

# Greenhouse Pest Posse

“What’s current on the pest, disease and production scene”

## POINSETTIA POWDERY MILDEW

Powdery mildew has arrived on scene this month. As greenhouse temperatures go below 86°F during the day, this disease is able to cause problems. On poinsettias, powdery mildew is caused by the fungus *Oidium* sp. No other hosts are known for this particular mildew, which means, that in the high plains climate, the fungus will not not over winter. It is able to move from greenhouse to greenhouse via infected cuttings or plants.

When caught early, powdery mildew is quite easy to manage. Growers must look for the early evidence of the fungus (white talcum powder like colonies) on lower leaf undersides. As the disease progresses, signs of the disease will be apparent on the tops of leaves. Unfortunately, this disease has a way of “exploding”, so thorough scouting



Powdery mildew colonies on ‘Success Red’

programs are a must.

During the early production period (September and October) scout one out of 30 plants weekly. If powdery mildew is detected, increase scouting to one out of 10 plants, weekly.



Circular colonies on leaf surface

Management of the disease can be quite successful if the following practices are followed:

**Flag** or mark all plants with powdery mildew signs

**Remove** all infected leaves and quickly place in a sealed bag (*do not carry open, infected tissue throughout the greenhouse*). **Leaf removal** is feasible if 1 – 5 leaves per plant are infected. If more than 5 leaves per plant or stems are infected, then consider destroying (rouging) the entire plant.

**Apply fungicides** to the *entire* crop (do not spot treat). Labeled fungicides include: triadimefon (Strike), triflumizole (Terraguard), myclobutanil (Systhane) [Imidazole/Triazole class\*]; and [Strobilurin class] trifloxystrobin (Compass\*), kesoxim-methyl (Cygnus).

\*Alternating between these two classes helps reduce fungicide resistance.

## Day lily rust found in Colorado

Daylily rust caused by the fungus *Puccinia* sp. was found in a nursery in Arapahoe County in early September. This is the first time staff within Colorado State University Cooperative Extension and the Colorado Department of Agriculture have been aware of its presence in Colorado. In May of 2003 APHIS removed the quarantine on this disease. As such, if you find rust on day lilies it takes the status of all other indigenous pests and diseases that come in on plant material entering from other States. Plant material you purchase should be free of problems. You do not have to, nor should you, accept disease or pest-infested material. If you receive daylilies with suspicious symptoms contact the Colorado Department of Agriculture (303) –239-4140 or Colorado State University Cooperative Extension (303)-637-8111 together, both agencies can help with the identification of daylily rust. For more information and management recommendations visit: <http://www.aphis.usda.gov/npb/>



Signs of daylily rust on leaves

## RHIZOCTONIA STEM CANKER (POINSETTIAS)

Stem cankers and root rots are very common problems on poinsettias. Many different fungi can potentially cause these symptoms, however, the fungus *Rhizoctonia* is often most common. Stems are attacked at the soil line and develop dark brown cankers or lesions that eventually become soft and mushy. Roots are usually affected, as well. When examined, the roots will be discolored, root mass will be decreased, and often the outer covering of the root will be soft and mushy. The disease is favored by high available moisture and high temperatures. Anything that will weaken the plant will also favor the disease. Plants are predisposed to attack when there are problems related to poorly drained media, over irrigation and/or planting too deeply. Root disorders are the number one cause of plant death. Sanitation is key in managing this problem. Many fungicides are labeled for control including: Banrot, Chipco 26GT, Terraclor, 3336, Heritage, Medallion, Contrast, Systec 1998, Plant Shield (Root Shield), SoilGard, and Mycostop.



Stem canker on poinsettia caused by *Rhizoctonia*

## PANSY PROBLEMS

Crown rotting disease problems have started to “pop” up around the region. Growers describe the plants as wilted, not responding to watering. One would think root rot, however, upon examination of roots, there appears to be no damage or rotting. When plugs are transplanted, the plants break off at the crown. As symptoms progress tons of plants “melt



Crown rot of pansies

out” or become mushy (usually under hot conditions). These are classic symptoms of crown rot caused by one of two fungi, either *Phytophthora* or *Pythium*.

A combination of good sanitation and fungicides can help control this problem. Inspect incoming plugs for symptoms and signs of crown rot and other diseases. Look for uneven growth across the plug tray. Never reuse plug trays and flats (disinfection of the used trays may not kill all pathogens). Avoid high temperatures as well as fertilizers with ammonium.

Fungicides such as Aliette, Heritage (aerial *Phytophthora*), Stature (aerial *Phytophthora*), Subdue MAXX, Truban and Terraguard are labeled for control.

## OTHER PROBLEMS OF NOTE

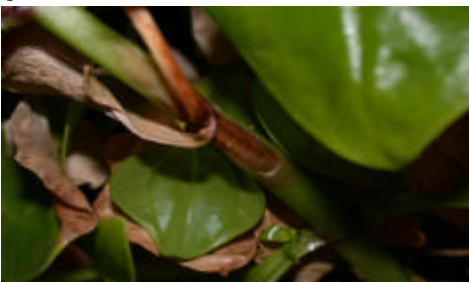
- Downy mildew of snapdragons
- Caterpillar feeding injury on snapdragons
- Powdery mildew of pansies
- *Pythium* crown rot of Poinsettias

## QUESTIONS OR COMMENTS?

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## *INSV on Exacum*

*Impatiens* necrotic spot virus, a tospovirus can be a problem on a wide variety of crops at all times of the year. Recently the disease was found on Exacum. Symptoms of tospovirus are as varied as the plants they affect. Keep a look out for necrotic leaf blights, cankers on stems and leaf spots with concentric rings. Symptoms on exacum look very much like those caused by fungi. Management includes destruction of symptomatic plants, monitoring and control of thrips (the vector) with insecticides such as Avid + Talstar, Tame, Azatin, or Ornazin, BotaniGuard, Naturalis-O, Conserve, Mesurol, Orthene + Talstar, Pedestal or Thiodan.



*Canker caused by INSV on Exacum*



*Leaf blight caused by INSV on Exacum*

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## Greenhouse Pest Posse

*A newsletter designed to keep greenhouse growers informed of current pest, disease and production information. Produced by Laura Pottorff, Regional Greenhouse Specialist, Colorado State University*

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## DON'T MISS- GREENHOUSE PEST MANAGEMENT SCHOOL

The 2003 Greenhouse Pest Management School will be held November 6 at the Adams County Extension Office in Brighton. This years workshop will focus on the relationships between plant nutrition and the incidence of pests and diseases.

If you have ever been curious as

to how pests, diseases and even biological control organisms are discouraged (or enhanced) by how much you fertilize a crop- this day long workshop is for you. Attendance will count toward continuing education credit for the Certified Greenhouse Professional Program. For more information and registration contact Teresa at (303) 637-8100.