



County Director's Notes

2005 Upcoming Meetings

January

- Mushroom Production Workshop

February

- Dried Plum Day
- Forage Seminar
- Table Grape Seminar
- Tri-County Walnut Day
- Winter Cotton Meeting
- Tri-County Vegetable Crop Mtg

April

- Spring Citrus Meeting

May

- Blackberry Field Day
- Blueberry Field Day
- Garbanzo Bean Field Day
- Olive Day
- Tree Fruit Research & Variety Trial Field Day

June

- Tree Fruit Research & Variety Trial Field Day
- Summer Cotton Growers Meeting

July

- Tree Fruit Research & Variety Trial Field Day
- Summer Cotton Growers Meeting

August

- Tree Fruit Research & Variety Field Day
- Fresh Market Tomato Variety Trial Field Day
- Specialty Crops Field day

September

- Cotton Harvest Safety Training

October

- Fall Citrus Meeting
- Landscape Pest Management Evening Seminars

November

- Landscape Pest Management Evening Seminars
- Pesticide Workers Safety Meeting

AN EDITORIAL

Wrapping up 2004:

As we go into the last quarter of 2004 it seems that there will be many more challenges in 2005 for agriculture and all those that depend on agriculture (isn't that everyone?). When we use the term agriculture it seems to become this amorphous term separate from what agriculture really does, and that is the production of food and fiber to feed the world, including you and me. Here in Tulare County we seem to be closer to understanding this relationship, however one does not seem to have to get very far away before that understanding is lost on the general public.

World Hunger

Thomas Malthus published his *Essay on the Principle of Population* in 1798. When I was in school, I remember being convinced that the world would starve before the end of the 20th century based on his theories of population growth. He argued that while population grows exponentially (very fast), food production grows only arithmetically (more slowly), inevitably moving us toward scarcity and famine. But history has not yet fulfilled Malthus' theory: over the past 35 years, global per capita food production has outstripped population growth by 16 per cent. We now have more food per person available on this planet than ever before in human history. This does not mean that

we are not facing world hunger; according to the United Nations, there are more than 800 million undernourished people in the world, and that 25,000 people are starving to death each day. The best estimate of the USDA locates 36 million under-nourished in the United States, arguably the richest nation on Earth, and the world's number one food exporter. The Malthus relationship between population growth and hunger continues to be debated.

Will it Be Water?

The Malthusian predictions have not happened yet, thanks to many developments of which Malthus had no conception in 1798, including massive irrigation projects, plant breeding successes, and continual advancements in crop and animal management productivity. However, the 21st century promises a host of new resource and environmental challenges, driven by continued population growth. The most recent population forecasts envision growth continuing at least through the 21st century, and perhaps beyond, with an expected peak world population of 9-11 billion. For the most part, the additional 3-5 billion people will be added to the poorer and resource-limited regions of the world, creating enormous challenges in the management of scarce resources and in the production of adequate quantities of food and fiber.

In particular, the incremental stresses that these additional people will place in the world's water resources will sharply intensify existing world water scarcity and lead to a host of critical water management challenges. For example, feeding an increasing population will surely require the expansion of irrigated crop acreage world-wide with the resulting increases in the demand for water. Already there are signs that food production advances are being overtaken by population growth. Worldwatch reports that grain production failed to match consumption in 10 of the last 15 years between 1987-2001, causing grainstocks to decline to lower and lower levels. Food production clearly needs to increase sharply in the years ahead to prevent widespread famine and disease. And, such increases in food production will invariably be accompanied by increases in water demand.

Although substantial effort is being focused on development of higher-yielding crops (and we will get back to that thought later), growing numbers of experts believe that water availability will become a limiting factor in crop production, and that water shortages will become chronic in some of the most populous regions of the world. It has estimated that as many as 500 million people today are being fed by crops grown with water obtained by groundwater overdraft, the majority in China and India. UN estimates project that at least 3 and as many as 7 billion people will live in chronically water-short areas by the end of the century. And on top of this dire forecast looms the uncertainty of climate change, which by recent estimates could decrease river flow supply to certain populous areas by as much as 20%.

Is it just "Fish or Water"?

Does some of this sound familiar? Tulare County already depends on overdrafted groundwater for 50-60% of our irrigation supplies, not to mention that most of the cities and communities are dependent on the same groundwater. The other 40-50% has come from surface water deliveries, which with several conjunctive use projects, has generally been able to meet crop needs and balance the groundwater overdraft by recharging ground water in wet years.

The largest surface water provider for Tulare County is the Central Valley Project's Friant Division, delivering San Joaquin River water to over a million acres of farmland on the eastern side of the southern San Joaquin Valley, including most of Tulare County.

On August 27 of this year, this balancing act became endangered when Judge Lawrence K. Karlton ruled that the Friant Dam was built in violation of a California State Fish and Game Code requiring restoration and maintenance of the historic fisheries that existed in the San Joaquin River prior to the construction of the dam.

This is not the first time that the CVP has faced proposed reallocations of significant amounts of water, however this may be the most serious. When the Central Valley Improvement Act was first introduced in 1996, there were proposals to reallocate up to 800,000 Acre Feet (AF). Based on this proposal two studies were conducted, one by UC Cooperative Extension and one by Northwest Economic Associates (NEA) in which reallocations of 200,000 AF and 500,000 AF were analyzed for local economic impacts and impacts on groundwater. These studies agreed that reallocations would have significant regional impacts with the loss of from 10,000 jobs at 200,000 AF to potentially more than 19,000 jobs lost by reallocating 500,000 AF, representing \$733 million in lost personal income.

These are local impacts that will have serious repercussions on all of the communities in Tulare County, especially those that are predominately directly dependent on agriculture. These estimates are similar to the losses we had during the citrus freeze of 1990.

Even more ironic, is to put this proposed action in the perspective of world hunger. Over 800 million people undernourished in the world today, with 25,000 expected to starve to death each day, and some have the arrogance to think we have the luxury to reallocate water from crops to attempt to re-establish a salmon fishery. Crops that not only are our livelihood and the life blood of our communities, they also feed and clothe us and the world.

Genetically Modified Organisms (GMO)

A recent national study of public knowledge about biotechnology, genetic engineering and genetically modified organisms by Rutgers University found that the majority of Americans claim to know "very little" (55%) or "nothing at all" (22%) about biotechnology. This may not be surprising, however what is significant is that the majority of the people interviewed disapproved of biotechnology including those claiming to know "nothing at all" about the topic. As if to say "we don't know much about it, but if we did we are sure we wouldn't like it."

This knowledge gap and the public's attitude are not only disconcerting, it is now threatening several of agriculture's most promising tools. In Tulare County, as transgenic crops such as Round-up Ready cotton, corn, (and soon alfalfa) have become standard use in a matter of only a few years, reducing production costs and making management options such as reduced tillage and no-till feasible. Many dairymen utilize Posilac as one of their important management tools, increasing overall efficiency.

Today, the use of these management tools is threatened in California. Sixteen counties have either passed an anti-GMO ordinance (Trinity and Mendocino), have proposed ordinances on the November ballot (Humboldt, Marin, Butte, and San Luis Obispo) or are in the process of a proposed ordinance (Sonoma, Lake, Napa, Yolo, Solano, Sacramento, Placer, Alameda, Santa Cruz, and Santa Barbara).

Could a similar action be taken in Tulare County? Not likely, however if this becomes a state trend, California agriculture could once again loose another competitive advantage to other states and nations. And we could loose another tool that may hold many of the solutions we need to stop world hunger. If you want to learn more about GMO or Biotechnology, or want a service or school group to learn more I will

have a video tape or DVD, "*Genetic Engineering in California Agriculture*", that you can check out or purchase. Give our office a call.

Jim Sullins, County Director
Acknowledgements:

Empty stomachs in a World of Plenty

Share International

By Peter Rosset

August 1999, Plant Physiology, October 2000, Vol. 124, pp. 487-490

Ending World Hunger. The Promise of Biotechnology and the Threat of Antiscience Zealotry

Norman E. Borlaug

The National Academies of Science

Meeting Overview

The Role of Science in Solving the World's Emerging Water Problems

Organized by William Jury and Henry Vaux Arnold and Mabel Beckman Center of the National Academies; Irvine, CA, October 8-10, 2004

Animal Biotechnology

Knowledge Gap Breeds Distrust

Alison Van Eenennaam, October 20, 2003

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Bravo Lake Botanical Gardens Open House Saturday, October 30, 2004 • 8:00 a.m. to Noon

The University of California Cooperative Extension invites the public to attend an open house of the Bravo Lake Botanical Gardens on Saturday, October 30, 2004 from 8:00 a.m. to Noon.

Visitors will be able to see the initial phase of the development of the facility and learn more about future planned construction.

The Bravo Lake Botanical Gardens site is located on Naranjo Blvd., two blocks east of Valencia Blvd. in Woodlake. Signs will be posted. Admission is free. To get to Woodlake from Highway 99 take Highway 198 east (15 miles), then take the Woodlake-Kings Canyon exit north (seven miles).

For more information, please call (559) 685-3303.

**National Alfalfa Symposium and
34th California Alfalfa & Forage Symposium
San Diego, CA - December 13-15, 2004**

The NATIONAL ALFALFA SYMPOSIUM is a comprehensive educational program covering all aspects of alfalfa production. Other forage corps, such as small grain forages and grass hays are also featured. This conference is oriented towards producers, pest control specialists, company representatives, and anybody interested in the important issues surrounding alfalfa & forage crops. It features a trade show, full symposium with > 35 speakers, and an agricultural tour of local interest. This year, the National Alfalfa Symposium is combined with the California Symposium, and has been organized by the California Alfalfa Workgroup and a team from 9 other states.

The CALIFORNIA ALFALFA & FORAGE SYMPOSIUM is a comprehensive educational program covering all aspects of irrigated alfalfa production. It has been a highly-respected yearly event since 1971, and is the annual gathering of California's \$1 billion + per year alfalfa industry.

The National Alfalfa Symposium was last held in 2000 in Las Vegas, Nevada and had > 700 attendees and 500 exhibitors. The National Alfalfa Symposium has rotated around different parts of the USA, and this year will focus on issues of importance of the desert Southwest, including irrigation and water issues, environmental issues, pest management, regulation, crop management, application of wastes, and other forages such as sudangrass and cool season grasses that are harvested for hay. Full information including a detailed program, registration form and hotel details are available at: <http://alfalfa.ucdavis.edu> or call our office at 559/685-3303.

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**Mushroom Production for Fun & Profit
February 2, 2005, Wednesday - 6:00 - 9:00 p.m.
Tulare County Ag Bldg Auditorium**

Dr. Mike Davis, Extension Plant Pathologist from UC Davis, will conduct a 3 hour workshop on growing mushrooms for fun and profit. Shiitake, oyster and several other specialty mushrooms will be covered. Participants will learn practical techniques for producing spawn, sterilizing substrates, maintaining correct humidity and temperature, and getting mushrooms to form.

Pre-registration required by January 14, 2005.

Cost: \$25.00 per person which includes a shiitake bag for each participant

Make checks payable to: UC Regents

Mail registration & check to:
Mushroom Workshop
UCCE Tulare
4437B S Laspina St
Tulare, CA 93274

Name: _____

Address: _____

City, State, Zip: _____

Number of Participants: _____ Phone: _____

**Landscape Pest Management Evening Seminars
Agricultural Building Auditorium - 7:00 - 9:30 p.m.**

\$30 for 4 seminars OR \$10/evening

2.5 hours CEU per seminar approved by CDPR

Contact the UCCE office for registration information at 559/685-3303

- Oct 27 Hackberry Woolly Aphid, Andrew Lawson, CSU Fresno
Controlling Summer Insects with Winter Systemic Insecticide Applications for Landscape Sites, Gordon Vostic, Bayer Crop Science
- Nov 3 Laws & Regulations Update for the Landscape Industry, TBA
- Nov 10 Understanding Plant - Soil - Water Relations to Minimize Plant Stress, Insect Infestation and Disease Incidence in Landscapes, Loren Oki, UC Davis
- Nov 17 Abiotic Disorders of Landscape Plants, Larry Costello, UCCE San Mateo - San Francisco

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What's A Parent to Do?

Helping families deal with bullying and with kids who are out of control

Two Part Satellite Program

November 30 and December 7, 2004, 3:30 p.m. - 6:15 p.m.

UC Cooperative Extension Auditorium, 4437B S Laspina St, Tulare

Registration is \$6.00 - Pre-registration is required

- November 30 What Families, Schools, and Communities Can Do to Support Healthy Social and Emotional Development in Children and Youth, David Osher, Ph.D.
- December 7 Finding a Mighty Heart: Acquiring the Courage to Stand Up for Oneself and Others, Charles A. Smith, Ph.D.

For more information, call 559/685-3303 or go to our website: cetulare.ucdavis.edu

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Winter Tree Fruit Meeting

December 1, 2004, Wednesday - 8:00 a.m. to 1:00 p.m.

Dinuba Memorial Building

\$20 registration fee includes refreshments, lunch and syllabus

Pre-registration is strongly encouraged

Detailed agenda and registration form available in next Orchard Notes newsletter

Continuing Education credits requested

For more information, please call Kevin Day at 559/685-3309 ext 211

Pesticide Worker Safety Training Program

The University of California Cooperative Extension and the Tulare County Agricultural Commissioner's Office will jointly conduct a Pesticide Worker Safety Training Program for your employees on the dates listed below. Each session is a complete training program. They need attend only one program for all information.



Dates

- Wednesday, November 17
- Thursday, November 18

Times

- 8:30 a.m. - 12:00 p.m.
- 1:30 p.m. - 5:00 p.m.

Location

- Dinuba Memorial Bldg, 249 S Alta Ave.
- Exeter Veterans Memorial Bldg, 324 N Kaweah Ave.

Language

- Spanish Session
- English Session

These training sessions are for the purpose of helping employers' train their employees in the safe handling and application of pesticides as required by state regulations. A certificate of pesticide training will be issued to those who attend.

In addition to this training, employers are still required to provide and document annual training in specific pesticides to be used.

Continuing education hours have been requested. Individuals with the following certificates will receive 2.5 hours continuing education credit, which includes 1.0 hours of laws and regulations and 1.5 hours of other.

- Private applicator certificate
- Commercial applicator certificate
- Agricultural pest control advisor license
- Qualified applicator license
- Qualified applicator certificate
- Maintenance gardener pest control business license.

Other certificate or license holders should call the Dept. of Pesticide Regulations regarding certification of continuing education credits.

We urge you to send your workers, even if they have attended previous safety training sessions. A review of the laws and the procedures to handle and apply pesticides safely is in the best interest of reducing accidents.

Steve Wright, Farm Advisor
(559) 685-3309 ext. 215

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Pesticide Worker Safety Training Program Registration

November 17 & 18, 2004

Company Name: _____ Phone _____

Address: _____ City: _____ Zip: _____

Names: _____

EARLY REGISTRATION: \$5.00 per person if paid or postmarked by due date

LATE REGISTRATION: \$10.00 per person if paid or postmarked after due date or at the door

No. Attending: _____ Amount Enclosed: _____

Please enclose a check payable to: **UC REGENTS**

Mail to: **Pesticide Worker Training**
UC Cooperative Extension
4437B S Laspina St
Tulare, CA 93274-9537

OFFICE USE ONLY:
 Cash Check # _____

Receipt # _____

Due Date: Monday, November 1 2004



UNIVERSITY of CALIFORNIA
COOPERATIVE EXTENSION • TULARE COUNTY
4437B S Lasplina St • Tulare, CA 93274
(559) 685-3303 • Fax: (559) 685-3319



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2. Fax in your renewal to the **Tulare County Cooperative Extension** at **(559) 685-3319** and indicate that you would like to continue receiving our newsletter(s). **Be sure to fax both sides of the sheet, this side with your selection marked above, the other side with your address label with any corrections in the box. DO NOT MAKE CHANGES ON THE ADDRESS LABEL.**

OR

3. E-mail your renewal to **cetulare@co.tulare.ca.us** indicating that you would like to continue receiving our newsletter(s). **Include your name, company name and address as printed on the label on the reverse side in the e-mail. If you are making a name and/or address correction, please include both the old and new name and/or address.**

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October 30, 2004

Landscape Pest Mgmt Evening Seminars
October 27, November 3, 10 & 17, 2004

Pesticide Worker Safety Training Program
November 17 & 18, 2004

What's A Parent To Do?

November 30 & December 7, 2004

Winter Tree Fruit Meeting
December 1, 2004

National & CA Alfalfa & Forage Symposium
December 13-15, 2004

Mushroom Production Workshop
February 2, 2005

Newsletter Renewal Form

IMPORTANT: Return the Newsletter Renewal Form included in this mailing
By **December 31, 2004** or you will be dropped from our mailing list!!

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