



Greenhouse Pest Message, August 18, 2023
Leanne Pundt, UConn Extension

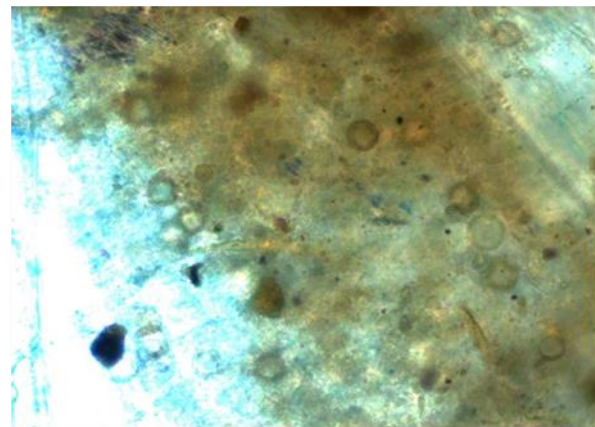
Garden mums are looking good, with just a little color starting in outdoor field-grown mums. Poinsettia production is also underway.

During this “year of the aphid,” continue to monitor for aphids on your fall crops.

With one of the wettest summers on record, disease management has also been challenging.

In my travels, growers have been asking about *Pythium* root rot. At the ***Diagnosis and Management of Plant Disease Workshop*** on June 29, 2023, at CAES, New Haven, Emma Lockabaugh, Senior Technical Specialist from BASF spoke on *Blame it All on my Roots*. She spent 7 years studying *Pythium* at North Carolina State University.

For those of you who missed the workshop or would like a refresher on her talk, Greenhouse Management magazine send out a email on August 15th, about an upcoming webinar on **August 30 at 2pm** sponsored by BASF and Greenhouse Management on the “frightful five” soilborne pathogens: *Phytophthora*, *Pythium*, *Fusarium*, *Rhizoctonia* and *Thielaviopsis* (now *Berkeleyomyces*). Click [here](#) to sign up.



Figures 1 & 2: “Rat Tail” symptoms with *Pythium* root rot where the outer root easily sloughs off when pulled with finger tips, leaving the inner strand or cortex of the root (on left) and close-up of *Pythium* oospores in infected root tissue when viewed under the microscope to confirm presence of *Pythium*. Photo credits: J. Allen.

The rotational program Emma Lockabaugh recommended for Pythium root rots was:

- 1) Empress Intrinsic (FRAC 11) and Segway O (FRAC 21)
- 2) Terrazole (FRAC 14) – foliage should be rinsed off with water immediately after application to avoid phytotoxicity
- 3) Empress Intrinsic Brand (FRAC 11) and Subdue Maxx (FRAC 4)

Because there is widespread resistance to Subdue Maxx (4), and you may have both resistant and sensitive strains, you always want to tank mix when using Subdue Maxx and **never** start with it first. Always read labels carefully for plant safety precautions.

Tip Burn on Ornamental Cabbage

With the humid rainy weather this summer, ornamental cabbage, especially if grown in greenhouses, can suffer from leaf edge burn or tip burn. Calcium is immobile in the plant, so deficiency symptoms start in the youngest leaves. High humidity and poor air flow result in poor transpiration, so the calcium does not move in the transpiration stream to the youngest leaves. High humidity, uneven watering, and excessive use of ammonium nitrate, which competes with calcium, all favor calcium deficiency or tip burn.



Figures 3 & 4: Tip Burn on Ornamental Cabbage. Photos by L. Pundt

Various foliar applications of calcium sprays such as 15-0-15 or 15.5-0-0 (calcium nitrate) can help reduce this damage. Adding a spreader sticker such as Capsil helps reduce run-off from their waxy leaves. Spray in the morning or evening to reduce the chance of phototoxicity and slow drying time to help increase calcium uptake. Make applications once a week when environmental conditions favor reduced calcium uptake.

[Biosafe Systems](#) carries CalOx FT (8-0-0), which contains a patented CaT technology, a synthetic molecule (DPU) which improves the mobility and distribution of calcium in plant tissues.

The 'FT' stands for the calcium "Flow Through" that occurs by stimulating selective ion channels in the cell membranes, allowing calcium to flow through the cells. Normally, calcium migrates outside of the cell membranes, around and through the cell walls, only being transported by water movement. CalOx FT increases cellular calcium throughout the plant. Follow all precautions on the label.

Save these Dates:



The conference schedule is online at <https://www.negreenhouse.org/schedule.html>

Registration is now open! <https://www.negreenhouse.org/registration.html>

The biennial Northeast Greenhouse Conference & Expo is co-sponsored by New England Floriculture, Inc. - a group of grower representatives from the Northeast, augmented by University and Cooperative Extension staff in each state who specialize in greenhouse crops and management.

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