

PhytonNews

Growers rely on Phyton27®

Wild Spring Weather

It has been a wild weather ride this spring with record cold temperatures and record rains. Now the disease problems and typical weather patterns of late spring and early summer, like May Gray and June Gloom, are almost upon us. So, let's take a whirlwind tour around the country to see where Phyton-27® can make in difference in your growing operation.

Surprise Cold Snap: Cold Damage Protection

A plant's ability to withstand freezing temperatures is affected by temperature fluctuations and day lengths prior to a freeze. With a gradual decrease in temperature over a period of time increases, such as we normally get in the fall of the year, plants or plant parts develop the ability to withstand cold temperatures. But when a sudden decrease in temperature in late fall or early spring occurs there is usually more damage than what occurs at the same low temperature in January or February.

The shrubs, trees and perennials in many areas were already out of dormancy when the recent cold front hit. There was a lot of vulnerable tissue. Once the tissue is damaged it is ripe for infection by opportunistic pathogens including Botrytis, Pseudomonas (blight and bacterial leaf spot), and other fungi that regularly cause leaf spots.

Phyton-27® First-Aid for "Frost Bit" Plants

Apply Phyton-27® after a chill or freeze to clean up damaged tissue and protect against further damage by lurking pathogens. With Phyton-27®, you get broad-spectrum anti-bacterial and anti-fungal protection for all your ornamental shrubs, trees and perennials.

Rainy Day Rescue: Texas & The Northeast

Record rains have pounded Texas and the Northeast. This rainy weather encourages infection and spread of many wet weather diseases including Botrytis, fungal leaf spots, bacterial leaf spots and black spot on roses.

Phyton-27® Umbrella for Soggy Plants

Phyton-27® provides systemic protection that is quickly absorbed into the plant so it won't wash away. Within 2 to 4 hours after spraying, Phyton-27® is absorbed through the foliage and systemically moves up, down and throughout the plant.

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WE'VE MOVED OUR OFFICES

In April, Phyton Corporation moved their offices to New Hope, Minnesota. The toll-free number (800-356-8733) and website address (www.phyton-corp.com) will remain the same. The new address, telephone and fax numbers are:

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ANTHRACNOSE ON EUONYMUS

Anthracnose on Euonymus, caused by the fungus *Colletotrichum gloeosporioides*, can be devastating under certain environmental conditions. It is a problem in container and field nurseries as well as in the landscape. Variegated varieties such as *Euonymus fortunei* and *E. japonicus*, seem to be more susceptible.

Symptoms

Symptoms include small lesions with dark borders and white or light tan to gray centers. In some cultivars, the area around the lesion turn reddish. The necrotic centers of the lesions may fall out, leaving a shot-hole appearance. Newly expanded leaves seem most prone to infection. Stem cankers may be small and oval and tend to be raised and appear scabby. Larger cankers elongate and may girdle the stem. Severe cases of anthracnose result in defoliation and stem dieback.

Conducive Conditions

Cool, wet springs are highly conducive to anthracnose infections, as well as hot, humid summers. Older leaves appear to be resistant to infection. Leaf wetness is critical for disease infection and spread. The fungus requires free moisture in the form of leaf wetness for germination and infection. Rain and irrigation contribute to leaf wetness for infection and spread the spores in splashing water. Cuttings are particularly susceptible when being rooted under mist conditions.

Successful Control

Apply Phyton-27® at a rate of 2.0 to 2.5 fluid ounces per 10 gallons water at weekly intervals. Begin applications as new growth emerges. Applications after pruning are also beneficial to protect the new flushes of growth. After three consecutive applications of Phyton-27® it may be beneficial to rotate with a product containing mancozeb or chlorothalonil.

Combine Phyton-27® applications with cultural control measures: spacing plants for good air circulation and rapid drying of foliage, timing overhead irrigation to speed drying of the foliage, removing of plant debris from the ground and containers, and removing infected leaves and stems along with dead plants to reduce inoculum and potential of spread to surrounding plants.

May Gray & June Gloom: California

The months of May and June can turn “Sunny Southern California” to gray and gloomy. May Gray and June Gloom refer to the common late-spring, early-summer weather pattern of overcast skies, mild temperatures, and early morning fog and drizzle. If some Californians claim affliction with Seasonal Affective Disorder, think what this wet, damp weather will do to your crops.

May Gray and June Gloom provide the perfect conditions of cool temperatures and high humidity and the perfect plant stages of succulent tissue and fading flowers that powdery mildew and Botrytis love.

Powdery Mildew

This fungus (actually powdery mildew is caused by a number of different species of fungi) is quite different from most of the foliar fungal pathogens in that it does not need water on the leaves for infection. It merely needs high humidity and prefers moderate temperatures and low light intensities (cloudy, gloomy weather). The powdery mildew spores are spread by splashing water, so once you have an infection, rain or splashing irrigation water can spread it around. Most of the powdery mildews prefer to infect young succulent spring growth.

Powdery mildew is easily recognized by the white to gray powdery growth, usually on the leaves. Early infections can hide under the leaves and be hard to detect. Early symptoms can include greasy looking spots on the underside of begonia leaves, red leaf tissue under the mildew colonies of photinia and leucothoe and slight curling and purpling areas on rose foliage.

Phyton-27® is an excellent tool to preventive and eradicate powdery mildew. Maintain a regular preventive spray program using lower rates and carefully scout your crop for early detection and treatment of any powdery mildew outbreaks.

Treat active powdery mildew infections by removing infected leaves before treatment to reduce inoculum potential. Apply Phyton-27® at labeled rates as a wet spray. Low volume applications are effective in preventive situations but not against active infections. Established infections may require multiple applications, higher dosage rates and shorter treatment intervals. When you encounter a particularly tough strain of powdery mildew, rotate or tank mix Phyton-27® with one of the strobilurin products.

Botrytis

Cool, damp, cloudy weather is ideal for Botrytis infection. The fungus loves the cooler temperatures (60 to 70 degrees F) found in many winter greenhouses. Botrytis is also a notorious postharvest problem, capable of establishing at temperatures of 32 to 50 degrees F. Bud or blossom blight can be a serious problem during storage and shipping of potted plants and cut flowers.

Botrytis causes a variety of symptoms including damping off or seedling blight, flower blights and bud rots, leaf spots or blights, cutting rots, and stem cankers. Infection first appears as water-soaking or browning. Under humid conditions, a tan to gray fuzzy mold develops on rotted tissue.

Keep your crops clean with regular applications of Phyton-27® at 7 to 14 day intervals, especially when conditions are ripe for Botrytis, and plants are stressed, wounded or senescing. Intervals can be shortened to 3 to 5 days for a couple of applications to control active infections.

Cultural Control:

- Early Detection - Regular scouting to catch Botrytis in the early stages allows for flexibility with spot treating and using lower, safer and more economical dosage rates. Lower rates are safe to use on buds and open blooms on most crops with no damage or residue.
- Environmental Controls - Maintain good air circulation with fans, heating and venting. Space plants to allow better air circulation around and through the foliage and use fans for air movement above the canopy.
- Strict Sanitation - Remove senescing flowers and foliage, as well as infected plant tissue, to reduce inoculum.

Pseudomonas Leaf Spot & Blight

Pseudomonas infects a wide range of ornamental plants including a large number of deciduous woody species and bedding plants. Pseudomonas syringae is the “cool-weather” bacterium.

Symptoms vary depending on the host plant. Most leaf spots start as small, watersoaked lesions that develop into dark brown to black, tan or gray colored leaf spots. Blight is often mistaken for winter injury.

- Lilac - brown spots sometimes surrounded by yellow halo on stems and leaves; infected stems may be girdled with blight and death of terminal shoots; buds may die before opening
- Maples - leaf spots, vein blackening and tip dieback
- Garden Impatiens - small spots with purple margins

Phyton-27® can be applied as a spray or cutting dip to control bacterial leaf spot during propagation and throughout production. Consult the label for rates specific to the crop you are treating.

Black Spot

Black spot is favored by periods of warm, wet weather. Look for brown-to-black, circular spots with “feathery” edges on the young, expanding leaves and canes. Infected leaves eventually turn yellow and drop prematurely.

The black spot pathogen penetrates deep into infected rose tissue, so a systemic product like Phyton-27® is needed for reliable control. Regular applications of Phyton-27® at 7 to 10 day intervals are needed to protect the vulnerable emerging foliage. Intervals can be spread out to 10 to 14 days during prolonged dry periods. For curative applications, apply every 5 to 7 days.

Bonus Benefits

When you use Phyton-27® you get Bonus Benefits beyond the systemic, broad-spectrum disease control.

- safe on most blooms
- no residue
- excellent tool for resistance management

PHOMOPSIS TIP BLIGHT

Phomopsis tip blight affects juniper, Eastern red cedar, and related evergreens. It is most damaging on seedlings and liners, particularly recently grafted liners, but also occurs on container and field stock and in the landscape. First year seedlings may be totally wiped out in epidemic years. It is most common when there is succulent young tissue and humid conditions.

Symptoms - Infected foliage turns dull red or brown and finally ash gray. Small gray lesions often girdle branch tips and cause blighting of foliage beyond the diseased tissue, resulting in branch tip dieback. During prolonged wet, cool periods, spores ooze from the black fruiting bodies and are dispersed by rain or irrigation.

Cultural Control - Space plants for good air circulation to promote rapid drying of the foliage. Avoid overhead irrigation or water early in the morning. Prune out diseased branch tips during dry weather but avoid pruning in the spring and fall, since the fungus infects through wounds.

Prevention - Junipers are most vulnerable in spring and early summer. Protect seedlings with regular applications at a rate of 1.5 fl. oz. Phyton-27® per 10 gallons at 7-10 day intervals during rapid plant growth in the spring and the fall. Continue applications as long as growth flushes continue and the weather remains hot and wet. Seedlings may need protection throughout the growing season.

Active Phomopsis Infections - Rogue out infected seedlings and treat the remaining plants with Phyton-27® at the rate of 2.0 to 2.5 fl. oz. per 10 gallons for a couple of weekly applications. Continue with preventive applications at a rate of 1.5 fl. oz. per 10 gallons.

Protect wounded plants, after pruning or shearing, and the new succulent growth with a Phyton-27® application immediately prior to, or after, shearing or pruning.



May 2007 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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BACTERICIDE & FUNGICIDE

2007 SUMMER SHOW SCHEDULE

SE Greenhouse Conf. Greenville, SC	June 22-23 Booth #6002
OFA Columbus, OH	July 15-17 Booth #2621
FarWest Portland, OR	Aug. 23-25 Booth #8022
Bedding Plant Conf. Cleveland, OH	Sept. 9-12
CanWest Vancouver, BC	Sept. 12-13 Booth #1300



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