective clothing. The REI for any given pesticide can be found on the label under the heading "Agricultural Use Requirements".

What is the "Treated Area" and the "Restricted Area"?

The "Treated Area" refers to the plants or block of plants that have been treated. The actual Restricted Area after treatment varies with the type of application, the type of pesticide applied and where the application is made (greenhouse or nursery).

IN THE GREENHOUSE

When a pesticide is applied as a:	Restricted Area During Application:	Restricted Area Post Application During REI
1) smoke, mist, fog or aerosol	entire enclosed area	entire enclosed area
2) other application method with pesticides requiring the a respirator	entire enclosed area	treated area, once ventilation is done
Other than in 1 or 2, from greater than 12 in. from the planting medium or as a fine spray or using spray pressure greater than 40 p.s.i.	treated area plus 25 feet in all directions	treated area
In any other manner	treated area	treated area

IN THE NURSERY

When a pesticide is applied as a:	Restricted Area During Application:	Restricted Area Post Application During REI
smoke, mist, fog or aerosol applied aerially or in upward direction, using spray pressure >150 psi	treated area plus 100 feet in all directions	treated area
Applied in downward, less than 12 in. from the planting medium or as a fine spray, spray pressure greater than 40 psi, but less than 150 psi pesticide that requires a respirator	treated area plus 25 feet in all directions	treated area
In any other manner	treated area.	treated area

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Working with the REI

The REI for Phyton-27® is 24 hours. No early entry is permitted for 4 hours after any pesticide application in a greenhouse. After this 4 hour period, there are options for early entry:

No Contact - No Restriction

Any trained worker can go into an REI-posted area to carryout activities where there is no contact with treated surfaces (plant or soil). Workers can work with plants that have not been treated and are not in the treated area, carryout irrigation work, and make repairs or install equipment. No PPE is needed for this entry.

Limited Contact - With Protection

Any trained worker can go into an REI-posted area for 1 hour in any 24 hour period for any reason. They must receive special training, and they must wear the required PPE.

Non-Agricultural Use Sites -

Growing areas that are not within the scope of the WPS, such as botanical gardens and landscape plantings, are covered under the "Non-Agricultural Use Requirements" section of the label. The requirements are to keep children and pets off the treated area until dry and no entry into the treated area without protective clothing until dry.

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BACTERICIDE & FUNGICIDE

October 2006 Nursery

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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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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