



**Fertilizer Research and Education Program (FREP)  
Technical Advisory Subcommittee (TASC)**  
California Department of Food and Agriculture (CDFA)  
2800 Gateway Oaks Drive, Room 101  
Sacramento, CA 95833  
(916) 900-5022

**August 8, 2019  
9:00 AM**

## **MINUTES**

### **TASC Members**

Dr. Jerome Pier  
Dr. Tom Bottoms  
Rex Dufour  
Dr. Eric Ellison  
Dr. Suduan Gao  
Chuck Hornung  
DD Levine  
Dr. Marja Koivunen  
David McEuen  
Jenny Rempel

### **CDFA Staff**

Dr. Amadou Ba  
Dr. Martin Burger  
Mark Cady  
Brooke Elliott  
Natalie Jacuzzi  
Dr. Emad Jahanzad  
Brent Oge

## **WELCOME AND INTRODUCTIONS**

Dr. Jerome Pier, Chair, called the meeting to order at 8:59 AM and welcomed the subcommittee. David McEuen arrived at 9:52 AM. Steve Petrie was not able to attend the meeting. Self-introductions were made, and a quorum was established.

## **REVIEW AND APPROVE MINUTES**

Dr. Pier requested the subcommittee review the minutes of the March 14, 2019, meeting.

**MOTION:** Chuck Hornung moved to approve the March 14, 2019, minutes; Tom Bottoms seconded. The motion passed by present subcommittee members with a vote of 8 – 0.

## **DEPARTMENT, DIVISION, AND BRANCH UPDATES**

Dr. Amadou Ba began by thanking Jenny Rempel and Chuck Hornung for their contributions as TASC members. Rempel served on TASC for three years, and Hornung served for six years. Their terms will expire in September 2019.

Dr. Rob Mikkelsen, a previous member of TASC for approximately 18 years, will take a new position as Director of Communications at the African Plant Nutrition Institute in Morocco, Marrakesh. Dr. Mikkelsen previously worked for the International Plant Nutrition Institute, which closed in June 2019.

Safe and affordable drinking water was addressed in Senate Bill (SB) 623 last year, but it did not continue to the floor for a vote on the funding mechanism. SB 623 was not supported by water purveyors or the Association of California Water Agencies (ACWA) because the bill included a tax on residential water deliveries. ACWA proposed that the Safe and Affordable Drinking Water Fund should receive support from general funds. Last year, the funds were proposed to include \$30 million from the agricultural industry and about \$110 million through water tax. Instead, \$130 million in funding will come from the greenhouse fund. Any additional funding will come from general funds.

CDFA is helping to eradicate virulent Newcastle Disease (vND), a viral disease first found in birds in Mexico. The disease was transmitted to commercial poultry venues in Southern California. Ten production farms and 15,000 backyards were affected, and 1.2 million birds were depopulated. Since June 4, there have been no new findings of vND.

Biostimulants are an emerging topic for the agriculture industry. The Environmental Protection Agency is drafting regulations for biostimulants. There is a working definition of biostimulants in the 2018 Farm Bill, which is set by Congress every five years. Two CDFA staff members will attend a conference about biostimulants in Barcelona, Spain, on November 18-24. Dr. Marja Koivunen noted that a biostimulants symposium will also be held on August 27 in San Diego, California. The symposium is part of a five-day American Chemical Society Meeting.

FREP funds include \$4.5 million through the end of the fiscal year 2018-2019. Expenditures including encumbrances are \$1.7 million through March 2019. FREP has \$3.85 million available, and TASC may select up to 10 projects to receive grants.

Brent Oge is the summer intern for FREP. Oge is focusing on FREP communication and outreach research.

Mark Cady asked Dr. Emad Jahanzad, who joined FREP in March 2019 as a Senior Environmental Scientist, to introduce himself. Dr. Jahanzad recently worked as an Environmental Scientist in the Office of Environmental Farming and Innovation with the State Water Efficiency and Enhancement Program. Prior to joining CDFA, Dr. Jahanzad was a postdoctoral scholar at the Department of Plant Sciences, University of California, Davis, studying soil health in almond orchards. Dr. Jahanzad was also a postdoctoral research associate at the Pennsylvania State University in the Northeast Sustainable Agriculture Research and Education Program Dairy Cropping Systems team, studying nutrient losses from dairy farms. Dr. Jahanzad holds a PhD in Plant and Soil Sciences

from University of Massachusetts, Amherst, as well as a MSc in Agronomy and a BSc in Agronomy and Plant Breeding.

### **TASC VACANCIES AND APPLICANTS**

Cady explained that three TASC member positions will become vacant in September 2019. The terms of current members Steve Petrie, Jenny Remple, and Chuck Hornung will expire in September 2019.

Fourteen people submitted applications for the three TASC vacancies. FREP recommended that TASC members organize a subcommittee to review the applications and recommend new TASC members to the rest of TASC. Rex Dufour, Chuck Hornung, DD Levine, and Jenny Remple volunteered to be the subcommittee members. This subcommittee will meet in September, as the recommendations must be presented at the next Fertilizer Inspection Advisory Board meeting, scheduled for October 1.

**MOTION:** Dr. Koivunen moved to approve a subcommittee to recommend applicants for TASC vacancies, consisting of the current members Rex Dufour, Chuck Hornung, DD Levine, and Jenny Remple. Dr. Suduan Gao seconded. The motion passed by present subcommittee members with a vote of 8 – 0.

### **DISCUSSION AND RECOMMENDATION OF 2019 FULL PROPOSALS**

Dr. Pier led discussion in reviewing and voting on the 2019 full proposals; 16 proposals were received. TASC voted a majority “yes” for the following seven proposals. The authors will be invited to submit full proposals.

- Promoting the adoption of CropManage to optimize nitrogen and irrigation use through low-cost data loggers and cellular modems for Spanish-speaking growers in Santa Cruz and Monterey Counties  
*Gerry Spinelli and Michael Cahn*
- Immobilization of nitrate in winter-fallow vegetable production beds to reduce nitrate leaching  
*Richard Smith, Michael Cahn, Joji Muramoto, and Daniel Geisseler*
- Developing a nitrogen mineralization model for organically managed vegetable farms on the Central Coast  
*Joji Muramoto, Richard Smith, Michael Cahn, and Daniel Geisseler*
- Achieving Efficient Nitrogen Fertilizer Management in California Wheat  
*Mark Lundy, Nicholas Clark, Giuliano Galdi, Thomas Getts, Michelle Leinfelder-Miles, Sarah Light, Konrad Mathesius, and Lynn Sosnoski*
- Develop Nutrient Budget and Nutrient Demand Model for Nitrogen Management in Cherry  
*Patrick Brown and Douglas Amaral*

- Next Generation N Management Training for Certified Crop Advisors  
*Doug Parker, Dan Munk, Patrick Brown, Allan Fulton, Daniel Geisseler, and Sat Darshan Khalsa*
- Irrigation and Nitrogen Management, Monitoring, and Assessment to Improve Nut Production While Minimizing Nitrate Leaching to Groundwater  
*Thomas Harter, Isaya Kisekka, and Patrick Brown*

TASC voted a majority “no” for the following nine proposals.

- Yield Prediction for Seasonal N Fertilization Strategies in California’s Almond Orchards  
*Yufang Jin and Patrick Brown*
- Ventura County Nitrogen Management Training Program  
*Jodi Switzer*
- Assessing Nitrogen Fertilizer Needs for Optimal Production and Environmental Sustainability of Summer-Planted Strawberry Production in Ventura County  
*Andre Biscaro, Daniel Geisseler, and Michael Cahn*
- Improving N Management Guidelines for Super-High-Intensive Olive Orchards  
*Xia Zhu-Barker*
- An innovative fertigation strategy to minimize nitrate losses  
*Patrick Brown, Douglas Amaral, and Pedro Lima*
- Evaluating Automatic Fertigation Management and Monitoring Practice Effects on Production and Nitrate Leaching from Processing Tomato Fields to Groundwater  
*Isaya Kisekka, Thomas Harter, and Daniel Geisseler*
- Evaluating NOx emissions and fertilizer-related emission factors under BMPs to minimize N losses and optimize N use efficiency  
*Xia Zhu-Barker and William Horwath*
- Monitoring nitrogen uptake, partitioning and growth patterns in Raspberry to improve nitrogen management  
*Jamie Whiteford, Andre Biscaro, and Jose Gomez*
- Assessing Nitrogen Release Dynamics from Organic Fertilizers using a Novel in-situ Field Incubation Method  
*Cole Smith and William Horwath*

## **PUBLIC COMMENTS**

No public comments were given.

### **AGENDA ITEMS FOR FUTURE MEETINGS**

Two more meetings will be held in 2019. The next meeting will convene to select recommendations for new TASC members. The following meeting will include discussion about priorities and knowledge gaps to include in the 2020 Request for Proposals (RFP), which will be released in December 2019. Information about FREP-funded projects on grower practices and decision making could also be presented.

### **NEXT MEETING**

The next meeting will be scheduled for September to discuss and vote on the new TASC members. The following meeting, to discuss and write the RFP, will be scheduled for mid-November. Both will be scheduled via Doodle poll.

### **ADJOURN**

**MOTION:** Dufour moved to adjourn the meeting; Hornung seconded. The motion passed by present subcommittee members with a vote of 9 – 0.

Dr. Pier adjourned the meeting at 3:11 PM.

Respectfully submitted,

**Original Signed by Mark Cady**

**Sept. 12, 2019**

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Mark Cady  
Senior Environmental Scientist (Supervisory)  
Fertilizer Research and Education Program

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Date