

**Fertilizer Research and Education Program
Technical Advisory Subcommittee (TASC)**

California Farm Bureau Federation
2300 River Plaza Drive
CAPCA Board Room
Sacramento, CA 95833

February 23, 2012
8:30 AM to 2:30 PM

Minutes

TASC MEMBERS

Jack Wackerman, Chair
Michael Cahn
Eric H. Ellison (not present)
Robert Fry
Tom Gerecke
Holly Little
David P. McEuen
Robert Mikkelsen
Jerome Pier
Chris Simas
Doug West

CDFA STAFF

Asif Maan
Erika Lewis

WELCOME AND INTRODUCTIONS

The meeting was called to order at 8:30 a.m. Mr. Jack Wackerman, Chairperson welcomed the subcommittee. Self-introductions were made and a quorum was established.

REVIEW AND APPROVE MINUTES

MOTION: Mr. Wackerman requested the committee review the minutes of the August 24, 2011 meeting. Mr. David McEuen moved to approve the minutes as submitted. Mr. Robert Fry seconded. The motion passed unanimously.

SELECTION OF CHAIR AND VICE CHAIR

MOTION: Mr. Wackerman requested the committee vote to select the Chair and Vice Chair. Mr. David McEuen moved for Mr. Jack Wackerman and Mr. Tom Gerecke to continue serving as Chair and Vice Chair if they would accept the responsibility. Mr. Wackerman and Mr. Gerecke accepted. Dr. Jerome Pier seconded. The motion passed unanimously.

PROGRAM UPDATE

Dr. Asif Maan explained the Department's decision to realign the terms of the TASC members. Currently, the majority of TASC members' terms expire in September of the same year every three years, with the remaining two terms expiring in March of the following year. In accordance with a similar effort undertaken to realign the terms of the Fertilizer Inspection Advisory Board, TASC members' terms have been realigned so that only three or four members' appointments expire in September of each year. To accomplish this, some randomly chosen members have terms shorter than the typical three year term. This is a one time occurrence and is solely for the purpose of realigning the TASC; members with shortened terms are welcome to reapply when their terms expire.

Ms. Erika Lewis provided an overview of attendee feedback regarding the fall 2011 FREP conference. Overall, attendees that completed evaluation sheets had a very positive opinion of their experience at the 2011 FREP conference. The majority of respondents rated the conference better than most other agricultural seminars and indicated that it fulfilled their expectations and provided useful information. Respondents appreciated the variety of expert speakers, the topics covered, and the quality of information presented; they felt it was specific, timely, practical, and relevant.

Ms. Lewis then provided the TASC with a spreadsheet detailing the 2012 research project status. All ongoing and recently completed projects are listed with detailed information on the funding status of each project. Dr. Maan pointed out that the Fertilizer Inspection Advisory Board increased the total funding allocation for research and education projects from \$900,000 to \$1,000,000 annually. As a result of this increase, there will be more money available to fund research and education projects in the next fiscal year. Dr. Robert Mikkelsen asked how much funding will be available to fund new research projects this coming year; Dr. Maan responded that \$333,000 will be available in 2012/2013 and \$650,000 will be available in 2013/2014. Mr. Tom Gerecke asked whether remaining funds from previous years can still be spent. Dr. Maan responded that all remaining funds are transferred into the reserve.

Dr. Maan then gave a presentation to the TASC detailing some of FREP's new initiatives. A strategic review of FREP will be conducted to ensure the program is still conforming to its initial intent. A review has not been conducted for several years; in light of current developments regarding air/water quality issues, the department felt now would be an appropriate time. Participants from TASC and FIAB will meet and discuss how the program started, what it has accomplished, and what its future goals are. Discussion will then focus on ways FREP can realize those goals. There is no time table for this initiative yet; Mr. Wackerman, Dr. Mikkelsen, Dr. Pier, and Dr. Cahn volunteered to participate in this process.

Dr. Maan then explained FREP's effort to obtain a CIG grant from USDA-NRCS. This grant would be for \$500,000 toward a \$1,000,000 project; the remaining amount will be

\$250,000 in-kind from FREP and \$250,000 in cash from an as yet undetermined source. The concept proposal has been submitted; if it is accepted we will submit a full proposal. The grant will fund demonstration projects to show FREP funded research, as well as education and outreach events.

Dr. Maan then discussed the FREP database initiative. Completed FREP research reports are currently available online, but they are quite lengthy and technical. FREP has been working closely with CDFA IT to develop a web based database to make FREP research easily accessible to consultants, growers, and other interested parties. Dr. Daniel Geisseler, a post-doc researcher from UC Davis, will be working with FREP to analyze the completed reports and create records for the database. The goal is to roll out the database in June 2012. Ms. Lewis then gave the TASC a demonstration of the proposed database.

Dr. Maan then discussed the CCA Nutrient Management Certification Program initiative. CDFA is attempting to take a proactive role concerning the implementation of NMP requirements. Dr. Amrith Gunasekara, Science Advisor to the Secretary, has been working with Parry Klassen of the East San Joaquin Water Quality Coalition on this issue. The California CCA program has been identified as an appropriate vehicle to oversee the implementation of nutrient management plans. The proposal is to create a CDFA FREP program to certify CCAs in nutrient management planning. This would help to support FREP's goal of education and outreach. The proposed program would be entirely optional and would complement/supplement the existing CCA program. In cooperation with CDFA and subject experts, the California CCA program will develop the curriculum and organize workshops; CDFA will approve the curriculum and issue certificates to CCAs that complete the required training. This initiative is still in the development stage and feedback has been very positive thus far.

RESEARCH PRIORITIES

Mr. Gerecke stated that at a recent CCA meeting, a discussion took place regarding giving nitrate in irrigation water 100% credit for fertilizing a crop. Mr. Gerecke argued that assuming 100% of all nitrogen in irrigation water will make it into a crop is absurd and will just tie farmers to an unreasonable number. There is a need for research that supports how much nitrate is actually used by crops in a number of irrigation systems and cropping patterns. Mr. Gerecke asked how the TASC, as the governing body of FREP, can propose such research be done. He suggested putting out a specific RFP and asked whether the TASC has the authority to do something of that nature.

Dr. Maan responded that it is currently the standard procedure to give out a list of broad research topics on the annual RFP. However, there is nothing that prohibits the TASC from creating a specific RFP. Dr. Mikkelsen agreed, stating that researchers he has approached seemed receptive to the idea; the TASC should discuss research priorities, and then approach researchers. Mr. Gerecke suggested the TASC should contract with an individual to prepare a very specific project proposal; a second individual would then

volunteer to complete the proposed project for a specified amount of money. Mr. Gerecke explained that there are a number of organizations that would be well equipped to complete this type of project (laboratories, UCCE, etc.); however, he is reticent of asking for research proposals when the TASC already has a very specific type of research in mind. Mr. Gerecke argued that it is more logical to put together a specific proposal of what to do and how to do it, and then ask for volunteers. Mr. Wackerman agreed, stating that the next step in the process would be to create the idea. He asked the members whether developing this idea should go to a committee of volunteers or whether the group as a whole should discuss.

Mr. Gerecke stated that the TASC should identify someone to put protocol together; for example, someone with qualifications like Dr. Michael Cahn or Dr. Claude Phene could put this together rather quickly, allowing the TASC to move forward with contacting researchers. Dr. Cahn expressed his hesitation, asking whether it may be better to list this as a very specific research priority and see what types of projects researchers suggest/propose. Dr. Mikkelsen and Dr. Pier stressed the need for an RFP to be written very specifically. Dr. Doug West explained that he experienced a similar problem when working for the Pierce's Disease Control Program (PDCP). Dr. West explained that although PDCP would set specific research priorities, researchers are ultimately interested in their own priorities. PDCP eventually began setting up targeted research programs, stating the specific objectives of the research and asking for volunteers interested in conducting it. Dr. Holly Little suggested that if the TASC has a very specific type of research in mind, they should ask for it up front. Dr. Little cautioned that listing research priorities rather than creating a specific project may not result in the desired outcome. Dr. West agreed, stating that PDCP thought they had specific research priorities, yet the program never obtained the research they wanted. Dr. Mikkelsen asked whether PDCP approached individual researchers or put out a general request. Dr. West responded that the program used both approaches.

Mr. Gerecke explained that this will likely need to be done by multiple researchers in different situations. Mr. Robert Fry explained that this will likely require multiple proposals to account for complexities due to irrigation systems, crops, soils, etc. Dr. Cahn suggested that researchers conducting different projects could possibly agree to use a standard methodology. Dr. Pier suggested the following process: conduct a literature review to identify gaps in knowledge, figure out how to monitor and get useful information on those existing gaps, find and modify an existing model and validate that model. Dr. Pier asked whether it would be possible to solicit specific people to do the work or whether there must be some kind of bidding process. Dr. Maan replied that it would be possible to directly approach a researcher in the university system, but the preference is to follow the bid process.

MOTION: Dr. Robert Mikkelsen moved that Mr. Tom Gerecke will chair a TASC subcommittee to formulate a proposal that will look at nitrate in irrigation water and do a literature review and look at modeling approaches that can be considered off cycle for funding. Dr. Jerome Pier seconded the motion. The motion passed unanimously.

Subcommittee volunteers include Dr. Jerome Pier, Dr. Michael Cahn, Dr. Eric Ellison, and Dr. Rob Mikkelsen.

MOTION: Dr. Rob Mikkelsen moved that the TASC subcommittee will also develop a research protocol with Central Coast and Central Valley to measure nitrate movement in the field from irrigation water. As that proposal is developed, it will be brought to the TASC and considered for funding. Mr. Robert Fry seconded and the motion passed unanimously.

SELECTION OF 2012 CONCEPT PROPOSALS TO ADVANCE TO FULL PROPOSALS

Mr. Wackerman led discussion in reviewing the 2012 concept proposals. FREP received 23 concept proposals. Project leaders for the following 12 concept proposals were invited to submit full proposals:

- *Improving Pomegranate Fertigation and Nitrogen Use Efficiency with Drip Irrigation Systems*
Project Leaders: James Ayars and Claude Phene
- *Use of Chlorophyll Meters to Assess Nitrogen Fertilization Requirements for Corn, Potatoes and Tomatoes*
Project Leader: Brian Marsh
- *Development of Economically Variable Rate P Application Protocols for Desert Vegetable Production Systems*
Project Leaders: Charles Sanchez, Pedro Andrade, and Kurt Nolte
- *Fertigation Education for the San Joaquin Valley*
Project Leaders: William Green and Kaomine Vang
- *Improving Nitrogen Fertilizer Management in California*
Project Leader: Renee Pinel
- *Evaluation of N Uptake and Fertilization Strategies of High Density Plantings of Leafy Green Vegetables*
Project Leaders: Richard Smith and Michael Cahn
- *Soil Nitrate Dynamics, Nitrous Oxide Emissions, and Herbicide Movement in Sub-Surface Drip and Overhead Irrigation Conservation Tillage Cropping Systems*
Project Leaders: Anil Shrestha et al.

- *Developing Fertilizer Best Management Guides from FREP Research*
Project Leader: Renee Pinel
- *Evaluation of a 24 Hour Soil CO₂ Test For Estimating Potential N-Mineralization to Reassess Fertilizer N Recommendations*
Project Leaders: William Horwath, Martin Burger, and Jeffrey Mitchell
- *Further Optimization of Organic Fertilizer Schedules*
Project Leaders: David Crohn and Marsha Mathews
- *Characterizing N Fertilizer Requirements of Crops Following Alfalfa*
Project Leaders: Dan Putnam and Stu Pettygrove
- *Developing Best Nitrogen Management Practices for Fertigation of Conventional and Organic Blueberries*
Project Leader: David Bryla

The subcommittee agreed that FREP staff will send a letter to each of the project leaders informing them whether their concept proposal was selected for advancement to the full proposal phase.

NEXT MEETING

The next meeting to review 2012 full project proposals is tentatively scheduled for July 18, 2012 in the Central Coast. Additional details to be determined.

MOTION: Mr. Robert Fry moved to adjourn the meeting. Mr. Jack Wackerman seconded the motion. The motion passed unanimously and the meeting was adjourned at 2:30 pm.

Respectfully submitted,

Erika Lewis, Research Analyst
Fertilizer Research and Education Program

6/12/2012

Date