

Ornamental Research News

Central Florida Research and Education Center

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Entomology

Thrips Update

L.S. Osborne, Entomologist

This is the time of year we typically have thrips problems. Flower thrips populations increase as pollen becomes more prevalent. Pollen is, for most flower thrips, the main part of their diet. As you may be aware, this has been a particularly bad year for those of us that suffer from hay fever and other pollen allergies. Pollen is everywhere, and our homes and cars are coated with the yellow dust. Because of this abundance of food it appears that our thrips population will be greater than normal. We normally don't become aware of this problem until the pollen from natural sources (i.e., oaks, pines, citrus and many weeds) begins to disappear and the adult thrips start to fly in search of new food sources. We often know when this occurs because workers complain of being bitten. In general, the thrips that do the most biting at this time are the indigenous species of flower thrips. However, a certain percentage of the thrips we are now finding in central Florida are Western flower thrips which is the most efficient vector of tomato spotted wilt virus disease. In the past, we were not concerned with this disease, but the incidence of infected plants has increased to a level that should cause alarm.

Adult thrips transmit the virus, but it is the immature stage that acquires it from infected plants. The virus must pass a 3-10 day period within the immature thrips before it can be passed to uninfected plants. Ideally, we should try to control all stages of thrips to prevent the spread of virus. However, when most of the thrips we find in the nursery come in from the surrounding environment it becomes a losing battle. The nursery can be reinfested by thousands of new adults each day. The best we can do is to use appropriate pesticides on a regular basis to prevent the production of immature thrips. As pollen sources dry up, the thrips infestations should be reduced significantly.

**Full implementation of
Worker Protection Standard
postponed**

Extension Corner
Celeste White,
Orange County Extension Agent

The deadline for full implementation of the Worker Protection Standard (WPS) has been postponed until January 1, 1995. This delay in the implementation of the WPS affects only some of the provisions of the standard such as training, emergency assistance, information at a central location and decontamination sites.

However, Worker Protection Standard items that appear on product labels such as personal protective clothing, restricted entry intervals (REIs) and posting treated fields must be followed.

The legislation exempts crop advisors from the rules, and permits irrigation workers whose feet, lower legs, hands and arms are exposed to treated plants or soil to have unlimited time in a treatment area during a REI. However, they must wait four hours after application or until ventilation criteria specified on the label have been met and they must be provided with and wear protective gloves, footwear and coveralls during the REI. Both of these exemptions will expire on January 1, 1995.

The delay will permit more training materials to be completed and available, and will allow for translation of worker training materials into other languages. While the delay allows more time to comply with the full WPS, don't put off plans for compliance! Use this time to get set up to comply with the postponed provisions of the standard. Congress is not doing away with the WPS requirements, only postponing the full implementation date.

Cylindrocladium root and petiole rot of Spathiphyllum

Seasonal Watch
A.R. Chase, Plant Pathologist

Cylindrocladium root and petiole rot of *spathiphyllum* is caused by *Cylindrocladium spathiphylli*. It is one of the most serious diseases I encountered during my 14 years in Florida. In the first seven years of my tenure, almost one year was spent on this disease alone. Unfortunately, a simple inexpensive cure for this disease was never discovered.

All *Spathiphyllum* cultivars tested to date have been very susceptible to *Cylindrocladium* root rot with the exception of *S. floribundum*. This species is a host of the pathogen, but is highly resistant and shows little root loss when infected with *Cylindrocladium spathiphylli*.

One of the first symptoms of this disease is yellowing of lower leaves, sometimes accompanied by slight

wilting. Later, elliptical dark brown spots are sometimes found on leaves and lower portions of petioles. At this stage, plant roots are usually severely rotted and few healthy roots can be found. Tops of such plants are easily removed from the pot without any adhering roots.

Control of this root rot disease must be based first upon use of pathogen-free plants from either tissue culture or seed sources. Use of sterilized potting medium and pots, and growing plants on clean or "sterilized" raised benches are also important in reducing the chances of disease development and spread. Be careful when visiting other spathiphyllum growers since contaminated soil can easily be carried into your nursery on your shoes. It is even easier to bring *Cylindrocladium* into a nursery by purchasing infected plants from another nursery. Always examine new spathiphyllum plants before bringing them into your nursery. It would also be a good idea to segregate new plants for several months; this would allow symptoms to develop if the plants are infected.

Chemical treatments have never been found to be effective unless disease pressure is very low, which is not likely in Florida. Under conditions of high disease pressure (warm temperatures), triflumizole (Terraguard 50WP) provides better control than thiophanate methyl compounds such as Cleary's 3336, Systec 1998 or Topsin M which can provide some control during cooler portions of the year.

The only true control of this disease remains use of pathogen-free plants and the highest levels of sanitation possible.

Building for the Future

On Center

C.A. Conover, Center Director

Before faculty and staff from the CFREC locations in Leesburg and Sanford can be consolidated at Apopka, a new facility must be built. Although we have blueprints for a facility to house the nearly one hundred people that will comprise the new unit, we do not yet have the funds, which must come from the legislature. The funding for the project, slightly over 8.5 million dollars, was not included in the 1994-95 appropriations.

Plans for the new complex include space for faculty and staff, as well as an education building with facilities for industry meetings, seminars, short courses. The education building will also serve students working toward the Bachelor of Science degree in Environmental Horticulture. These students will obtain core courses in area community colleges, a few basic courses at the University of Central Florida and horticulture, plant pathology, entomology, and economics courses at the CFREC. A similar teaching program is already in place at the Ft. Lauderdale Research and Education Center and has about 100 students.

Included in the plans are new facilities for the study of plant growth including acclimatization rooms for simulation of interior environments, coolers for shipping studies, insect rearing units for the research of biological insect control, as well as service buildings and a large maintenance shop. Up to 30,000 square feet of additional greenhouses and shadehouses will also be added to replace facilities being lost at Leesburg and Sanford.

Next Issue - The need for a regional plant diagnostic laboratory.

Research Classic - 20 Years Ago

Shade, fertilizer source and level on growth
and quality of *Philodendron oxycardium* Schott.

In early 1974, information on optimum shade levels for commercial production of tropical foliage plants was limited to stock plant areas.

Overhead irrigation and fertilization of *P.oxycardium* (now *P. scandens oxycardium*) growing on totems created problems. The totems and overlapping leaves tended to shed much of the fertilizer applied in the irrigation water. Also, fertilizer tended to be concentrated on one side of the pot because of the totem, causing uneven growth or soluble salts damage. Several experiments were conducted to look at the use of slow-release fertilizer in foliage production and the effects of light intensity on optimum nutritional levels.

Plant grades and vine length of *P. oxycardium* totems increased as shade level decreased from 80 to 40%. Interactions occurred between light intensity and fertilizer levels as shown by a lack of response to the fertilizers at high shade levels. Plants grown using the slow-release fertilizer provided the highest plant grade, followed by liquid fertilizer and MagAmp. The poorest quality plants, grown at the highest liquid fertilizer level and the heaviest shade levels, were associated with high soluble salts levels in the growing medium.

For further reading:

Conover, C.A. & R.T. Poole, 1974,
J. Amer. Soc. Hort. Sci. 99(2):150-152.

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Hours 7:30 am until 4:00 pm, Monday thru Friday.
Grower Diagnostic Clinic - every Thursday 1:00 to 3:00 pm.
Ornamental Research News - Chris Fooshee, Editor
