

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

California Department of Food and Agriculture
Auditorium
1220 N Street
Sacramento, CA 95814

**January 21, 2020
10 AM to 4 PM**

MEETING MINUTES

Panel Member in Attendance

Jocelyn Bridson, Rio Farms (Chair and Member)
Don Cameron, Terranova Ranch (Member)
Vicky Dawley, Tehama RCD (Member)
Judith Redmond, Full Belly Farm (Member)
Michelle Buffington, PhD. CalEPA, ARB (Member)
Jeffery Onsted, PhD, Resources Agency, DOC (Member)
Scott Couch, CalEPA, State Water Board, (Member)
Doug Parker, PhD. UC ANR (Subject Matter Expert)
Thomas Hedt, USDA NRCS (Subject Matter Expert)

State Agency Staff and Presenters

Carolyn Cook, MSc, CDFA
Geetika Joshi, PhD, CDFA
Steph Jamis, MSc, CDFA
Michael Wolff, PhD, CDFA
Benjamin Nicholson, MBA, CARB
Guihua Chen, PhD, CDFA
Dennis Grossman, PhD, Strategic Growth Council
Amrith Gunasekara, PhD, CDFA
Nicole Lederer, Chair and Co-Founder, Environmental Entrepreneurs
Anthony Myint, Director of Partnerships, Restore California
Jane Sooby, Senior Outreach & Policy Specialist, CCOF
Scott Park, Farmer, Park Farming Organics
Kate Scow, PhD, Professor, University of California, Davis

AGENDA ITEM 1 – Introductions

The meeting was called to order at 10:05 AM by Chair Bridson. Panel members introduced themselves. Present at the meeting were all the members noted above under “Panel Members in Attendance.” A quorum of at least six members was present at the meeting.

AGENDA ITEM 2 – Minutes

Chair Bridson introduced the October 17, 2019 meeting minutes. Member Cameron made a motion to approve the minutes. Member Dawley seconded the motion. The motion to approve the minutes was passed by all members present.

AGENDA ITEM 3 – Whole Orchard Recycling (WOR)

A staff presentation on the WOR practice was given by Dr. Wolff. The presentation reviewed a proposal to add the WOR to the Healthy Soils Incentive Program, revisited the modeling work, shared practice costs, covered public comments received for the WOR practice and discussed

the updated staff recommendations for practice requirements.

Mr. Hedt from the USDA NRCS informed the EFA SAP that an interim practice standard for WOR is being adopted. NRCS EQIP is using the work done by CDFA to inform the interim practice and the agency is working on a payment schedule.

CDFA staff fielded several questions from EFA SAP members;

- Subject matter expert Hedt inquired if orchards were being removed due to the Sustainable Groundwater Management Act (SGMA) and not being replanted, what the best management of land should be as observed from the modelling work. Dr. Wolff responded that it could be ecosystem restoration type of work but that these systems would not be compatible with the modelling nor has that scenario been modelled at this time.
- Member Onsted inquired about the initial studies considering burning and WOR and if there was any data on the tree biomass being removed or orchards left abandoned. Dr. Wolff indicated that such data currently does not exist to his knowledge.
- Member Couch inquired why the cost estimates do not include the “pulling” or physical remove of the trees from the soil. Mr. Wolff responded that the since the life of the orchard trees have been reached, the farmer would be initiating the practice of removing the trees regardless of the disposal method. Therefore, the proposed payment rate primarily covers shredding of the woody material.
- Member Cameron asked if there was more carbon in almond trees compared to softer woody trees. Dr. Wolff responded that in the modelling work and subsequent analysis, age of the tree was as a driving factor in the modeling rather than the characteristics of the woody material, which are difficult to model.
- Member Redmond suggested that other options not modelled, such as permanent fallow or annual cropping, could be included as research type projects in the Healthy Soils Program. Member Dawley agreed that with the implementation of SGMA, farmers will need the other options such as permanent fallow or annual crops and more research is needed.
- Chair Bridson noted that co-benefits of the practice might prevent the leaching of nutrients and it would be beneficial to do more research work around this topic. Chair Bridson also inquired if a more accurate estimate would be the higher biomass value rather than the staff recommended 14 tons since almond trees might have higher biomass than other trees. Dr. Wolff noted that the practice was designed to include all orchard crops. Dr. Gunasekara also noted that the 14 tons value provides a conservative estimate for greenhouse gas reduction calculations and ensures the practice is available to other tree crops.
- Member Cameron questioned if the size of wood chips were smaller or larger than 2 inches, if the carbon sequestration and greenhouse gas values change. Dr. Wolff noted that smaller chips can result in dust creation and loss of the product to erosion where in some of the field experiments larger chunks did not seem to have an adverse effect on soil organic carbon sequestration and they decomposed in a few years.
- Member Onsted inquired if farmers can apply to both the CDFA Healthy Soils Program and USDA NRCS EQIP. Dr. Gunasekara responded that they are able to apply to both programs, however farmers are discouraged from receiving funding from the two entities for the same field.

Comments from the Public to the EFA SAP members were facilitated by Chair Bridson;

- Mr. Brian Shobe from CalCAN thanked the CDFA team for the work completed. Mr. Shobe agreed with the new staff recommendations and clarification to the requirements. He thanked the EFA SAP for discussions on permanent fallow.

Following public comment, a motion was made to approve the staff recommendations as

presented and accept the WOR practice for inclusion as an incentivized practice in the Healthy Soils Program. Member Onsted seconded the motion. The motion was passed by all members present. A final report on the WOR analysis will be posted on the EFA SAP website.

AGENDA ITEM 9 – Technical Assistance Program Updates

This agenda item was moved up in the EFA SAP meeting schedule to accommodate several speaker schedules for Agenda Item 4.

An update of the AB 2377 Climate Smart Agriculture Technical Assistance Grants was provided by Ms. Cook of CDFA. The presentation included revisiting the 2019 Technical Assistance Grant Solicitation timeline, sharing of the news release that awarded 33 technical assistance grants for climate smart agriculture work totaling \$2.1 million, summary of the awardees, next steps for the program and the grant awardees and outreach completed using Twitter.

Questions from EFA SAP members were fielded by Ms. Cook;

- Chair Bridson inquired if the program awards resulted in good statewide coverage of technical assistance. Ms. Cook responded that there is good coverage of technical assistance in the agricultural regions and that several awardees will be providing statewide technical assistance as well.
- Member Couch inquired as to how long the grant agreement execution process takes. Dr. Gunasekara provided background on the grant agreement process and Ms. Cook discussed the budget and scope of work development process following the award announcement.

AGENDA ITEM 4 - Carbon Removal and Soil Sequestration Partnership

AGENDA ITEM 5 - Partnering with the CDFA Healthy Soils Director of Partnerships Informational Item Program

Both agenda item 4 and 5 were held under the format of a panel format with speakers taking turns presenting their information to the EFA SAP members. Ms. Lederer provided an overview of Written Testimony in Support of Sec. 2307(c)(7): Soil Health Demonstration Trial that her organization, Environmental Entrepreneurs, had worked on. Several other organizations presented with her in a panel discussion format including representatives from Locus Agricultural Solutions, Nori Marketplace and Restore California. The primary message of each of the presentations was to inquire how private entities can work with CDFA on the Healthy Soils Program. Several proposals were made to CDFA ranging from establishing partnerships to providing a verification element to those farms that conduct carbon sequestration management practices from private funding.

Ms. Lederer from Environmental Entrepreneurs provided background on their efforts for carbon removal from the atmosphere. She noted that USDA estimates that U.S farmers could store 12-14% of annual greenhouse gas emissions. She proposed establishing a new program that monetizes carbon storage by farmers and technology companies can help measure the benefits. She also supported soil health demonstration trials funded through federal organizations.

Representatives from Locus discussed the benefits of crop “probiotics” as soil amendments that can increase soil carbon sequestration while Mr. Neil Curlers from Civic Ethanol discussed the Low Carbon Fuel Standard incentive for reducing emissions through the use of ethanol to displace gasoline. Mr. Christopher Jospe from Nori informed the EFA SAP that one can establish baselines using Comet-Farm and then monitor for reductions. Mr. Anthony Myint highlighted that the restaurant industry is a \$97 million sector and there are private funds to incentivizing soil health practices on farms. However, what is missing is the verification component and that CDFA can play a role.

The panel fielded several questions from EFA SAP members.

Dr. Gunasekara requested from Environmental Entrepreneurs a written proposal. He stated to the EFA SAP, following the panel presentations, that there are many stakeholder entities seeking collaborations with CDFA. He also suggested that CDFA put together a comprehensive discussion with a large group of private entities, including those who presented, on organizing several listening sessions on how CDFA can better partner with private organizations and stakeholders interested in the Healthy Soils Program and the topic in general. Dr. Gunasekara noted that such a meeting can be organized, and the results and recommendations brought back to the EFA SAP for further discussion. Although no motion was passed, the EFA SAP in general, agreed to that pathway proposed by CDFA.

AGENDA ITEM 6 - Addition of an Organic Transition Option to the Healthy Soils Program

This agenda item included a panel format with speakers making presentations on the topic of adding an organic transition option and plan to the Healthy Soils Program. Ms. Sooby from CCOF led the discussions which was supported by a recently submitted letter to CDFA Healthy Soils Program. The letter describes a proposal to add a one-time payment as a Healthy Soils Program practice for an organic transition plan for those farmers who would like to transition to an organic farming system. As part of the practice, recipients would agree to use organic compliant practices during the three-year term and develop a plan for organic production. Ms. Sooby advocated that the proposal fits for Healthy Soils Program because once the farmer is an organic producer, they will be committing to practices that continue to build soil health.

Dr. Scow supported the proposal and provided a presentation on the importance of microbial soil communities. She noted that microbial communities transform carbon inputs into their own bodies and metabolites. This process in turn builds stable soil carbon pools. When microbes die, the carbon associated with their bodies bond with the soil mineral fraction. Carbon inputs need to be continually fed to maintain the soil carbon reservoir and have many co-benefits including water retention, soil stability, buffering from extreme heat and providing adaptation and resiliency. She highlighted the Century Experiment and Study being conducted at Russell Ranch at the University of California, Davis. After 19 years, the study shows that more carbon is sequestered in organic systems. In conventional, tilled systems there is some carbon lost whereas in organic, tilled system substantial increase in top 1 foot and down to 6 feet, there was a 13% increase in soil organic carbon.

Mr. Park, an organic farmer since 1995, who farms 1700 acres presented on his experiences. He began farming in the 1970's. Decision-making on his farm now relates to soil health since 1986. He advocated that adding this option to the Healthy Soils Program will help young farmers the opportunity to work with a professional to develop an organic transition plan.

Questions by EFA SAP members were fielded by the panel;

- Member Couch inquired if the Russell Ranch study used dairy manure. Dr. Scow stated that they used poultry compost every year in addition to cover crops.
- Member Cameron informed the group that he has been farming organically for 27 years. He has worked to integrate organic practices into the production of conventional agricultural crops. Member Cameron emphasized that one goal of the EFA SAP has been to be move these practices into conventional agriculture but has concerns that the proposal may not be compatible with greenhouse gas funding. Ms. Sooby noted that two thirds of Healthy Soil Program funds in 2018 and 2019 came from Prop 68.
- Chair Bridson noted it would be hard to identify the greenhouse gas benefits of the consultant fee that is required with the organic transition plan. Ms. Sooby responded by noting the California Air Resources Board (CARB) has funded technical assistance and that there are other programs funded by greenhouse reduction funds (California Climate Investments) that don't have quantifiable greenhouse reductions. The cost of an organic transition plan is \$4300.
- Member Redmond referenced the CARB investment plan which stresses long term

transformational goals. She noted that the vision gives space for the proposal. She also noted that this can be considered a form of technical assistance. Member Redmond stated that organic farmers have been some of the best supporters and would also help to promote the program further.

Public comments were facilitated by Chair Bridson;

- Mr. Brian Shobe from CalCAN spoke in support of the proposal.
- Mr. Bill Aileo from Environmental Working Group also spoke in support of the proposal. His comments were in line with those made by Mr. Shobe on the point that quantification of this practice may not be needed for inclusion in the Healthy Soils Program.
- Mr. Ben King from Colusa County supported the comments by Mr. Scott Park
- Online verbal comments included ensuring performance-based approaches be considered in the proposed new organic transition plan proposal, there were existing questions about the parameters for the proposal and any limits set on when the full transition to organic needs to take place.

Following public comments, the EFA SAP had further discussion;

- Chair Bridson commented again that many conventional farmers use these practices and the tools indicate a greenhouse gas reduction measure in the quantification tools. She suggested that further digestion and discussion could occur of the proposal.
- Member Redmond inquired when this would be implemented. CDFA staff informed her that anything new would be included in the next solicitation in 2021.
- Member Couch noted that the proposal may best fit within the Technical Assistance Program
- Member Onsted informed the group that there are planning grants. These grants are different than technical assistance grants.
- Chair Bridson moved that CDFA OEFI staff review the proposal and bring their findings including recommendations to the next meeting for further discussion. Mr. Cameron seconded that motion. All members passed the motion.

AGENDA ITEM 7 – Healthy Soils Program Update

Dr. Chen and Dr. Joshi from CDFA and Dr. Grossman from the Strategic Growth Council (SGC) provided updates on the Healthy Soils Program. Public comments received for a public review of the upcoming solicitation and how the comments were addressed was presented. A new mapping tool to assist grower applications was presented and the partnership between CDFA and SGC was noted in developing this new tool to make the Healthy Soil Program (HSP) application process more user friendly. There were several updates to the Comet-Planner tool as well including inclusion of payment rates into it. These new developments were presented to the EFA SAP and members of the public. Information surrounding the next solicitation was discussed by Dr. Joshi.

Member Redmond stated it would be beneficial to receive an update on older projects and the outcomes. Dr. Gunasekara responded that this could be one of the agenda items in a future EFA SAP meeting.

AGENDA ITEM 8 – State Water Efficiency and Enhancement Program Updates

Program updates on the SWEEP was presented to the EFA SAP by Ms. Jamis. Program updates included metrics on the last solicitation.

Dr. Gunasekara announced that the next meeting of the Panel would be on April 16, 2020. The location of the meeting is yet to be determined.

The meeting was adjourned at 4 PM.

Respectfully submitted by:

Amrith Gunasekara, Ph.D.
Liaison to the Environmental Farming Act Science Advisory Panel