

Production Times



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Mediterranean Fruit Fly!

Summarized by Lelan D. Parker

◆ **Production Times** is brought to you by:

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See the newsletter online at:
<http://cfextension.ifas.ufl.edu>



**Learn about Chrysanthemum
White Rust on page 2**

Ceratitis capitata, Mediterranean fruit fly (Medfly) is considered one of the world's most critical fruit flies that threaten our food supply. Medfly attacks more than 250 different fruits, vegetables, flowers and nuts. The female Medfly lays eggs in the fruit and maggots develop causing the fruit to rot. Females are capable of producing hundred of eggs. Medflies breed continuously when host fruits are present. In June of this year, the Medfly was found in Boca Raton, FL during routine fruit fly monitoring by an FDACS/DPI inspector. Since the initial find, over 2,000 additional fruit fly traps have been set out and more flies have been detected. The flies have been found on traps in sour orange trees, mango, and loquat. This is the first major outbreak of Medfly since 1997 and 1998. To address the current outbreak additional traps are being placed in a 81-square-mile area around each positive find.



The Medfly completes its life cycle in 21-30 days under typical Florida summer weather conditions. Adults are slightly smaller than a housefly. Adults die within 4 days if they do not have any food. A female may deposit as many as 800 eggs during her lifetime.

Eggs are laid underneath the skin of fruit that is about to ripen. Adults may survive up to a year or more under favorable conditions of food, water and cool temperatures.



For the 2010 infestation the following treatments are being used by the USDA and FDACS-DPI: Foliar Spot Treatments (Spinosad), Soil Drenching, Fruit Stripping and Sterile Fruit Fly Release.

For more info go to: <http://www.fl-dpi.com/enpp/ento/medfly-facts.html>



Chrysanthemum White Rust

By Lelan D. Parker

Chrysanthemum white rust (CWR) is a disease of chrysanthemum caused by the fungus *Puccinia horiana*. CWR originated in eastern Asia in 1895 and is now established in Europe, Africa, Australia Central America, South America and the Far East. CWR is not established in the United States and Canada, it has been eradicated or is being eradicated and is a quarantined disease in these two countries. CWR begins as small white or yellow spots on the upper leaf surface that are about 4 mm wide. After spots, pink pustules appear. Pustules are usually found on young leaves and flower bracts but may appear on any part of the foliage, including flowers. As the pustules age they become white and feel waxy to the touch.

CWR infects Mums through spores. Spores float through the air or are carried by humans or water from an infected plant or flower to a new plant or flower. CWR has two kinds of spores, teliospores and basidiospores. This is important because teliospores can live for 8 weeks on dried leaves. Teliospores survive only 1 week if infected tissues is buried under soil. Since the survival rate is significantly lessened in buried soil, it is beneficial to bury cull piles. Teliospores germinate to produce basidiospores. Basidiospores are released from pustules and spread from plant to plant by splashing water and human handling. The optimum temperature and time for basidiospores to penetrate is 2 hours at 63°F. Basidiospores can travel short distances during moist weather and survive only 5 minutes when relative humidity is 80% and less than 60 minutes when relative humidity is 90%.

When symptomless infected cuttings are brought into a greenhouse new infections occur. Always buy healthy cuttings from reliable sources and regularly scout for symptoms especially when the weather becomes cooler and wetter. Imported flowers should not be handled in or near mum-growing facilities because they may be infected and not show signs or symptoms. Furthermore, try to maintain a low humidity and dry foliage.

For more information go to: <http://www.syngentaflowersinc.com/pdf/cultural/CWR%20Presentation.pdf>



CWR pustules.



CWR on entire plant.



Respirators for Pesticide Applications

Summarized by Lelan D. Parker

Pesticide applicators wear respirators to protect from breathing air that is contaminated with pesticides. Different types of respirators are required based upon specific pesticide formulations. The pesticide label provides specific instructions in addition to which type of respirator is to be worn. The National Institute of Occupational Safety and Health (NIOSH) is the federal agency that is responsible for testing and certifying respirators that are used with pesticides.

One of the most common types of respirators is the air-purifying respirator. Some air-purifying respirators cover the entire face. Moreover, there are less expensive half masks that cover the nose and mouth. Air-purifying respirators have chemical cartridges or mechanical filters that remove airborne contaminants. Each chemical cartridge is color coded to indicate its use and filled with activated carbon to absorb gases and vapors. Mechanical filters trap particulate matter in porous filter material.



Air purifying respirator.

In order to provide protection and work properly, a respirator must fit tightly. To select the right size respirator for the applicator the fit test method is used. An employer must provide a medical evaluation determining an employee's ability to use a respirator before the employee is fit tested to use the respirator in the workplace. Every time a respirator is put on a fit check should be conducted. To perform a fit check, the respirator must be put on properly. There should be a firm and comfortable fit/seal against the face at all points.

For more information go to: <http://edis.ifas.ufl.edu/pdffiles/PI/PI11400.pdf>



Handling Tissue-Cultured Microplants

1. *Postharvest requirements for Tissue Culture (TC)*: TC containers do not immediately need sunlight or cold temperatures to survive for several days up to a week.
2. *Humidity Management*: Transplanting line should be away from drafts and air movement such as fans. Provide mist, spray or fog as soon as possible after the containers are opened.
3. *Temperature management*: Tropicals can be handled at 75°F, while woody species should be held at 55-65°F.
4. *Quality Control*: The ideal TC product has many root initials without elongated roots. Elongated roots should be removed during transplant. If you are receiving many plants with elongated roots this should be corrected.
5. *Cleanliness*: Molds growing in TC containers can be washed off, the mold isn't harmful to humans.
6. *Light Management*: The cuticle, leaf hairs and root hairs develop quickly once the plantlets are removed from TC containers. Once the miniaturization characteristics are outgrown, i.e., leaves look normal, the plant can be treated like a rooted cutting.



Phytophthora on Spathiphyllum

By Lelan D. Parker

Phytophthora parasitica is a common fungus that infects *Spathiphyllum* plants. This pathogen can gain access to production facilities through contaminated soils mixes or if plants are set onto soil surfaces. Infected *Spathiphyllum* plants may have leaf chlorosis, wilting, die-back and discoloration that looks similar to *Cylindrocladium*. *Phytophthora* can spread to leaf surfaces by splashing water. When this happens, black lesions appear on leave but do not have yellow halos.

Always place your *Spathiphyllum* plants on raised benches or inverted saucers to avoid infestations. If there is an infestation, keep leaf surfaces dry. Severely infected plants should be disposed and remaining plants may be treated with Aliette® or Subdue®.



For more information go to: http://mrec.ifas.ufl.edu/foilage/resrpts/rh_96_5.htm



Upcoming Programs

July

- 21 Limited Pesticide License Certification Review and Exam. Sanford, FL at Seminole County Extension Office. To register: Maggie Jarrell at 352-343-4101.
- 31 - Aug 1 Small Farms Conference. Kissimmee, FL at Osceola Heritage Park.
For info: <http://smallfarms.ifas.ufl.edu>

August

- 13 Florida Green Industries Best Management Practices In Spanish. Orlando, FL at Orange County Extension. To register: Yamira Donato at 407-254-9200.
- 17 Review and Exams for Restricted Use Ornamental and Turf or Private Applicator Pesticide Licenses. Sanford, FL at Seminole County Extension Office. To register: Maggie Jarrell at 352-343-4101.

September

- 17 Florida Green Industries Best Management Practices. Orlando, FL at Orange County Extension. To register: Yamira Donato at 407-254-9200.

October

- 13 Certified Crop Advisor CEU Day. Via Videoconference. Tavares, FL at Lake County Agricultural Center at 352-343-4101