

**CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE (CDFA)  
ENVIRONMENTAL FARMING ACT SCIENCE ADVISORY PANEL**

Byron Sher Auditorium  
California Environmental Protection Agency  
1001 I Street  
Sacramento, CA 95814

July 17, 2015

**MEETING MINUTES**

**Panel Members**

Don Cameron, Member and Chair  
Mike Tollstrup, Member  
Jeff Dlott, PhD., Member  
Bruce Gwynne (Alternate), Natural Resources Agency  
Jocelyn Bridson, MSc., Member (via webcast)  
Doug Parker, PhD., Subject Matter Expert  
Luana Kiger, MSC, Subject Matter Expert

**State Agency Staff**

Amrith Gunasekara, PhD. (CDFA)  
Jenny Lester Moffitt, Deputy Secretary (CDFA)  
Evan Johnson (CalRecycle)  
Carolyn Cook (CDFA)

**AGENDA ITEM 1**

The meeting was called to order at 10:10 AM by the Chair, Mr. Don Cameron. Panel Chairman Mr. Cameron introduced the Healthy Soils Initiative (HSI) as an issue of relevance to all farmers. Introductions were made. Members present at the meeting include Mr. Cameron, Dr. Dlott, Mr. Tollstrup, and Mr. Gwynne (alternate for Dr. Bunn from Natural Resources Agency). A quorum was established.

**AGENDA ITEM 2**

**Welcome Address- CalRecycle Deputy Director, Howard Levenson and CDFA Deputy Secretary Jenny Lester Moffitt**

Deputy Secretary Moffitt welcomed the panel and audience to the meeting and provided background information on the Healthy Soils Initiative. CDFA was charged with leading the Healthy Soils Initiative as described in the Governors January 2014-15 budget proposal and under the authority of the Environmental Farming Act of 1995. Dr. Levenson welcomed the group on behalf of EPA and Cal Recycle.

**AGENDA ITEM 3**  
**PREVIOUS MEETING MINUTES**

CDFA staff presented the minutes from the previous May 14, 2015 meeting. The motion was made to accept the minutes as presented by Mr. Tollstrup, and seconded by Mr. Gwynne. The motion was moved by all members present and was accepted without further changes.

**STATE WATER EFFICIENCY AND ENHANCEMENT PROGRAM (SWEEP)**

Dr. Gunasekara provided an update on the State Water Efficiency and Enhancement Program (SWEEP). \$10 million are available through the current fiscal year for grants to farmers to install irrigation systems that reduce water use and reduce greenhouse gas emissions. The application period closed on June 29, 2015. 345 applications were received, totaling \$30.3 million in requests. The program was oversubscribed by 300%. A technical review period of the application had begun. Dr. Gunasekara noted that he would continue to update the Science Panel members at each meeting on SWEEP since the program continues to receive funding.

**VACANT POSITION ON EFA SAP**

Dr. David Bunn, Director of the Department of Conservation, has been appointed to serve on the EFA SAP from the Natural Resources Agency. Bruce Gwynne was filling in for Dr. Bunn at this meeting.

**AGENDA ITEM 4 – HEALTHY SOILS INITIATIVE**

**A. IMPACT OF SOIL ORGANIC MATTER ON NUTRIENT CONSERVATION AND SOIL HEALTH – DR. WILLIAM HORWATH**

Dr. Horwath provided an overview of soils, soil organic matter (SOM) and its role in soil health. Dr. Horwath also discussed the microbial environment and its contribution to building SOM. He also discussed the abiotic contribution to building SOM such as climate and moisture. His presentation included a case study and research studies which attempted to build SOM. Dr. Horwath facilitated questions from the Science Panel members and the public following his presentation.

**MICROBIAL COMMUNITIES, COMPOST AND IMPLICATIONS FOR SOIL HEALTH – DR. GARY ANDERSEN**

Dr. Gary Anderson of U.C. Berkeley presented on thermophilic aerobic decomposition (composting) and discussed some benefits of compost to soil health. Dr. Anderson's research team has been studying which microbes are active in compost production. They are using microchip technology to detect different bacteria and archaea and understand how the different microbial species play different roles in the compost

process and who dominants when and at what stages of the composting cycle. Dr. Anderson answered questions from the Science Panel members and the public following his presentation.

### **CALRECYCLE EFFORTS TO DATE ON COMPOST – DR. HOWARD LEVENSEN**

Dr. Howard Levenson of CalRecycle provided an update on current policies and progress on promoting composting in California. He noted that California has policy drivers for increasing composting, including a statewide goal of 75% of solid waste diverted from landfills by 2020. Since organic waste makes up one-third of solid waste, composting will be a critical component of meeting that goal. Dr. Levenson noted that CalRecycle is engaged on several research initiatives on compost and suggested future research needs. Dr. Levenson answered questions from the Science Panel members and the public following his presentation.

### **A TOOL FOR INCENTIVIZING SOIL HEALTH IN AGRICULTURE (COMET-PLANNER) – DR. ADAM CHAMBERS**

Dr. Adam Chambers provided an overview of a new tool (Comet-Planner) developed to quantify the GHG benefits of various farm management practices. Dr. Chambers showed how to use the tool and find background information and quantification methodology for each practice. He noted that soil health is an important priority and there is the goal of 111-124 MMTCO<sub>2</sub>e reduction by 2025. USDA NRCS used historical accomplishments in soil health through EQIP since 1997 to extrapolate what can be accomplished by 2025. Dr. Chambers facilitated questions from the Science Panel and the public following his presentation.

### **PUBLIC COMMENT AND DISCUSSION**

Daniel Morash, California Safe Soil: They are exploring California aerobic enzymatic digestion. Additionally, unless we can prove the value of these products to farmers then projects won't be successful. Need research to back up and prove benefits to farmers.

Niles Brinton, Char Born: Commented that he was encouraged by the initiative. He suggested that the addition of biochar to compost can reduce off-gassing of ammonia and methane. The finished compost product also has a higher nitrogen content, possibly leading to less fertilizer demand. Biochar is a needed solution for dealing with woody biomass waste (ex; forest).

Pablo Garza, Nature Conservancy: Excited regarding the Healthy Soils Initiative and potential incentives for landowners, but also concerned about application of compost on rangelands because it can lead to a decline in biological diversity. Requested that rangelands are discussed in the subcommittee on compost application rates.

Calla Rose Ostrander, Rathmann family foundation: Has maps and materials to share with the panel on various waste sources. Wants to promote a systems approach and

management of organics in a way that protects air and water quality and gets organics back on land.

Cole Smith, UC Cooperative Extension: Inquired on the next steps in education and outreach. Hard to organize and disperse scientific information to the public. Dr. Gunasekara responded that CalRecycle and CDFA can reach out to UC Extension and try to involve them in the discussion.

Pelayo Alvarez, Carbon Cycle Institute: Inquired on the timeframe of the Healthy Soils Initiative. Inquired on how public input will be collected and how the public can participate.

Dr. Gunasekara replied that this meeting is part of the public process in the development of the program. The EFA SAP meeting will continue to be the public venue for Healthy Soils discussions and open to the public. Interagency coordination is also occurring; there is a 2-page document available on goals for the initiative on CDFA Environmental Stewardship webpage.

Adam Kotin, CalCAN: Inquired if there have been further conversations on goals for the initiative or opportunities for public involvement.

Dr. Gunasekara responded that there would be further public and stakeholder conversations on the potential of setting SOM goals.

Nick Lapis, Californians Against Waste: The 2-page document on the initiative includes interesting short term and long term goals. Commented that it would be helpful to know how we are going to reach these goals.

Dr. Gunasekara responded that this meeting is part of reaching the goals. Multiple agencies are participating. Different agencies will take different actions. CDFA is using SAP to determine what to focus on.

#### **AGENDA ITEM 5 – ADJOURN**

Chair Cameron adjourned the meeting at 2:47 PM.

Respectfully submitted by:



Amrith Gunasekara, Ph.D.

5/7/16

Date