University of California Cooperative Extension

Vegetable Crop Facts

Merced and Madera Counties

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Vegetable Crops Research Update MEETING & Luncheon

8:50 am through **Lunch - Tuesday, February 17, 2009**

UC West Side Research and Extension Center - Diener Hall

8:15- 8:50	**Registration**
8:50	**Welcome -** *Tom Turini,* Farm Advisor, UCCE Fresno County
8:55	**Melon and Lettuce Pest Management Research Update** *Tom Turini,* Farm Advisor, UCCE Fresno County
9:10	**Weed Control Research Update: Peppers and Onions** *Michelle Le Strange,* Farm Advisor, UCCE Tulare & Kings Counties
9:30	**Weed Control Research Update: Tomatoes and Melons** *Tom Lanini,* UCCE Weed Science Specialist, UC Davis
9:50	**Water and Fertility Management in Tomatoes & Onions** *Don May,* UCCE Farm Advisor and Researcher, retiring
10:10	**Effective and Efficient Fertigation Management** *Tim Hartz,* UCCE Vegetable Crops Specialist, UC Davis
10:30	**REFRESHMENT BREAK**
10:45	**Recent Developments on Verticillium of Vegetables** *Mike Davis,* UCCE Plant Pathology Specialist, UC Davis
11:05	**Disease Update: Powdery Mildew** *Brenna Aegerter,* Farm Advisor, UCCE San Joaquin County
11:25	**Status of Beet Curly Top Virus Control Program** *Jim Rudig,* Program Supervisor, CDFA
11:45	**CTV and Tomato Spotted Wilt Virus (TSWV) Update:** *Bob Gilbertson,* Plant Pathology Dept, UC Davis
12:10	**TSWV: The Role of Crops and Weeds Update** *Michelle Le Strange,* Farm Advisor, UCCE Tulare & Kings Counties
12:20	**TSWV: Thrips Control and Variety Susceptibility Update** *Tom Turini,* Farm Advisor, UCCE Fresno County

12:35 - 1:45 Special LUNCHEON – TRIBUTE to DON MAY

CE Hours requested from CA DPR and CCA

This meeting is open to any interested party. Meeting facility is handicap accessible.

PLEASE CALL and LET US KNOW YOU ARE COMING SO WE CAN PLAN FOR LUNCH!

Tom Turini (559) 375-3147, Michelle Le Strange (559) 799-1250, or Chris Robles at UC WSREC (559) 884-2411

Drip Irrigation of Tomatoes

9:30 am to 11:30 am - **Tuesday, February 10, 2009**

Robert J Cabral Agriculture Center

2101 E. Earhart Ave., Stockton, CA 95206

(this is the new UCCE office location near the airport, from Hwy 99 take Arch Airport Rd)

A class intended for commercial growers who are new to using drip irrigation for tomatoes, or those who are thinking of moving to drip in the near future. Although some of the information will be specific to processing tomatoes, the majority will be applicable to both fresh market and processing production systems. The goal is to give participants some practical information on using and maintaining drip irrigation systems. Topics include:

- Fertigation
- System maintenance
- Computer demonstration on using CIMIS to determine irrigation scheduling

Discussion forum, with time for lots of questions.

Class will be taught by

- Tim Hartz, Vegetable Crops Specialist, UC Davis
- Larry Schwankl, Irrigation Specialist, UC Davis and Kearney Agriculture Center
- Brenna Aegerter, Farm Advisor, UCCE San Joaquin County

Free and open to the public. For more information, contact Brenna Aegerter at 209-953-6114.

Other good sources of information about tomato irrigation:

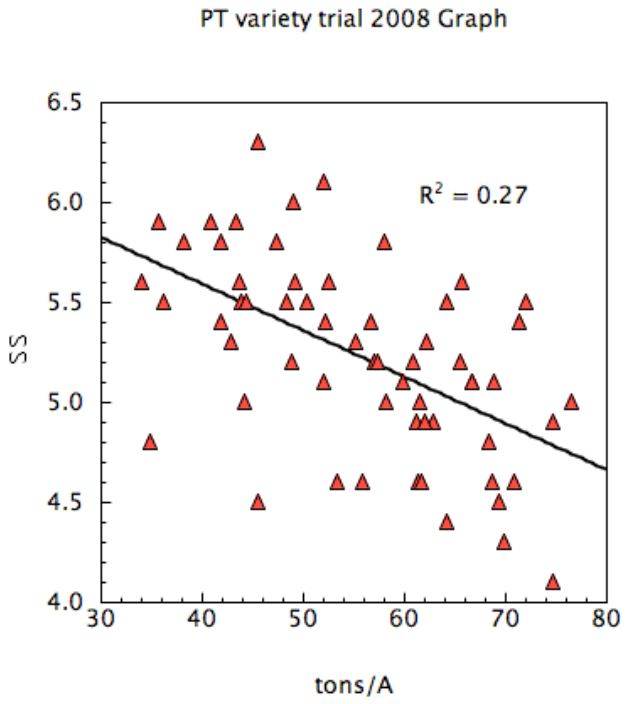
- **Drip Irrigation and Fertigation Management of Processing Tomato**. Available on-line at the VRIC website http://vric.ucdavis.edu.
- **Deficit irrigation strategies for processing tomatoes**. VRIC website.
- **Drip Irrigation of Processing Tomatoes**. UC ANR publication no. 3506, available for purchase in our office or on-line at anrcatqalog.ucdavis.edu.
- University of California drought management website: http://ucmanagedrought.ucdavis.edu/irrigationSched.cfm
- Complying with ground water protection area regulations: http://gwpa.uckac.edu

2008 RESEARCH SUMMARY

UCCE Processing tomato variety trial
Merced County 2008
MID-MATURITY VARIETIES

Replicated Name	Yield tons/A	SS	PTAB color	pH
AB 2	43.908	5.50	22.3	4.56
AB 8058	48.395	5.47	21.8	4.56
H 2005	59.285	5.65	23.5	4.63
H 2601	65.514	4.65	23.8	4.58
H4007	55.681	4.68	22.8	4.64
H8004	62.236	5.33	23.5	4.52
H 9780	63.020	5.43	23.5	4.50
HM 6898	60.853	5.23	23.0	4.53
NDM 5578	51.216	5.08	22.8	4.57
NUN 672	62.846	4.90	22.0	4.65
PX 1723	41.916	5.38	23.5	4.69
SUN 6368	57.467	5.20	23.5	4.58
UG 4305	47.404	5.45	23.0	4.63
AVERAGE	55.365	5.224	23.0	4.59
LSD 0.05	10.03	0.49	1.1	0.07
CV, %	12.6	6.5	3.3	1.1

Observation Name	Yield tons/A	SS	PTAB color	pH
BOS 1411	59.982	5.1	25	4.65
CXD 255	61.550	5.0	22	4.57
CXD 269	49.310	5.6	22	4.62
DRI 0303	57.107	5.2	22	4.59
H 8504	52.272	5.4	21	4.54
HMX 7885	68.912	5.1	25	4.76
NUN 6385	74.705	4.1	25	4.70
NUN 6390	52.011	6.1	23	4.68
AVERAGE	59.481	5.200	23.125	4.639



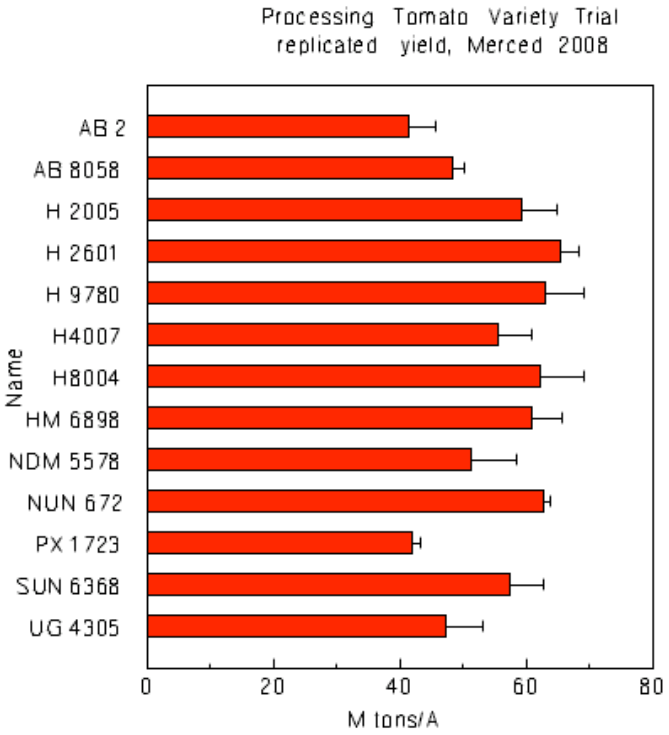
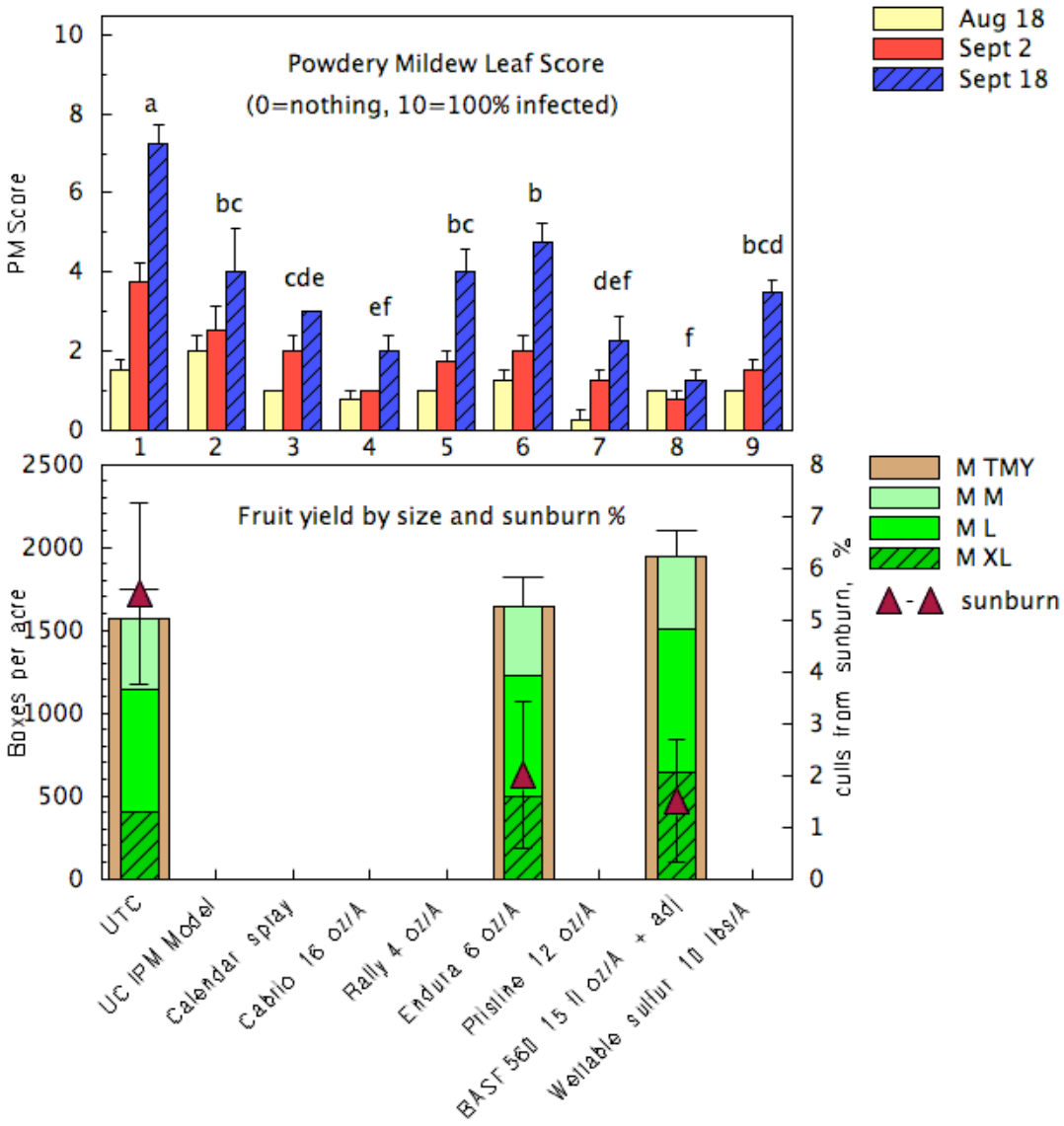
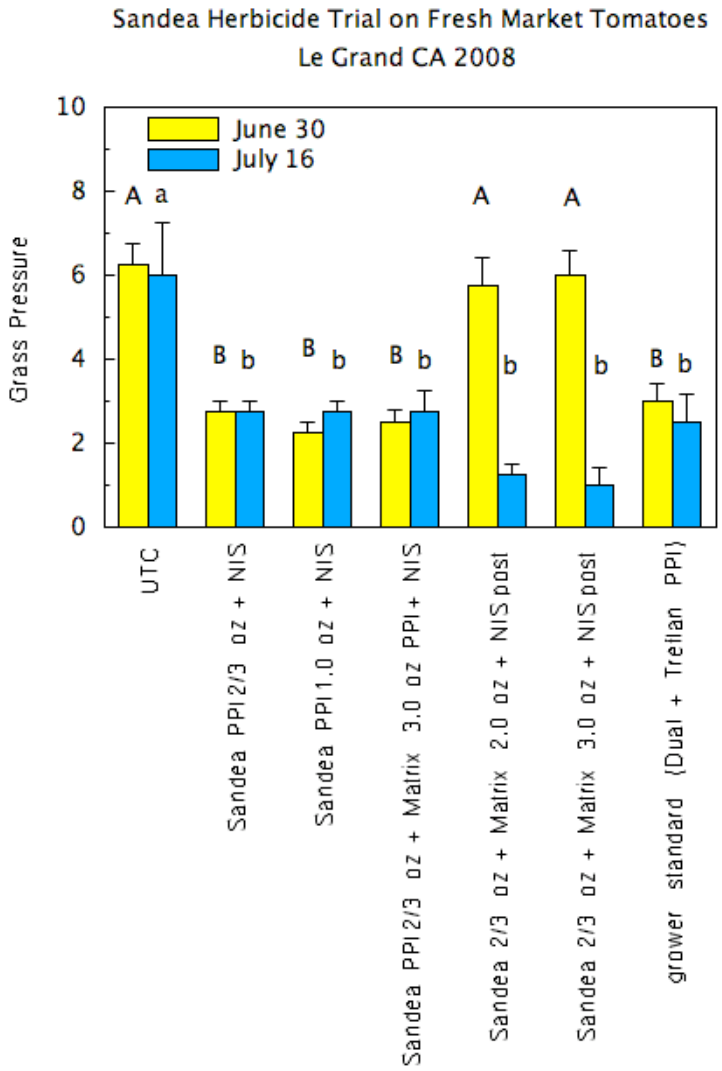


Table above shows the results yield and PTAB results for the 2008 processing tomato variety trial, conducted with A-Bar Ranch south of Los Banos. Field was drip irrigated, transplanted May 6 and harvested Oct 3. Bottom right figure illustrates the replicated trial yields. Upper right: lower yielding plots had higher fruit Brix, and vice-versa. Statewide combined results are posted on the UCCE Merced website.



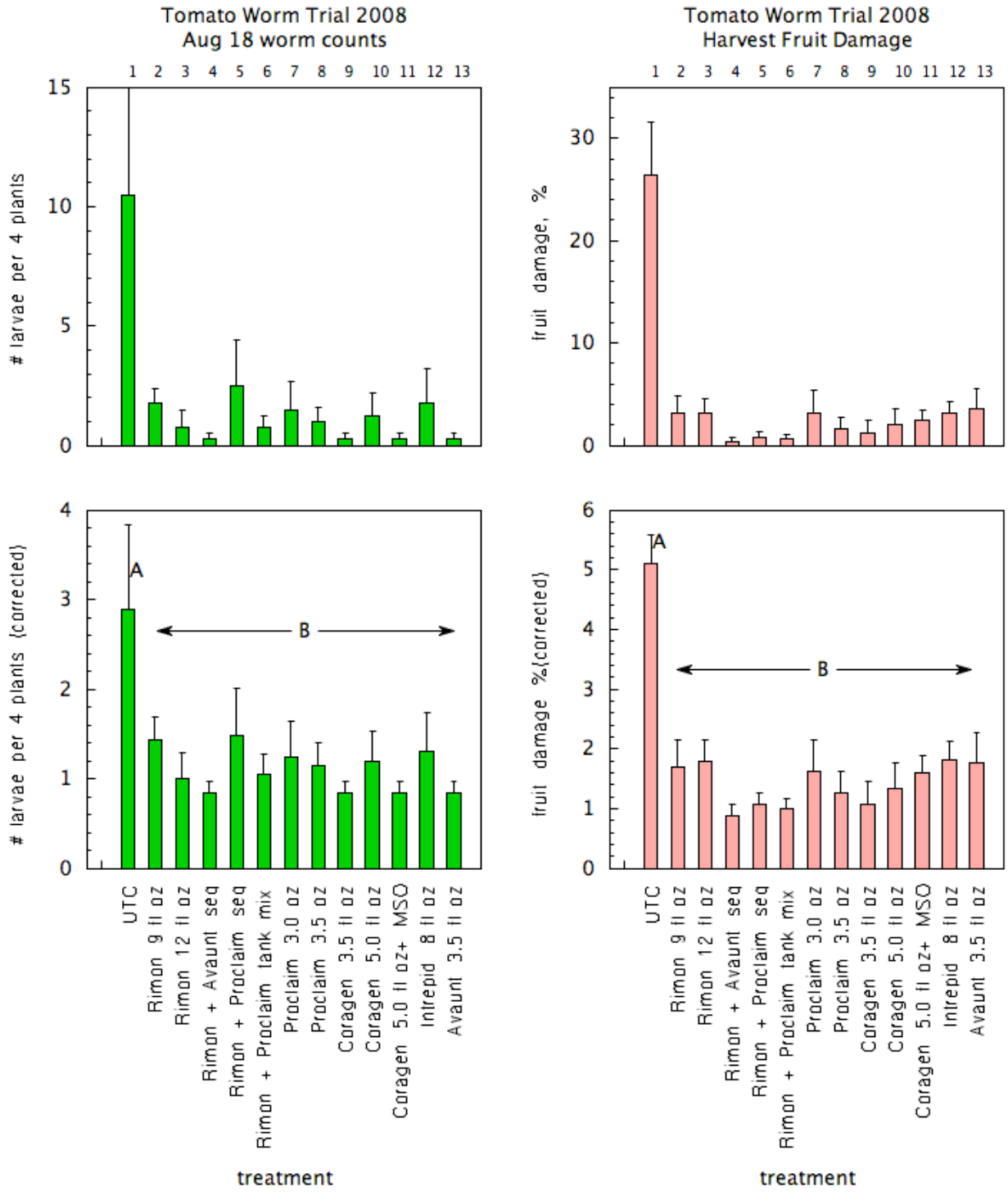
Powdery Mildew Trial. A trial conducted to evaluate powdery mildew control from different fungicides and the performance of the UC powdery mildew spray model. Top figure shows the results of the trial conducted in late summer in Gustine on fresh market tomatoes. As measured by the intensity of the powdery mildew on random leaves, best results were obtained with Cabrio and a new, unregistered material BASF 560. All plots were sprayed 3 times, and fungicides contained a non-ionic surfactant. Bottom figure illustrates yield and sunburn % from selected treatments. Yield was not impacted, but sunburned fruit were significantly greater in the untreated control. The UC IPM model performed poorly in this location because it underestimated disease pressure early in the experiment (the UC IPM model treatment was alternate sprays of Cabrio and Rally).



Sandea Herbicide Trial in Fresh Market Tomatoes. Sandea herbicide (halosulfuron) was applied both pre-plant and post-plant alone and in combination with Matrix (rimsulfuron). Pre-plant applications were incorporated with about 0.5 inches of water from sprinklers. Main weed species at this location was jungle rice, though there were some broadleaf weeds and yellow nutsedge. The figure at left shows grass weed pressure in the plots on June 30 before post-application treatments were made, and two weeks later. All herbicide treatments significantly reduced the amount of weeds as compared to the untreated control. Lowest overall grass pressure was observed in the post-plant application of Sandea + Matrix tank-mixed. No crop phytotoxicty was seen.

Tomato Spotted Wilt Monitoring Project. 2008 had low incidence of tomato spotted wilt in the Merced area for the most part, though symptomatic plants were seen in a far greater geographic area than previous years. The monitoring project found no evidence that spotted wilt was coming from the greenhouse. Unfortunately, we also found little evidence to indicate just where it *did* come from. Over 750 weed samples were run, and only 0.7% were found to contain the virus. Additionally, spring radicchio was very clean in 2008 and appeared to have no impact on either the severity or location of spotted wilt in tomatoes. Additional monitoring is planned in 2009.

Tomato Worm Control Trial. A trial conducted in the Gustine area to observe the efficacy of several different insecticides for control of late season armyworm and fruit worm on fresh market tomatoes. Rimon is a new material that is not currently registered in California on tomatoes. It was applied as a stand-alone treatment, in combination with Proclaim, and alternated with Avaunt and Proclaim. Insect pressure was moderate, and the plots were sprayed twice. All insecticide treatments significantly reduced both the number of worms counted on the foliage as well as the amount of damaged fruit as compared to the untreated control (Figure next page). However, there were no significant differences between the treatments that received insecticides.



Scott Stoddard, Farm Advisor