

**2011 Series**  
**Citrus Research Growers' Educational Seminars**

Citrus Research Board (CRB) and  
University of California Cooperative Extension

**San Joaquin Valley Seminars**

Same program offered at your choice of locations:

<p><b>Thursday, August 25, 2011</b> <b>Kearney Agricultural Center</b> 9240 S. Riverbend Ave., Nectarine Room Parlier, CA 93648</p>	<p><b>Friday, August 26, 2011</b> <b>Exeter Memorial Building</b> 324 North Kaweah Exeter, CA 93221</p>
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**Registration begins at 7:30 A.M.**

**Seminar Sessions: 8:30 A.M. – 2:00 P.M.**

**Hunting for ACP Natural Enemies in Pakistan**

*Findings from the search for ACP predators*

*Dr. Mark Hoddle/Raju Penday, UCR, Entomologist*

**More options = Risks and Benefits for Growers**

*New Varieties & Rootstocks- Incompatibilities*

*Dr. Mikeal Roose, UCR, Chair & Prof. of Genetics, Botany & Plant Sciences*

**Major Soil-borne Fungal Diseases in Citrus & Their Control**

*Control treatment applications & cultural practices to prevent infection*

*Dr. Akif Eskalen, UCCE, Plant Pathologist*

**Statewide & San Joaquin Valley Water Issues**

*Discussion on state & local water availability/quality*

*David Zoldoske, CEO, Center for Irrigation Technologies, CSU, Fresno*

**Efficient Citrus Irrigation: Methods, Monitoring & Mgmt**

*Crop water use, soil moisture storage & monitoring, irrigation methods, and management options for citrus*

**Kearney:** *Larry Schwankl, UCCE Irrigation Specialist, UC ANR*

**Exeter:** *Blake Sanden, UCCE, Irrigation & Agronomy Farm Advisor*

**Ozone Removal & VOC Emissions in Citrus Trees**

*Regional Air Quality Implications*

*John Karlik, UCCE, Kern County*

**Questions & Answers**

**Lunch**

**GIS in Farming Practices**

*Kris Lynn-Patterson, UC KAC, GIS Academic Coordinator*

**3 in 30...**

**News Shooters on the latest developments & new technologies for California citrus**

*Ted Batkin, President, Citrus Research Board*

**Approved for 3.0 hours of continuing education credit**

**\$25.00 per person includes lunch and course materials**

**For planning purposes, please register in advance via one of the following methods:**

**Mail:** Please send coupon no later than Friday, August 19th; **Phone: (559) 738-0246** or **Fax: (559)738-0607** by noon August 22nd; **Email: [info@citrusresearch.org](mailto:info@citrusresearch.org)**; or **Register online: [www.citrusresearch.org](http://www.citrusresearch.org)**  
*(You may pay at the door - cash or check only)*

-----**IMPORTANT:** Please designate which seminar you will attend -----

\_\_\_\_\_ Parlier, Thursday, August 25<sup>th</sup>: Please make reservations for \_\_\_\_\_ (Qty.)

\_\_\_\_\_ Exeter, Friday, August 26<sup>th</sup>: Please make reservations for \_\_\_\_\_ (Qty.)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_

**Enclosed is my check in the amount of \$\_\_\_\_\_. Make check payable to Citrus Research Board. Mail check with this form to: Citrus Research Board, P.O. Box 230, Visalia, CA 93279**

**Water Infiltration**

The problem: Where this condition exists, ponding or runoff results. Stress in the tree may result, even though the amount of applied water matched the water requirements of the tree. If nutrients are being applied in the irrigation, a portion of those nutrients may be lost to the tree. Ponding or runoff may be a result of one or more factors. Equipment operated on wet soil produces compaction, resulting in a lower rate at which water enters the soil. In some cases the rate of water delivery from the emitter exceeds the infiltration rate of the soil, resulting in runoff. Water infiltration rate of the soil can be affected by water quality. Low salinity

waters (less than 0.5 dS/m) tend to leach surface soil free of soluble minerals and salts, particularly calcium, reducing their strong stabilizing influence on soil aggregates and soil structure. Canal water is low in salt. Continued use displaces calcium from soil particles, resulting in a dispersion of soil particles. The particles “run” together, reducing pore spaces and lowering water infiltration rate. Corrective action involves application of calcium containing amendments such as gypsum. Application can be made to the soil, although the benefit may be lost before the end of the irrigation season. Introduction into the irrigation water is

beneficial. It must be applied in each irrigation; if discontinued, the infiltration rate quickly drops back to the pretreatment level. The rate of application is related to the quality of the water; 500 - 900 pounds per acre foot of water may be required. The increase in infiltration rate results from the following chemical changes:

$\text{CaSO}_4$ (calcium sulfate=gypsum) + Na soil(sodium soil) > Ca(calcium)soil +  $\text{NaSO}_4$ (sodium sulfate). The sodium produced must then be leached from the root zone. The presence of the calcium in place of the sodium on the soil particle exchange sites allows aggregation of particles with an increase in pore space and an increase in the rate of water infiltration.

### **Low Volume Irrigation Emitters**

Plugging of emitters can occur during the irrigation season when weed growth and insect populations are favorable. False chinch bug is capable of plugging emitters. Large numbers of this insect often develop where spurge is present. Commonly, large numbers of the insect, both immature nymphs and adults, can be found under mats of spurge. The insect is attracted to microsprinkler emitters. The emitter can serve as an egg-laying site, resulting in partial or complete plugging of the emitter. Control of the spurge eliminates it as a food source and location to aggregate. In addition, emitters are available that prevent access by the insect when the irrigation system is not operating. In the case of very young trees, high numbers of chinch bugs have been observed moving into the trees, resulting in significant damage from their feeding in the tree canopy, and in some cases resulting in death of the trees.



**Spotted Spurge**



**False Chinch Bug**



**European Earwig**

### **Tree Wraps**

Installing tree wraps on young trees provides protection to the trunk from applications of herbicides during weed management operations. Additionally, the wraps minimize light interception by trunk tissue, thereby minimizing sucker growth. During hot weather, tree wraps provide shade to the trunk and reduce the incidence of sunburn. With the increasing incidence of earwig damage to young trees and the tendency for the insect to congregate under the wraps, tree wraps have been removed in some instances. When wraps are removed, care should be exercised to paint the trunk with a uniform coating of sun protective material to protect against sun damage. Once this is done, trunk surfaces should be periodically monitored to ensure that the coating is adequate.

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# *Citrus Notes*

*August 2011*



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