

## Spring Citrus Meeting

Friday, April 20, 2012

9:00 – 12:00 A.M.

Tulare County Agricultural Building  
4437 South Laspina Street, Tulare

- 8:30 A.M.**                      **Registration**
- 9:00**                              **Nitrogen Management Research Revisited**  
*Dr. Mary Lu Arpaia, UC Kearney Research and Extension Center*
- 9:45**                              **Screening for HLB: Current and Possible New Approaches**  
*Dr. MaryLou Polek, Citrus Research Board*
- 10:15**                             **Break**
- 10:30**                             **Comparison of Conventional LV Irrigation vs. Partial Root Zone Drying**  
*Dr. Carol Lovatt, UC Riverside*
- 11:15**                             **Progress Report on the Biology and Management of Earwigs**  
*Dr. Beth Grafton-Cardwell, UC Lindcove Research and Extension Center*

**Continuing Education Credit Has Been Requested**

## **Irrigation Start Up**

Increasing temperatures in the spring raises the question as to when to begin the irrigation season. Applying the first irrigation while the soil is at, or near saturation runs the risk of damaging roots. Use of an auger or soil tube to sample soil moisture at several locations and at several depths provides a picture of how much moisture is present in the root zone. Most of the roots are generally present in the 0-24 inch depth. Different soil types (sand, sandy loam, clay) with varying levels of moisture will behave differently when a sample is kneaded in the hand. A description of this method of estimating soil moisture is available in a one-sheet answer at the Cooperative Extension office. Being familiar with this method allows one to draw a sample and estimate as to whether the soil is at saturation (water is draining from the soil), at field capacity (maximum moisture the soil will hold after an irrigation), or after fifty percent of the moisture present at field capacity has been used. The goal would be to start the irrigation season with the root zone at field capacity, and not overly dry with the tree in stress, or saturated and at risk of root damage from the first irrigation. Initially, water use by the trees will be from shallow depths. The first irrigations may need to replenish moisture at this depth only. This will avoid adding moisture to deeper possibly saturated zones with the risk of root damage. While evaluating the soil moisture condition, it would be worthwhile to check several trees throughout the orchard for cracking and possible gumming near the soil line. With the number of nights water was run for frost protection, saturated soil and ponding conditions existed which are conducive to brown rot gummosis resulting from invasion by *Phytophthora* spp. a soil borne fungus.

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## **Planting a New Orchard**

### **Variety Selection**

With an ever increasing number of new varieties to choose from for planting, the process of selecting the "right" one becomes a greater challenge. Some considerations that should be included in the decision-making process are:

Market potential - Is there an established market for the variety?

Site Selection: frost potential

Harvest period for the variety – exposure to frost

Possible rootstock

## **Rootstock Selection**

The related decision in choosing the variety is selecting an appropriate rootstock. Some thoughts to consider in this process:

Fruit quality associated with the rootstock

Fruit production generally associated with the rootstock

Tree size at maturity - implications for tree spacing, pruning requirements

Rootstock suitable for the soil characteristics-calcareous, fine textured (soil pathogen tolerance)

## **Citrus Nutritional Program**

Production of citrus requires fulfilling the nutritional needs of the citrus tree. In some instances, adequate supplies are available from the soil. Failure to supply sufficient quantities of essential elements results in deficiencies that can cause reduced yields and lowered fruit quality. Of the elements (nitrogen, potassium, phosphorous), nitrogen is most often in short supply. A number of elements are required in trace amounts; trace elements are referred to as micronutrients. Citrus has been found to need the following micronutrients: iron, manganese, zinc, copper, boron and molybdenum. A shortage of one or more of these micronutrients usually results in leaf symptoms; severity of the symptom is related to severity of the deficiency. Zinc and manganese are the micronutrients most frequently deficient. Iron deficiency symptoms are frequently encountered in citrus orchards. Over irrigation and calcareous soils are conditions often associated with the deficiency, use of leaf analysis for planning a nutritional program for an orchard is founded on the idea that the plant is the best nutrition indicator factoring in all the elements of the complex production system of climate, soil and tree. Results from last fall's leaf analysis can be compared to standards established for elements that are important in the nutrition of the tree. Leaf analysis provides the information for planning, evaluating and controlling the nutritional program, with the goal of highest yields of good quality fruit with maximum returns at reasonable cost.

Interpret leaf analysis results from last fall by comparing to optimum levels established for each

of the essential elements. Review fertilizer amount, timing and analysis applied last year. Was it enough, too little or excessive? Review production and fruit quality from pack out records. This review will suggest if the current program is adequate or if adjustments upwards or downward are called for. Additional considerations in a nutrient management program are additions of potassium may induce or aggravate symptoms of magnesium deficiency in the foliage. Many instances of magnesium deficiency symptoms can be attributed to potassium additions either as manure or commercial fertilizer. Additions of phosphorous have been observed to induce or aggravate zinc and copper deficiencies; both are readily corrected by sprays of zinc or copper.

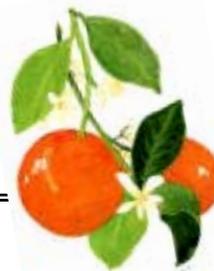
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# *Citrus Notes*

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*March 2012*



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