

**Greenhouse Pest Message, October 14, 2024**  
**Charles Krasnow, UConn Extension**

Poinsettia season is fully underway. There are many pathogens that affect poinsettia to watch out for in the greenhouse. *Botrytis* causes leaf blight and is common this time of year. Often the pathogen will start at the leaf margins or cause leaf spots. The bracts and cyathia are also very susceptible to *Botrytis*, and stems can be affected under high disease pressure. Be on the lookout for this pathogen and spray when necessary to minimize pathogen levels on plants and in the greenhouse.

Another important pathogen is *Pythium*, causing root rot and wilt. This is one of the more tricky pathogens in the greenhouse. Often *Pythium* will be present at low levels, only to appear in a widespread area when plants are stressed (fertilizer stress, water stress – over or under watering, or physiological stress– when bracts appear, shipping). *Pythium* is typically considered a soil-borne pathogen, as it is usually found in soils, and almost never in raw peat. However, the pathogen is very good at moving in water (also referred to as a “water-mold”). Most growers using flood floors have filtration systems and accurate watering schedules. Remain vigilant to remove dead or wilting plants, as they can be an inoculum sources that spreads in recirculating water, increasing the risk of infecting near-by plants, or a whole bay/flood bench.

There are very few fungicides that effectively reduce *Pythium*. One highly effective product is Terrazole. This fungicide inhibits all *Pythium* species and can be injected into drip lines or used on flood floors when necessary. Subdue is also highly effective, however resistance is known with this fungicide. It should still be included in the rotation, as not all *Pythium* are resistant, even in a single greenhouse where resistance has been observed it can still help depending on the crop and source of the pathogen. Cease (*Bacillus subtilis*) is a biological control that has been reported as active against this pathogen. Segovis shows activity against one species, *Pythium ultimum*. This is a very common species in soils, however, is not as common in the greenhouse. In multiple greenhouse studies in the northeast region, it was found at low levels: in PA it was recovered at 10%, in MI greenhouses ~15%, and in Long Island only 4%. However, this fungicide is highly active against *Phytophthora* species, and may be included in a rotation program where appropriate.

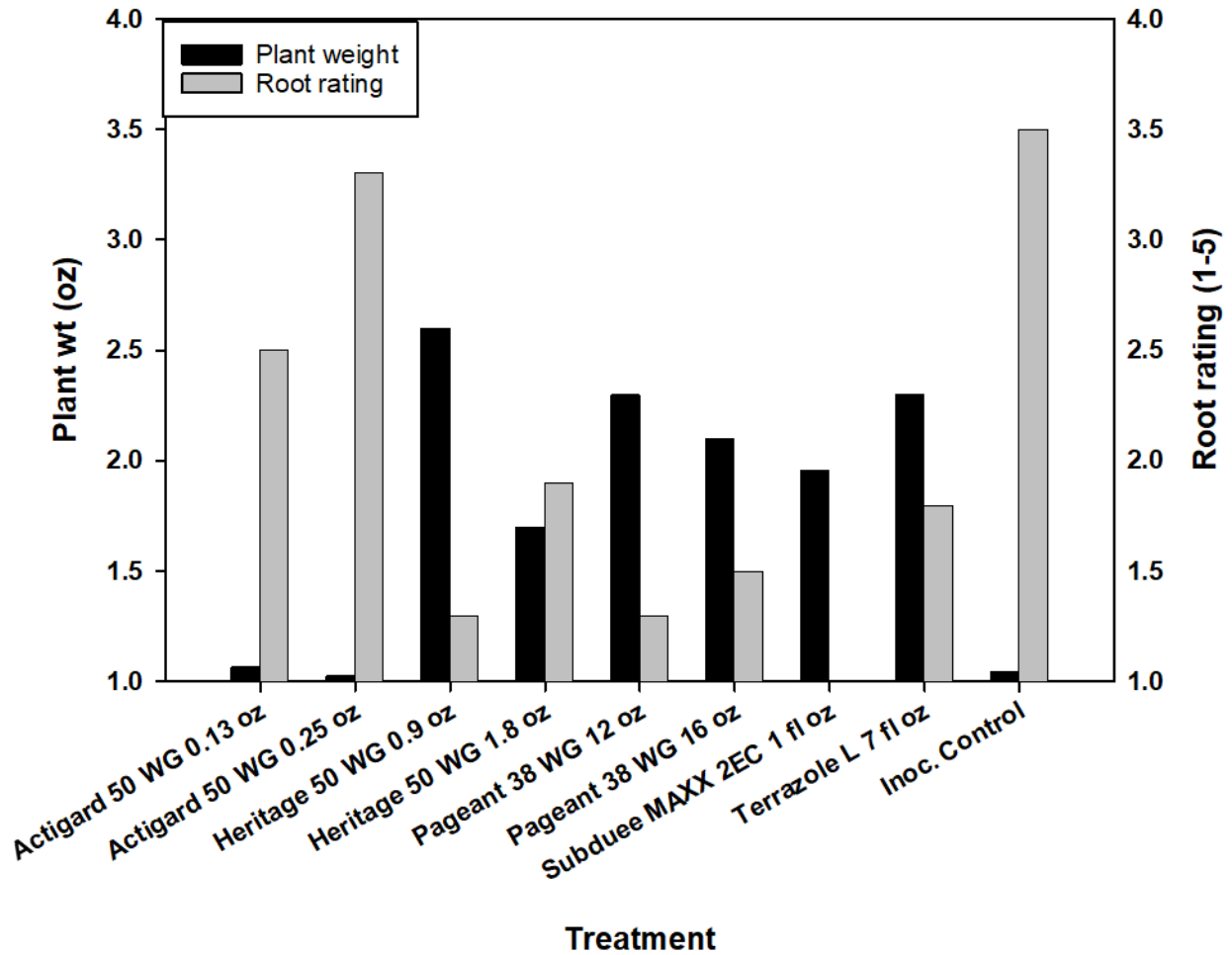


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Below is a trial from Mike Benson (retired) of NCSU showing a number of different products applied as a drench to poinsettia to control *Pythium aphanidermatum*. Drenches were applied on a 28 d schedule, Pageant was applied as a srench on a 14 d schedule. Plant top weight was

measured at the conclusion of the trial, and the roots were rated using a 1-5 scale; where 1 = healthy and 5 = all roots necrotic. Terrazole and Subdue MAXX provided excellent control, with no significant difference from the non-inoculated control (*not shown*). Pageant and Heritage also provided high levels of control.

### Effect of Fungicides for Control of Pythium



\*Actigard is not labeled for use on ornamentals.

Whitefly (*Trialeurodes vaporariorum*) is one of the major insect pests of poinsettia. Recent scouting has come up positive for low levels of whitefly in some greenhouses. Use yellow sticky traps to monitor for this insect. This pest will also cause damage to begonia, aster, flowering cabbage, herbs, tomato, and many other crops. They feed on plants with piercing, sucking mouthparts, causing the infested foliage to become mottled and drop. Honeydew is secreted from the insects, resulting in black sooty mold and reducing crop value.



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Michigan State recommended the following insecticides as foliar sprays:

Mainspring (cyantraniliprole)

Rycar (pyrifluquinazon)

Judo/Savate (spiromesifen)

Altus (flupyradifurone)

Safari (dinotefuran)

Check the links below for more in depth insecticide recommendations.

Additionally biocontrols can form an important part of a control program:

“Growers can also use biological control to manage whitefly populations. There are two commercially available parasitoids in the United States: *Encarsia formosa* and *Eretmocerus eremicus*. *Eretmocerus eremicus* will parasitize both sweet potato and greenhouse (*Trialeurodes vaporariorum*) whiteflies while *Encarsia formosa* will only parasitize greenhouse whiteflies. For production during these warmer months, *Eretmocerus eremicus* is more effective at higher temperatures than *Encarsia formosa*. There are also two commercially available predators that feed on whiteflies: *Amblyseius swirskii* and *Delphastus catalinae*. *A. swirskii* feeds on the eggs and nymphs of whiteflies while *D. catalinae* feeds on whitefly eggs.” Other recommendations: *Eretmocerus* species should be released at a rate equivalent to one adult female per plant per week. Apply an insect growth regulator such as buprofezin twice, in weeks seven and eight, prior to bract coloring. If the whitefly population is low (fewer than one nymph or pupa per leaf) in November and early December, then parasitoid releases may not be necessary. Continue scouting in order to detect hot spots or a general increase in the whitefly population. Ensure that there is compatibility with other insecticides used.

<https://content.ces.ncsu.edu/greenhouse-whitefly>

<https://ag.umass.edu/greenhouse-floriculture/fact-sheets/whiteflies-on-greenhouse-crops>