

Pomegranate Drip Irrigation/Fertigation Research

Date: October 7, 2013

Time: 9:30 AM - 12:00 PM

Sponsor: UC-KARE & USDA-ARS

Location: UC Kearney Ag Research and Extension Center, , 9240 S. Riverbend Ave, Parlier, CA 93648

Event Details

UC Kearney Agriculture Center, 9240 S. Riverbend Ave, Parlier, CA 93648

9:30 Check in and ride to site

10:00 Discussions with Research Staff about irrigation/fertigation of Pomegranate, etc.. (see attached summary below)

11:30 Adjourn and return to KARE Station

Space is limited. Prior reservations are required by e-mailing your RSVP to Diana Nix at the UC KARE Center at dlnix@ucanr.edu or by calling her at 559-646-6500

We will be outdoors so bring a big hat.

Additional Information: Please Contact Dr. J. E. Ayars, 559-596-2875, james.ayars@ARS.USDA.GOV

or Dr. C. J. Phene, 559-298-0201, [<claudejphene@gmail.com>](mailto:claudejphene@gmail.com)

Improving Pomegranate Fertigation and Nitrogen Use Efficiency with Surface and Subsurface Drip Irrigation Systems

J. E. Ayars, C. J. Phene, D. Wang, G.S. Banuelos, S. Gao, A. Hendratna, K. R. Day, R. Schoneman, R. Tirado-Corbala, R. C. Phene, T. M. DeJong, H Zhang and T. Centofani

Following three and half years of intensive pomegranate research with surface drip (DI) and subsurface drip (SDI), preliminary results have demonstrated that the high frequency SDI system has the potential to provide:

1. More efficient water use efficiency (WUE) than DI,
2. More efficient Nitrogen use efficiency (NUE) than DI,
3. Larger tree than DI,
4. Less weeds than DI,
5. Lower potential for nitrate-nitrogen (NO₃N) leaching than DI,
6. No nitrous oxide (N₂O) gaseous emission compared to DI,
7. Improved orchard access for maintenance equipment. and,
8. Significant Prime Pomegranate Fruit yield increase over that of DI.

We will present research information to substantiate above claims and allow brief time for questions and comments.

Research Personnel Involved:

James E. Ayars, USDA-ARS, Co-Leader
Claude J. Phene, SDI+, Co-Leader
Ted J. DeJong, UC Davis
Gary S. Banuelos, USDA-ARS
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Becky C. Phene, UC KARE
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Rick Schoneman, USDA-ARS
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Huihui Zhang, USDA-ARS
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Tiziana Centofani, USDA-ARS

Contributors:

CDFA/Fertilizer Research and Education Program-Grant
Paramount Farming Company– trees
LAKOS – Media filter set
TORO Micro Irrig – Rootguard drip tubing
Dorot – Solenoid & Manual valves
SDI⁺ -- Consulting Time & monitoring equipment