

ENVIRONMENTAL FARMING ACT SCIENCE ADVISORY PANEL (EFA SAP)  
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE



MEETING AGENDA  
May 24, 2018

EFA SAP MEMBERSHIP

<https://www.cdfa.ca.gov/oefi/efasap/>

Jocelyn Bridson, MSc, Rio Farms, Member and Chair  
Don Cameron, Terranova Ranch, Member      Jeff Dlott, PhD, SureHarvest, Member  
Vicky Dawley, Tehama RCD, Member      David Bunn, PhD, Resources Agency, DOC, Member  
Emily Wimberger, CalEPA, ARB, Member      Judith Redmond, Full Belly Farm, Member  
Scott Couch, CalEPA, State Water Board, Member      Julie Alvis, Resources Agency, Member  
Tom Hedt, USDA NRCS, Subject Matter Expert      Doug Parker, PhD, Subject Matter Expert

Public Meeting

1:00 to 5:00 PM

U.S. Fish and Wildlife Office  
10950 Tyler Road  
Red Bluff, California 96080  
916-654-0433

REMOTE ACCESS

Webinar information

Registration URL: <https://attendee.gotowebinar.com/register/2093808080029986305>

Webinar ID: 638-051-411

Please note the webinar is on listen-only mode.

For verbal questions and comments, please attend the meeting in person

Presentation materials will be posted at the following link prior to the meeting:

[https://www.cdfa.ca.gov/EnvironmentalStewardship/Meetings\\_Presentations.html](https://www.cdfa.ca.gov/EnvironmentalStewardship/Meetings_Presentations.html)

Meeting Agenda

- |   |   |
|---|---|
| 1. Introductions  | Chair Bridson                           |
| 2. Minutes and Panel administrative matters                       | Chair Bridson                           |
| 3. Healthy Soils Program  | Geetika Joshi, PhD, CDFA                |
| • Update for adding new practices to Quantification Methodologies |   |
| 4. SWEEP Update   | Scott Weeks, CDFA                       |
| 5. Strategic Planning summary document                            | Chair Bridson                           |
| 6. CDFA Climate Smart Agriculture efforts                         | Jaydeep Bhatia, CDFA<br>Josh Eddy, CDFA |
| 7. Public Comments  | Chair Bridson                           |
| 8. Next Meeting and location                                      | Chair Bridson                           |

Amrith (Ami) Gunasekara, PhD, CDFA Liaison to the Science Panel

All meeting facilities are accessible to persons with disabilities. If you require reasonable accommodation as defined by the American with Disabilities Act, or if you have questions regarding this public meeting, please contact Amrith Gunasekara at (916) 654-0433.

More information at: <http://cdfa.ca.gov/Meetings.html> and [http://www.cdfa.ca.gov/EnvironmentalStewardship/Meetings\\_Presentations.html](http://www.cdfa.ca.gov/EnvironmentalStewardship/Meetings_Presentations.html)

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

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

March 15, 2018  
1 PM – 5 PM

**MEETING MINUTES**

**Panel Members in Attendance**

Don Cameron, Terranova Ranch (Chair and Member)  
Jocelyn Bridson, MSc, Rio Farms, (Co-Chair and Member)  
Jeff Dlott, PhD. SureHarvent (Member)  
David Bunn, PhD. Natural Resources Agency (Member)  
Scott Couch, State Water Resources Control Board (Member)  
Emily Wimberger, CalEPA, ARB (Member)  
Judith Redmond, Full Belly Farm (Member)  
Vicky Dawley, Tehama RCD (Member)  
Doug Parker, PhD. UC ANR (Subject Matter Expert)  
Tom Hedt, USDA NRCS (Subject Matter Expert)

**State Agency Staff and Presenters**

Secretary Karen Ross, CDFA  
Virginia Lew, CEC  
Olivier Jerphagnon, MSc, PowWow Energy  
Kevin Langham, MSc, PowWow Energy  
Miriam Volat, UC Davis Facilitation Services  
Carolyn Cook, M.Sc.  
Guihua Chen, PhD, CDFA  
Geetika Joshi, PhD, CDFA  
Amrith Gunasekara, PhD, CDFA

**AGENDA ITEM 1 – Introductions**

The meeting was called to order at 1:10 PM by the Chair, Mr. Don Cameron. Introductions were made. Present at the meeting were all the members noted above under “Panel Members in Attendance.”

**AGENDA ITEM 2 – Minutes from Previous Meeting**

Chair Cameron introduced the minutes from the January 18, 2018 meetings. A motion was made by Member Bridson to accept the minutes as presented by CDFA staff and

the motion was seconded by Member Dawley. The motion was moved by all members present and accepted without further changes.

### AGENDA ITEM 3 – SWEEP Update

Ms. Cook provided a programmatic update on the State Water Efficiency and Enhancement Program (SWEEP). She noted potential future funding sources. Ms. Cook provided a status update on the Joint Program between CDFA and DWR, noting that the North San Joaquin Irrigation District assessment did not pass in support of the project. Therefore, she noted the project would not move forward. The funds allocated to projects under the DWR-CDFA Joint Program would be re-allocated to SWEEP applications received in 2017 that did not receive funding due to insufficient funds.

Ms. Cook explained the monitoring approaches for SWEEP projects funded in 2015 and 2016, noting the different mechanisms that were used for monitoring, namely, comparing paper utility bills in 2015 and third party remote and digitized monitoring through PowWow Energy in 2016. She introduced the next two speakers from California Energy Commission and PowWow Energy.

#### Virginia Lew, California Energy Commission

Ms. Lew explained the California Energy Commission's (CEC) Agriculture-related Energy Efficiency Research. She noted the various policy drivers behind the CEC programs, such as the Electric Program Investment Charge (EPIC) and the Natural Gas Research and Development Program. The 2018 EPIC Investment Plan has a focus on energy and water use efficiency in irrigation technologies. Ms. Lew shared examples of some current projects funded through EPIC, such as the Wexus Energy and Water Management Mobile Software for farmers. The funded projects provide growers with easy-to-use, farm-integrated decision-making assistance technologies to help them maximize their water and energy efficiencies. Ms. Lew facilitated questions and provided responses to member questions.

#### Olivier Jerphagnon and Kevin Langham, PowWow Energy

Mr. Jerphagnon provided a presentation on water-energy monitoring systems developed by their company funded by the grant received through CEC EPIC. He noted their collaboration with UC Santa Barbara and UC Davis to develop energy and water savings technologies, respectively. He explained how the technology was customized for use in SWEEP verifications. Mr. Langham gave a presentation specifically noting their work on SWEEP. Each SWEEP recipient part of the verification was provided with a SMART meter and showed examples of data created by PowWow, such as well pumping and solar energy use. Mr. Langham showed an example of the data generated for SWEEP verifications, including energy savings, water savings and GHG savings. Mr. Langham and Jerphagnon facilitated questions from the panel members and provided responses.

#### Address by Secretary Karen Ross

Secretary Ross arrived and welcomed the Panel Members. She noted that Chair Cameron had accepted a new position as President of the State Board of Food and Agriculture and would be stepping down as current Chair of the EFA-SAP. Co-Chair Bridson was appointed as the new Chair of the EFA-SAP. Secretary Ross thanked Chair Cameron for his service and presented him with a Certificate of Appreciation. She welcomed Ms. Bridson in her new role as Chair. She would begin to take on the responsibilities as Chair at the May 24, 2018, meeting.

#### AGENDA ITEM 4 – Healthy Soils Program (HSP) Update

Chair Cameron introduced Dr. Chen who provided an update to the Science Panel on the Healthy Soils Program (HSP). She discussed the projects selected for funding and distribution of awardees for the HSP Incentives Program and HSP Demonstration Projects. She explained the proposed management practices to be considered for inclusion under the HSP and presented an update on CDFA's mechanism for evaluation and inclusion of these practices. Dr. Chen also presented an update on the 2017 Healthy Soils Program Second Solicitation, noting the differences from the previous round.

Several questions from the Panel were facilitated by Dr. Chen and CDFA staff. Topics included remaining GHG reductions achieved via various practices, clarifications on the verification process, and clarifications on CDFA's process for including new practices in future rounds of HSP.

#### AGENDA ITEM 5 – Strategic Planning on Future Topics

Dr. Gunasekara provided a point-by-point update on Strategic Plan processes that occurred in the last two EFA-SAP meetings, including each major recommendation made by the Science Panel at the October, 2017 and January, 2018 meetings. He noted that a public process will be initiated to solicit stakeholder input on the Strategic Plan if approved by the members with a finalized Plan to be presented at the next meeting.

#### AGENDA ITEM 6 – Public Comments

Several questions and comments from the public were accommodated by Chair Cameron and CDFA staff. They included clarifying questions for PowWow Energy on increasing sample size for SWEEP verifications for data-based future decisions relating to choosing irrigation technologies, distribution efficiency, and modification of the GHG quantification methodology based on PowWow data findings. Additional public comments related to incomplete application analysis for the HSP, concerns regarding

scheduling of awarded project site verifications, increased technical assistance and consideration of existing programs and plans (e.g. Carbon Farm plans), potentially increasing award amount for both Incentives Program and Demonstration Projects, support for several new practices being evaluated for inclusion in the HSP, including on-farm composting, allowing multi-species (mixing leguminous and non-leguminous) cover crops, integrated cropland ruminant grazing, and one-time compost application; and concerns regarding lack of soil health benefits and potential for ammonia volatilization by nitrification inhibitors, and potential crusting or increased run-off from anaerobic digestate application were expressed. Additional clarification was provided in support of on-farm composting to be allowed for those regions where commercial composting facilities may not be available by members of the public.

#### AGENDA ITEM 7 – Next Meeting and Location

Dr. Gunasekara stated that the next meeting will be May 24, 2018, in Tehama County. A new co-chair will be selected at the next meeting. Final recommendations for the long-term strategic plan for the Panel will be presented at the next meeting. The meeting was adjourned at 4:02 PM by Chair Cameron

Respectfully submitted by:

---

Amrith Gunasekara, Ph.D.

---

Date

# CDFA HEALTHY SOILS PROGRAM

---

Geetika Joshi, Ph.D.

Senior Environmental Scientist, Office of Environmental Farming & Innovation

**Environmental Farming Act – Science Advisory Panel Meeting**

*May 24, 2018*

*Red Bluff, CA*



# Outline

- Program Updates:
  - 2017 Healthy Soils Program (HSP) Round I
  - 2017 HSP Second Solicitation
- New Management Practices under consideration for inclusion under the HSP



# 2017 HSP Awarded Projects

★ Incentives Program

**51** **22**  
 projects counties

**8,992 tons CO<sub>2</sub>e/yr**  
 GHG Reduction

- 69 applications requesting \$1.99 million
- Total grant amount requested: \$1.4 million
- Estimated cost share: \$1.62 million

★ Demonstration Projects

**22** **20**  
 projects counties

**1,642 tons CO<sub>2</sub>e/yr**  
 GHG Reduction

- 27 applications requesting \$4.7 million
- Total grant amount requested: \$3.2 million
- Estimated cost share: \$2.5 million

Note: Final grant awards subject to change pending CDFA budget evaluations.





Note: Final grant awards subject to change pending CDFG budget evaluations.

★ Incentives Program

**33** projects  
**16** counties

**7,470 metric tons CO<sub>2</sub>e/yr**  
GHG Reduction

- 43 applications requesting \$1.15 million
- Total grant amount requested: \$918,496
- Estimated cost share: \$706,489

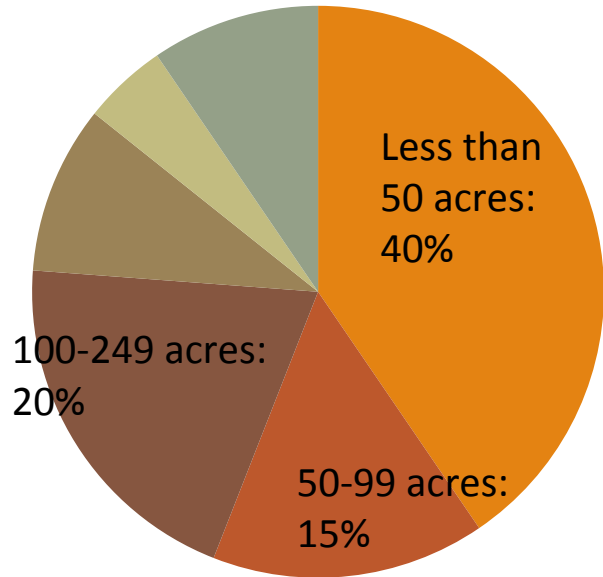
★ Demonstration Projects

**6** projects  
**7** counties

**446.5 tons CO<sub>2</sub>eq /year**  
GHG Reduction

- 11 applications requesting \$957,587
- Total grant amount requested: \$549,429
- Estimated cost share: \$614,497

### Number of Awards by Farm Size



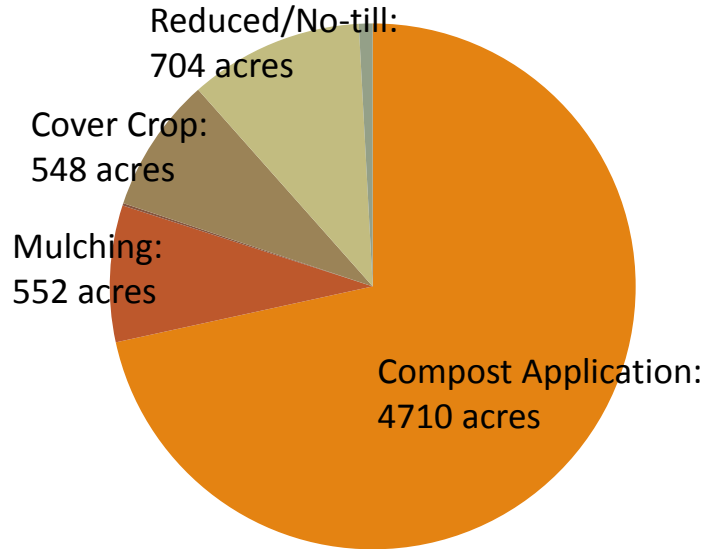
■ <50 
 ■ 50-99 
 ■ 100-249 
 ■ 250-499 
 ■ 500-1000 
 ■ >1000

Average CA farm size: 329 acres

79% projects on smaller farms (<250 acres)

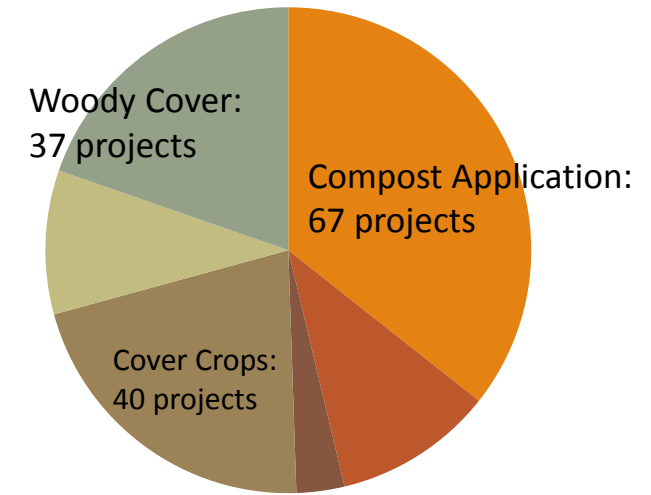
### Most Popular Practices

#### By Acres of Implementation



■ Compost Application 
 ■ Mulching  
■ Herbaceous Cover Establishment 
 ■ Cover Crop  
■ Reduced/No-Till 
 ■ Woody Cover Establishment

#### By Number of Projects



■ Compost Application 
 ■ Mulching  
■ Herbaceous Cover Establishment 
 ■ Cover Crop  
■ Reduced/No-Till 
 ■ Woody Cover Establishment

Applications Received: 66 + 43 = 109

Selected for Awards: 51 + 33 = 84

New Management  
Practices for  
Consideration under  
the CDFA HSP



# I. Nitrogen Management

Under Discussion with CARB and USDA-NRCS:

**590: Nutrient Management: Reduce Fertilizer Application Rate by 15%**

Managing the amount (rate), source, placement (method of application), and timing of nitrogen fertilizer application to achieve 15% reduction.

- Includes a California implementation in Comet-Planner 2.0.
- Negative GHG reduction (i.e., emissions) in certain counties.



# I. Nitrogen Management

Under Discussion with CARB and USDA-NRCS:

## **590: Nutrient Management: Slow release fertilizers**

Improved nitrogen management by use of slow release nitrogen fertilizers. Slow release fertilizers release nutrients into the soil gradually, which results in lower N losses from cropland soils.

- Includes a California implementation in Comet-Planner 2.0.



# I. Nitrogen Management

Not considered for next round:

**590 Nutrient Management: Replacing synthetic N fertilizer with soil amendments.**

Improved nutrient management by partial substitution of beef feedlot manure, chicken broiler manure, chicken layer manure, other manure, dairy manure, sheep manure, swine manure, compost (various C:N) for synthetic nitrogen fertilizer.

- Includes a California implementation in Comet-Planner 2.0.
- Not included due to challenges in establishing application rates for amendments other than compost. Compost application practice already exists.



# I. Nitrogen Management

Not considered for next round:

## 590 **Nutrient Management: Nitrification Inhibitors.**

Improved nitrogen management planning by use of nitrification inhibitors. Nitrification inhibitors slow the nitrification of ammonia, ammonium-containing, and urea-based fertilizers, which results in lower N losses from cropland soils.

- Includes a California implementation in Comet-Planner 2.0.
- Not included due to stakeholder concerns related to lack of CA-based data.



## II. Practices Already in Comet- Planner

Under Discussion with CARB and  
USDA-NRCS:

**585 Strip Cropping:** Add perennial cover  
grown in strips with irrigated/non-  
irrigated annual crops.

Growing planned rotations of row crops,  
forages, small grains, or fallow in a systematic  
arrangement of equal width strips across a  
field.

- Includes a California implementation in  
Comet-Planner 2.0.





## II. Practices Already in Comet- Planner

Under Discussion with CARB and USDA-NRCS:

### **512 Forage and Biomass Planting: Conversion of Annual Cropland to Irrigated/Non-Irrigated Grass-Legume Forage/Biomass Crops**

Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production.

- Includes a California implementation in Comet-Planner 2.0.
- Plant species to be planted would be consistent with NRCS California eVegGuide <https://www.calflora.org/nrcs/index.html>
- Cannot overlap with [550](#) Range Planting.



## II. Practices Already in Comet- Planner

Under Discussion with CARB and  
USDA-NRCS:

**327 Conservation Cover: Convert  
Irrigated/Non-irrigated cropland to  
permanent unfertilized grass/grass  
legume cover.**

Converting conventionally managed, irrigated  
or non-irrigated, annual cropland to permanent  
unfertilized grass cover.

- Includes a California implementation in  
Comet-Planner 2.0.
- Negative GHG reduction (i.e., emissions) in  
certain counties.



## II. Practices Already in Comet- Planner

Under Discussion with CARB and  
USDA-NRCS:

### [550](#) Range Planting

Establishment of adapted perennial or self-sustaining vegetation such as grasses, forbs, legumes, shrubs and trees.

- Includes a California implementation in Comet-Planner 2.0.
- Cannot overlap with [512](#) Forage and Biomass Planting.



## II. Practices Already in Comet- Planner

Under Discussion with CARB and  
USDA-NRCS:

### **412 Grassed Waterway: Convert Strips of Irrigated/Non-Irrigated Cropland to Permanent Unfertilized Grass/Grass- Legume Cover**

A shaped or graded channel that is established with suitable vegetation to carry surface water at a non-erosive velocity to a stable outlet.

- Includes a California implementation in Comet-Planner 2.0.
- Negative GHG reduction (i.e., emissions) in certain counties.



## II. Practices Already in Comet- Planner

Under Discussion with CARB and USDA-NRCS:

### 311 Alley Cropping

Trees or shrubs are planted in sets of single or multiple rows with agronomic, horticultural crops or forages produced in the alleys between the sets of woody plants that produce additional products.

- Does not include a California implementation in Comet-Planner 2.0.
- Cannot overlap with 379 Multistory Cropping.



## II. Practices Already in Comet- Planner

Under Discussion with CARB and USDA-NRCS:

### 379 **Multistory Cropping**

Existing or planted stands of trees or shrubs that are managed as an overstory with an understory of woody and/or non-woody plants that are grown for a variety of products.

- Does not include a California implementation in Comet-Planner 2.0.
- Cannot overlap with 311 Alley Cropping.



## II. Practices Already in Comet- Planner

Under Discussion with CARB and USDA-NRCS; may have additional requirements if included:

### **528 Prescribed Grazing: Grazing Management to Improve Irrigated/Non-Irrigated Pasture Condition**

Managing the harvest of vegetation with grazing and/or browsing animals.

- Includes a California implementation in Comet-Planner 2.0.
- A Grazing Management Plan signed by a certified professional range manager would be needed (continued on next slide).

# II. Practices Already in Comet-Planner

## **528 Prescribed Grazing: Grazing Management to Improve Irrigated/Non Irrigated Pasture Condition**

Prescribed grazing plan will include

- Goals and objectives clearly stated.
- Resource inventory that identifies
  - Existing resource conditions and concerns.
  - Ecological site or forage suitability group.
  - Opportunities to enhance resource conditions.
  - Location and condition of structural improvements such as fences, water developments, etc., including seasonal availability and quality of watering sites.
- Forage inventory of the expected forage quality, quantity, and species in each management unit(s).
- Forage animal balance developed for the grazing plan that ensures forage produced or available meets forage demand of livestock and/or wildlife.
- Grazing plan developed for livestock that identifies periods of grazing and/or browsing, deferment, rest, and/or other treatment activities for each management unit that accommodates the flexibility needed for adaptive management decisions as supported by the contingency plan and monitoring plan in order to meet goals and objectives.
- Contingency plan developed that details potential problems (i.e., drought, flooding, and insects) and serves as a guide for adaptive management decisions in grazing prescription adjustments in order to mitigate resource and economic effects.
- Monitoring plan developed with appropriate protocols and records that assess whether the grazing strategy is resulting in a movement toward meeting goals and objectives. Short term and long term monitoring may be needed to determine outcomes and support timely adaptive management decisions. Identify the key areas, key plants, or other monitoring indicators that the manager should evaluate in making grazing management decisions.





## II. Practices Already in Comet- Planner

Under Discussion with CARB and USDA-NRCS; may have additional requirements if included:

### **328 Conservation Cover Crop Rotation: Decrease Fallow Frequency or Add Perennial Crops to Rotations**

A planned sequence of crops grown on the same ground over a period of time (i.e. the rotation cycle).

- Includes a California implementation in Comet-Planner 2.0.
- A complete implementation plan or Conservation Plan for 3 years of project duration will be needed.
- Cannot overlap with [340](#) Cover Crop in the same field.



## II. Practices Already in Comet- Planner

### Not considered for next round:

#### **650 Windbreak/Shelterbelt Renovation**

Replacing, releasing and/or removing selected trees and shrubs or rows within an existing windbreak or shelterbelt, adding rows to the windbreak or shelterbelt or removing selected tree and shrub branches.

- Determining damage to existing windbreak/shelterbelt to require renovation is beyond the scope of the HSP and requires a professional arborist or forester to determine.
- For purpose of practice implementation and verification, it is tough to distinguish from 380 Windbreak/Shelterbelt Establishment, an eligible practice.
- Does not include a California implementation in Comet-Planner 2.0.



## II. Practices Already in Comet- Planner

Not considered for next round:

### **612 Tree/Shrub Establishment**

Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.

- Includes a California implementation in Comet-Planner 2.0.
- Comet-Planner modeling assumes replacing conventionally managed and fertilized annual cropland with unfertilized, woody plants.

### III. Variable Names/Already Included

Can be  
accommodated  
under [340](#)  
Cover Crop

- Green Manure
- Cover crop and bio-diverse planting

Can be  
accommodated  
under [345](#)  
Reduced-Till

- Semi-permanent coverage
- Alternative Inter-row tillage

Under  
discussion with  
CARB and  
USDA-NRCS:

- Whole Almond Orchard Recycling

# IV. Ongoing Considerations

- Not considered for next round of funding:
  - Sub surface drip irrigation (SWEEP).
  - On farm composting facility ([317](#)).
- Insufficient published peer-reviewed research literature to demonstrate soil C-sequestration in California:
  - Anaerobic digestate application
  - Vermicompost application
  - Mycorrhizal application
  - Microbial inoculation and compost tea
- Literature review, inter-agency consultation and/or modeling tests in progress:
  - Soil Erosion Control by swale building and mulching
  - Composting and Mulching
  - Livestock Management and Ruminant Grazing
  - One time compost application with higher rate for grazed grasslands
  - Application of on-farm produced compost
  - Integrated Cropland Ruminant Grazing

Thank You

Comments must be  
submitted to  
[cdfa.oefi@cdfa.ca.gov](mailto:cdfa.oefi@cdfa.ca.gov)

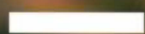




# SWEEP UPDATE


EFA SCIENTIFIC ADVISORY PANEL

MAY 24, 2018



*SCOTT WEEKS*

*ENVIRONMENTAL SCIENTIST*



# CALIFORNIA DROUGHT, WATER, PARKS, CLIMATE, COASTAL PROTECTION, AND OUTDOOR ACCESS FOR ALL ACT OF 2018.

- Enrolled September 19, 2017
- Authorizes the issuance of \$4 billion in bonds
- Must be approved by the voters on **June 5th 2018**

SB 5 (Chapter 11.6. 80147 (b))  
Regional Sustainability for  
Drought and Groundwater,  
and Water Recycling:

*"...funds made available pursuant to this section, up to twenty million dollars (\$20,000,000) shall be available for the State Water Efficiency and Enhancement Program administered by the Department of Food and Agriculture."*



# PROJECT TYPES



## WATER CONSERVATION

- Sensors for Irrigation Scheduling (weather, soil or plant based)
- Micro-Irrigation or Drip Systems



## GHG REDUCTIONS

- Fuel Conversion
- Improved Energy Efficiency
- Low Pressure Systems
- Variable Frequency Drives
- Reduced Pumping

# REVIEW OF 2017 PROJECTS

**REVIEWED  
APPLICATIONS**

206

**2017 AWARDED  
APPLICATIONS**

58

**2017 DOLLARS  
AWARDED**

\$5.1 Million

**ACRES  
IMPACTED**

7,135 Acres



# REALLOCATION OF 2017 FUNDS



\$1.84 million was reallocated to new SWEEP projects after the joint award with DWR failed to move forward

- 33 applicants contacted
- 6 projects unable to accept
- **27 new SWEEP projects** - In the process of finalizing grants

# 2017 PART 2 PROJECTS

**2017 AWARDED  
APPLICATIONS**

27

**2017 DOLLARS  
AWARDED**

\$1.8 Million

**ACRES  
IMPACTED**

4927

**PROJECTED  
GHG SAVINGS**

1,228 MTCO<sub>2</sub>e per year

**PROJECTED  
WATER SAVINGS**

5,041 Acre/Feet per year



## MEDIA PROJECTS

- Produce videos that highlight SWEEP
- Highlight large and small farms as well as innovative projects
- 3 videos are finished
- 5 more are scheduled or in production

View current videos at:

<https://www.cdfa.ca.gov/oefi/sweep/>



In 2014, the California Department of Food and Agriculture launched the State Water Efficiency and Enhancement Program (SWEET).



**THANK  
YOU**

Scott Weeks

Environmental Scientist, CDFA

[Scott.Weeks@cdfa.ca.gov](mailto:Scott.Weeks@cdfa.ca.gov)

California

# CLIMATE SMART AGRICULTURE

Jaydeep Singh

EFA SAP | March 24 2018



# OUTLINE

What is CSA?	<b>01</b>
Why CSA?	<b>02</b>
What we're doing	<b>03</b>
Resources	<b>04</b>
Future work	<b>05</b>

**“CLIMATE SMART AGRICULTURE IS AN INTEGRATED APPROACH TO ACHIEVE GHG REDUCTIONS WHILE ALSO ENSURING FOOD SECURITY IN THE FACE OF CLIMATE CHANGE.**



Building Soil  
Health



Managing  
Methane



Improving on  
farm efficiency

(IFPRI Impact Simulations)

## Population Growth



# WHY CSA GLOBALLY?

**+70%**      **-3-16%**

Needed increase in food production  
to meet 2050 global population

Decline in agricultural  
productivity



# WHY CSA IN CA?

Growing  
population



Climate  
Vulnerability



Global  
Leadership



# WHAT CSA CAN ACHIEVE

**#1**

Increase Sustainable Productivity

**#2**

Strengthen farmer resilience

**#3**

Reduce GHG and increase carbon sequestration

**#4**

Strengthens food security

**#5**

Provides Environmental Benefits

# WHAT CDFA IS DOING TO SUPPORT CSA

- Incentive Programs
- International Collaboration
- Building resources





**SWEEP**



**AMMP**



**DDRDP**



**HSP**



# OEFI PROGRAM HIGHLIGHTS

**702** projects supported

**\$122M** awarded

**6.7M** metric tons of CO<sub>2</sub>e prevented

# INTERNATIONAL COLLABORATION

- CDFA climate smart delegations have visited 4 countries, (Netherlands, Australia, Israel and Chile)
- Climate-smart webinars



Chile



Israel



Netherlands



Australia





# WEBINAR: CHILE & CALIFORNIA

Exploring on-farm climate change  
adaptation strategies

APRIL 25, 2018 | 9 AM TO 11 AM



# CLIMATE SMART WEBINARS

**10** webinars

**1500+** worldwide audience

**75** panelists

# Where will you need to go to find today's climate?

The tool can also be used in the reverse—looking at one particular location to identify where similar climates might be in 2030. To illustrate the concept, an analogue of present-day Los Angeles, California shows that the southern parts of United States' eastern seaboard and France, northern Germany, and the Netherlands might experience Hollywood's traditionally mild winter months (December to February) by 2030.



# FUTURE WORK

- Additional Webinars
- Build out full climate smart agriculture site equipped with CSA practices database
- Interagency Collaboration
- Affiliated event at Global Climate Action Summit

NESS FORUM 2017



**THANK YOU**

Jaydeep Singh  
Policy and Outreach Specialist, CDFA  
[jaydeep.bhata@cdfa.ca.gov](mailto:jaydeep.bhata@cdfa.ca.gov)