University of California Cooperative Extension • Tulare County

Citrus Notes

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Seminar on Asian Citrus Psyllid And Huanglongbing (Citrus Greening Disease)*

Monday, June 26, 2006 – Sacramento
Wednesday, June 28, 2006 – Tulare
Thursday, June 29, 2006 - Ventura

Asian Citrus Psyllid and Huanglongbing (Citrus Greening Disease)
Beth Grafton-Cardwell, UC Riverside, Kearney Ag Center, Parlier
Kris Godfrey, CDFA, Biocontrol Program, Sacramento, CA
Dr. Michael Rogers, University of Florida, Citrus REC, Lake Alfred

* Details on page 3

Leaf Drop/Dieback

Leaf drop and twig dieback were observed in a number of orchards in the county during March and April. In some instances, light leaf drop was noticed in early March. Reports of accelerated leaf drop were received in late March and into April with an occasional block reaching near total defoliation by late April. Dieback of small twigs to a junction with a lateral shoot generally accompanied the leaf drop; in some cases dieback of shoots ten to twelve inches long occurred. Although positive identification of the factors involved has not been made, it appears that most of the damage is related to weather. One type of dieback during late winter/early spring has been observed for many years in the county although its appearance from one year to the next has been very intermittent. Referred to as Tulare county dieback, it results in dieback of shoots as new growth appears in the spring with concurrent increases in temperature. Inability of the tree to replace moisture lost to evapotranspiration due to low soil temperature results in a dieback which is self limiting similar to the dieback experienced this spring. Affected trees this spring often exhibited canopies with greater leaf drop in the top of the tree, in some cases a total loss of leaves occurred in that area. This portion of the canopy receives the greatest heat load during the summer and may be the coldest area on a freezing night because during a frost event heat is lost more rapidly from the top of the tree. Freezing temperatures as experienced on a series of nights this winter coupled with the sunburning from last summer resulted in weakened tissue, leaves and twigs, making it more susceptible to invasion by secondary organisms often present within the canopy. Above average rainfall further intensified the situation, in that additional moisture is conducive to an increase in numbers of the secondary pathogens. One of the secondary pathogens frequently found invading leaves and twigs and frequently present in high numbers on dead wood in the canopy is a species of Colletotrichum. Leaf drop and twig dieback associated with this fungus have been observed a number of times in the past. The conditions during the winter provided the opportunity for high numbers of pathogens; freezing temperatures in some instances provided points of entry into tissue. The rate of advancement of the infection and damage was regulated in part by subsequent temperatures.

Rind Problems

Weather conditions also had a negative effect on the rind condition of the navel crop. In some cases a stained area on the fruit developed on the side of the fruit facing out and frequently on fruit on the outside of the canopy. Many fruit in this location exhibited sunburning last summer. During frost episodes this winter these same surfaces were exposed to icing conditions on some nights. Following conditions of above average rainfall, the peel of some fruit exhibited a water-soaked appearance. Concurrently tissue in some fruit stems deteriorated as a result of ice formation. Some fruit in addition to the staining are exhibiting tear staining, a dark streaking down the peel generally originating at the stem end of the fruit. This tearstaining is also referred to as anthracnose. The condition results from spores, produced by one or more fungi, streaming down the surface of the peel.

Additional Weather Related Problems

An additional weather related problem resulting from the unusually cool spring was the elimination of the first flight of red scale males. This event is of significant benefit in scale management in that the flight is used as a key reference point to time subsequent scale management activities such as spray applications and parasite release. Unusually cool conditions also had a significant impact on the bloom period. The beginning of bloom this year for the earliest district in the county (district 1) was declared by the agricultural commissioner on April 16. This was two weeks later than the five year average. The end of bloom, petal fall, was declared on May 8; in the past 21 years the latest it has ever been declared was May 10.

Fertigation Manual

A new publication Fertigation with Microirrigation has recently been published by UC Agriculture and Natural Resources. This publication discusses fertilizer properties affecting their movement in the soil, irrigation management and injection techniques to maximize placement and maintenance of fertilizer in the root zone and minimal opportunity for deep leaching below the root zone. Because of the potential of low volume irrigation for high water application uniformity, fertigation through a well designed and operated low volume system, can optimize fertilizer application to a crop. Without proper system operation during fertigation there may be opportunity for deep leaching even when the volume of water applied does not exceed the volume of water lost from evapotranspiration. Concepts and procedures discussed allow the grower to optimize fertilizer placement with low volume irrigation systems. The publication number is 21620. Details on ordering can be obtained by calling the Cooperative Extension Office at 685-3303.

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This seminar will discuss the basic biology, damage potential, and detection methods for the Asian citrus psyllid, *Diaphorina citri* and the bacterium that the psyllid vectors that causes huanglongbing (citrus greening disease), a devastating disease of citrus. The seminar will be held in three locations in June (see below for dates and exact locations). The psyllid is established throughout the citrus growing regions of Florida. Greening disease was discovered in Florida in 2005 and so the risk of the vector and the disease arriving in California has greatly increased. Guest speaker Dr. Michael Rogers from the University of Florida will present information on both the psyllid and the disease. To learn more about this pest and help prevent its establishment in California, please attend one of the seminar sessions.

Session 1: **Sacramento - Monday, June 26, 2006, 1:00 –3:00 P.M.**

Host and Moderator: Kris Godfrey, CDFA Biological Control Program

Location: Plant Pest Diagnostics Conference Room, 3294 Meadowview Rd., Sacramento

For more information call: (916) 262-1100

Directions: From Interstate 5 in Sacramento take the Pocket Road/Meadowview Rd. exit, head east on Meadowview Rd. for about 2 miles. Watch for the 24th St. traffic light and immediately after that on the south side of the road is the Sam Pannell Community Center, then the Job Corps and the National Guard. Immediately after National Guard is the CDFA complex. Turn right into the driveway and continue to the back of the complex. The Diagnostics Lab is the two-story building at the back of the complex. Park anywhere.

Session 2: **Tulare - Wednesday, June 28, 2006, 10:00 A.M.–12:00 P.M.**

Hosts and Moderators: Beth Grafton-Cardwell, IPM Advisor, Kearney Agricultural REC; Neil O'Connell, Citrus Farm Advisor, and Michelle LeStrange, Landscape Farm Advisor, Tulare Co. UCCE

Location: Tulare County Ag. Bldg. Auditorium, 4437 South Laspina St., Ste. B, Tulare

For more information call: (559) 685-3303

Directions: From Hwy 99, take the Paige Ave. exit and go east. At the stop sign, turn south on Laspina and look for the Tulare Ag Building on the right hand side of the road.

Session 3: **Ventura - Thursday, June 29, 2006, 9:00-11:00 A.M.**

Hosts and Moderators: Phil Phillips, Area IPM Farm Advisor, Ben Faber, Subtropical Farm Advisor, and Julie Newman, Ornamental Farm Advisor, Ventura Co. UCCE

Location: Ventura County Cooperative Extension, 669 County Square Dr., Ventura

For more information call: (805) 645-1462

Directions: The office is located between Highway 101 and Hwy 126 off South Victoria Ave. From South Victoria, go west on Thille St. and north on County Square Drive.

2 hours continuing education credits have been requested

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Neil O'Connell
Farm Advisor