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Cheers to Ten Years!

e-GRO celebrated its ten-year anniversary in 2021 and you can still access all of the high-quality information on our website: e-gro.org

Cheers to 10 years completed! Electronic Grower Resources Online (e-GRO) is beginning its 11th season in 2022. Are you new to receiving information from us? What is it?

e-GRO is a collaborative educational effort from 12 of the leading Universities specializing in the production of greenhouse ornamental and edible crops.

Over the past ten years, there has been 364 in-depth articles (Figure 1) or "Alerts" to bring grower's attention to plant production issues that our team is currently seeing in greenhouses across the county.

These articles are sent via the online newsletter every week during the peak production season to over 5,500 subscribers.

Since 2016, the e-GRO team has added a separate "Edible Alert" highlighting resources, diagnostics and management of common greenhouse edible crops such as basil, leafy greens, and tomatoes. There are currently 60 of these articles on our website from previous seasons of the e-GRO newsletter.

You might ask: is there more than articles and newsletters? YES! Let's explore the other resources that you can use in the coming growing season:

www.e-gro.org



Unusual Leaf Spot on Poinsettia

A sample of poinsettia with conspicuous leaf spots was received by the Cornell Long Island Horticultural Research and Extension Center (LIHREC) Diagnostic Lab, sent from a greenhouse located in another region. The leaf spots resembled scab, caused by the fungus *Sphaceloma poinsettiae*, however sporulation of the fungus *Corynespora cassicola* was found. *C. cassicola* is not a common problem on poinsettia, particularly for us in the northeast; fungal leaf spots caused by *Alternaria*, *Colletotrichum*, and *Botrytis* are more usually seen. *C. cassicola* can cause brown leaf spots on leaves and bracts in conditions of high moisture and high humidity.

C. cassicola listed as occurring on a very wide host range of over 500 plants from more than 350 genera including various ornamental plants as well as numerous vegetable, fruit, herb, and field crops. Ornamental plant hosts include poinsettia, hydrangea, begonia, African violet, salvia, annual vinca, and lipstick vine. Cucurbit crops, eggplant, pepper, tomato, and basil are a few of the edible crops affected.

C. cassicola causes irregular, often large, brown lesions on leaves and bracts, often seen at the tips or edges. Leaf spots are usually very difficult to discern from one another and assistance of a diagnostic lab is necessary.

Infested plant material or debris can harbor inoculum of *C. cassicola*, and good sanitation practices will help prevent the spread of this leaf spot disease. Reducing leaf wetness and humidity will also help to manage. Regular applications of a labeled fungicide may be needed if an outbreak occurs.

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Figure 1. e-GRO Alerts are articles that provide timely information to growers on common plant production problems. Photo: Heidi Lindberg

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e-GRO [Alert 9.1](#) in January of 2020 provides an excellent list of all the resources that are on the website. In addition to an archive of alerts and blogs on our website, there are several videos, how-to-guides, recorded seminars, e-books, and applications available:

1. [e-GRO University](#)

e-GRO University is a series of dozens of recorded lectures and tutorials covering the basics of greenhouse production, plant growth management, plant nutrition, pest and disease management, and plant growth regulators (PGRs).

2. [e-GRO Webinars and Videos](#)

The [e-GRO YouTube channel](#) is host to 204 videos on a wide variety of topics including recordings of previous e-GRO webinar series. The most popular videos include: Plant Nutrition - Sherlock Holmes Style (116K views), Identification of Nutrient Deficiencies of Greenhouse Crops (42K views), and Nutrient Programs for Hydroponic Crops (31K views) (Figure 2).

“PGR University, Succulents: Easier Than You May Think!, and Ready, Set, Let’s Grow” are all available on the [e-GRO Webinars Page](#).

3. [PGR MixMaster](#)

PGR Mixmaster is a calculator on our website that can help you mix your PGRs by inputting the concentration and the quantity of final solution needed (Figure 3). It contains many of the common PGRs including: B-Nine, Fascination, Paczol, and Topflor.

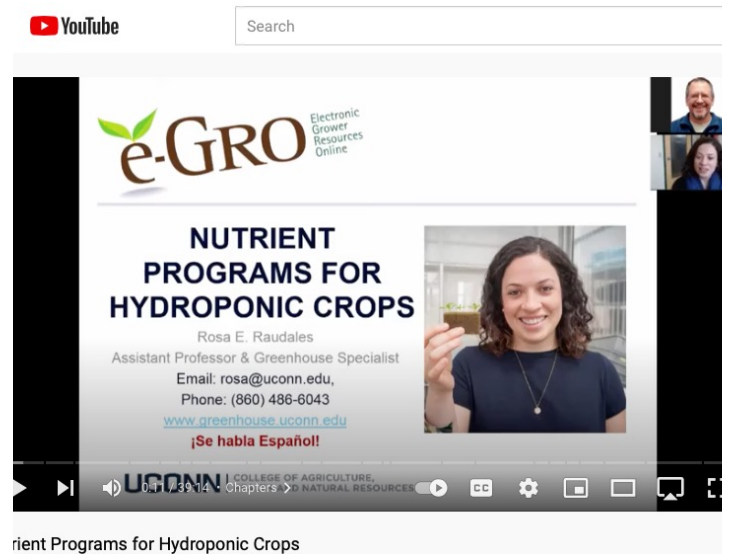


Figure 2. Nutrient Programs for Hydroponic Crops is a video on our e-GRO YouTube Channel with over 31,000 views. Photo: Heidi Lindberg

Figure 3. PGR Mixmaster is a calculator on our website that can help you mix your PGRs by inputting the concentration and the quantity of final solution needed. Photo: Heidi Lindberg



Figure 4. The e-GRO mobile app center allows growers to look up labeled products and has multiple calculators useful to growers. Photo: Heidi Lindberg

4. [e-GRO Mobile Web Apps](#)

The mobile web applications on the e-GRO website include calculators (Figure 4) to calculate fertilizer concentrations and acid concentrations to neutralize water alkalinity. There are also web advisors that provide lists of labeled insecticides, fungicides, and PGRs for crops. One of the newest mobile applications is the nutritional monitoring advisor where growers can look up pH and EC recommendations for common floriculture crops using their scientific names.

5. [e-Books](#)

There are six e-books available on the website including the newest on identifying the most common greenhouse insect and mite pests. Other e-books include books on specific crops including poinsettia, primula, and plectranthus.

6. [Research Reports](#)

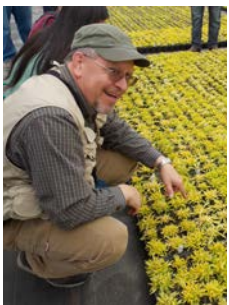
The research reports provide the latest research-based findings from the e-GRO team members' University laboratories. The most recent research reports are on rates of different PGRs on common poinsettia varieties and a cultivar report of red, white, pink, and specialty cultivars of the poinsettia cultivars grown in North Carolina. Other research reports include those covering irrigation topics, common nutrient deficiencies, and PGR application rates on perennial greenhouse crops.

Finally, users can look up the current members of the e-GRO team on the website e-gro.org/team. You will find a variety of experts specializing in crop production, entomology, pathology, and nutrient management.

The e-GRO team evolves as specialists retire or those who participated as graduate students go on to hold Extension positions after their studies. Prior to the pandemic, the e-GRO team would meet yearly for a diagnostic tour in different areas of the country. We'd tour greenhouses and other controlled environment production facilities, and it was a great opportunity for mentorship and personalized coaching for the next generations of floriculture experts. We hope to resume these in-person meetings in 2022 to continue to grow the materials available from e-GRO and provide hands-on learning opportunities for new Extension professionals, University faculty, and graduate students.



e-GRO team members meet to visit greenhouses nationwide and provide hands-on learning opportunities for University faculty, Extension professionals, and graduate students. Photos: Heidi Lindberg and W. Garrett Owen



e-GRO Alert

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