

Ornamental Research News

Central Florida Research and Education Center

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PLANT PATHOLOGY

Prevention Before Disease Management

Dr. David Norman, Plant Pathologist

Prevention is the most important disease control practice. There is no substitute for preventing diseases from becoming established in a production facility. Once a disease becomes established, it is usually time consuming and costly to eradicate. To implement preventative measures we must understand the major avenues by which pathogens gain entrance into production facilities. The two major ways pathogens enter a facility are on plant material or by workers.

Plant material that is brought into the nursery should be free of pathogens. When purchasing plants from a supplier, ask a number of questions.

- 1) Have any diseases been observed in the material?
- 2) Has the plant material been indexed or tested for the most common pathogens affecting this particular crop? This is especially important for virus diseases.
- 3) If the material has been produced in tissue culture, how long has it been deflasked? A lengthy time from deflasking to sale allows time for disease introductions.
- 4) Before purchasing plant material, try to look around the supplier's nursery. Avoid suppliers who have facilities that are unkempt. Look for weeds growing in or close to structures since many weeds can be alternate hosts for plant diseases or hosts of insects that can transfer pathogens to noninfected plants. When plants are first brought into your facility they should be quarantined in a separate greenhouse or, at least, at the end of a structure and down-wind of other plants. The quarantine period should be a

minimum of three weeks, if possible, which is a standard time for diseases to appear. Keep in mind that many viruses, bacteria, and fungi can remain latent or not showing symptoms for months, and symptom expression can be subsequently triggered by environmental or nutritional changes to the plant.

Personnel are the second most common way pathogens enter a nursery. Pathogens can be carried on the shoes and/or clothing of workers. To kill many bacteria and fungal spores, workers can step on wet pads or in shallow troughs of dilutions of substances such as Clorox, Physan, Pine-Sol or other household disinfectants prior to entering a production area. In addition, workers should also be restricted in their movements around a nursery. Priority zones should be setup within the nursery, with propagation material separated from production areas. Only workers directly involved in propagation should be allowed in these areas, thus limiting inadvertent disease introductions.

Tools and equipment should be surface-sterilized between uses or between individual cuts if disease is present. This is especially important if tools and equipment are shared between production duties and grounds keeping. The need for managing disease can be reduced simply by preventing disease. Obtaining disease-free plant material, supervising workers closely, and practicing general sanitation of tools and equipment are some of the basic means to achieve this goal.

ON CENTER

Snake-Oils and Cure-alls

Dr. C.A. Conover, Center Director

Over the years, faculty members at this center have been approached by numerous companies and individuals regarding new products which purportedly cure any ills a crop might have. Sometimes these products are sent to us by supply companies who, when questioning the salesman's claims find that there is no "real" research data.

What is "real" research data? It is the result of using the scientific method, which is an "unprejudiced analysis used to determine causal relations. It involves an orderly accumulation of knowledge through observation, formulation of an hypothesis, testing of the hypothesis under natural conditions or by experiments performed under controlled conditions, and conclusions based on the results of the tests or experiments that validate or modify the hypothesis.

All too often the products in question are untested. They frequently include grower testimonials as fact and often fall into the category of "snake oil". Researchers should not have a closed mind about such products because it is possible that they may work, and consequently, we have conducted research on a number of them over the years; however, the success rate has been very low.

Always ask for supporting data when you are approached by someone with a slick color brochure about

a new miracle product. Question what you are reading. Next, ask for research data and, if available, read it carefully. Lastly, don't just jump in and treat all your plants, even if you are convinced it is the best product since sliced bread. Set up a research plot and treat a small number of plants and observe the results. Don't purchase large volumes of anything until you see results on your plants, even if you are offered a "real deal". The main purpose of these comments is to make you think. You can level the playing field if you have the facts, and the facts boil down to cold, hard data. If the facts aren't there, you must question whether the results will be what is advertised.

EXTENSION CORNER

Can We Help You?

Liz Felter, Multi-County Commercial Horticulturist

During the past 12 months, the Cooperative Extension Service has presented several programs to help growers produce better crops, more safely, and with less potential environmental damage. The recent "Effective Control" seminar was attended by 118 growers, 80 of whom received 4.5 CEUs. At another seminar, with the assistance of an interpreter, 25 Korean growers were trained and certified in safe pesticide use. Integrated Pest Management (IPM) and nursery scouting was the subject of a session where 125 growers were enlightened on how to achieve a more environmentally sensitive pest control program. The Syngonium Growers Conference provided an increased awareness of better production practices to 40 nurserymen, while still another seminar prepared 115 interior landscape technicians to better perform their job tasks.

You can be a part of the next educational opportunity by attending the Anthurium Growers Conference. Anthurium may be a valuable addition to or an alternate crop in your product mix. Come and find out more on August 23, 1995, from 8:00 a.m. until noon. For more information call (407)836-7570.

MARGIN NOTES

Who to Thank

Chris Fooshee, Editor

This newsletter, Ornamental Research News (ORN), has been in publication since February 1994. Initially intended by our faculty and our industry advisory committee, to provide timely and usable research information to help keep Central Florida growers up-to-date on services and activities at the Central Florida Research and Education Center (CFREC). However, an early problem to be overcome was one of funding.

Although the funds for continued publication have come from the operating budget of the CFREC, \$1000 in seed money was donated by Bond Caldwell of Babylon Nursery, Dade City. If you have learned something new or have come to understand some aspect of plant production, IPM, irrigation or other area of horticulture from this publication, you have Bond to thank for planting the seed.

The first issues of ORN were placed on the sales counters of the various greenhouse supply firms in Apopka. Additional printed copies, as well as e-mailed electronic copies, were sent to the county extension offices. Subsequent editions have been distributed with the newsletters to the members of both the Action Chapter and the Coastal Springs Chapter of the FNGA, with a combined circulation of about 650 per month. All together the average monthly circulation is close to 850.

We know that this information has reached some of the intended audience, and if you find that you have learned anything from information provided, thank Bond Caldwell, the greenhouse supply firms, and the Action and the Coastal Springs chapters of the FNGA.

If you would like to help keep this source of information growing please contact Dr. Charles A. Conover or Chris Fooshee at (407) 884-2034.

ANTHURIUM GROWERS CONFERENCE

Learn about growing Anthuriums as a valuable addition to or alternate crop in your product mix. Wednesday, August 23, 1995. Registration Fee \$10.00 (per person and non-refundable). Registration Deadline August 16, 1995. For more information, contact: Liz Felter at (407) 836-7570

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