Climate Smart Agriculture Incentives Programs at CDFA

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https://www.cdfa.ca.gov/oefi/
The mission of the Office of Environmental Farming & Innovation is to serve California by supporting agricultural production and incentivizing practices resulting in a net benefit for the environment through innovation, efficient management and science.

Incentives for Reduction of Agricultural Greenhouse Gas (GHG) Emissions

- Alternative Manure Management Program (AMMP)
- Dairy Digester Research and Development Program (DDRDP)
- Healthy Soils Program (HSP)
- State Water Efficiency and Enhancement Program (SWEEP)
- Technical Assistance (HSP, SWEEP and AMMP)
Soil Carbon Sequestration – Healthy Soils Program

• HSP stems from the California Healthy Soils Initiative: https://www.cdfa.ca.gov/healthysoils/
• Management practices to build soil carbon and reduce agricultural GHG emissions through direct incentives and demonstration projects.
• Management practices include:
  • Soil management (e.g. compost application, mulching, no-till)
  • Establishment of herbaceous cover (e.g. conservation cover, field border)
  • Establishment of woody cover (e.g. hedgerows, windbreaks)
  • Grazing lands (e.g. compost application, prescribed grazing)
• 28 practices, can be implemented individually or in combinations.
HSP By the Numbers

INCENTIVES PROGRAM
• $3.9 million awarded to 77 projects.
• Grant size up to $50,000.
  • Up to $75,000 in 2018-19.
  • GHG reduction of 14,000 MTCO₂e per year.
  • Practices implemented over approximately 4,500 acres.

DEMONSTRATION PROJECTS
• $2.1 million awarded to 26 projects.
  • Type A: Demonstration, outreach and GHG data collection, grants up to $250,000.
  • Type B: Demonstration and outreach, grants up to $100,000.
  • GHG reduction of 1,900 MTCO₂e per year.
  • Projects implemented over approximately 800 acres.

2018 HSP: 252 applications received for a total request of $14.8 million.
Current Solicitation and New Practices

• CDFA appropriated $10 million from SB 5, the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018 (Prop 68) and $5 million from GGRF in 2018-19.

• 13 new practices included in 2018-19 in response to public and stakeholder comments.

• 9 new practices are eligible exclusively for HSP Demonstration Projects:
  • Funding for collection of GHG and soil health data for practices of interest to stakeholders for potential future inclusion in the HSP Incentives Program.


• [https://www.cdfa.ca.gov/oefi/HealthySoils/](https://www.cdfa.ca.gov/oefi/HealthySoils/)
Methane Reduction – Dairy and Livestock Agriculture

• Agriculture contributes to approximately 8% of California’s total GHG emissions.

• Dairy and Livestock manure management contribute to approximately 34% of this share.

• Manure, when flushed and stored in large lagoons, creates ideal anaerobic environment for methane generation.

• Methane can reduced by:
  • Capture and use as a renewable energy source (biogas): DDRDP
  • Eliminating or reducing wet manure storage conditions: AMMP

Source: California Greenhouse Gas Inventory – 2017 Edition
https://www.arb.ca.gov/cc/inventory/data/data.htm
Dairy and Livestock Methane Reduction Programs at CDFA

Dairy Digester Research and Development Program (DDRDP)
- $114.3 million awarded to 64 projects, $199.3 million in matching funds.
- Grant size: up to $3 million.
- GHG reduction of 1.3 million metric tons of CO₂ equivalent (MTCO₂e) per year.
- Projects construct anaerobic digesters that capture biogas for use as electricity or renewable compressed natural gas.
- Standalone projects and clusters (hub and spoke projects).
- [https://www.cdfa.ca.gov/oefi/ddrdp/](https://www.cdfa.ca.gov/oefi/ddrdp/)

Alternative Manure Management Program (AMMP)
- Since 2016-17.
- $31.2 million awarded to 57 projects, $5 million in matching funds.
- Grant size: up to $750,000.
- GHG reduction of 142,300 metric tons of CO₂ equivalent (MTCO₂e) per year.
- Projects implement practices such as conversion to dry scrape or solid separation in combination with drying or composting of manure, compost-bedded pack barns and pasture-based practices.
- [https://www.cdfa.ca.gov/oefi/AMMP/](https://www.cdfa.ca.gov/oefi/AMMP/)
DDRDP and AMMP GHG reductions are equivalent to 12% of total manure management GHG emissions.

### FundedProjects

**FLUSH TO SCRAPE CONVERSION**

**COVERED LAGOON ANAEROBIC DIGESTER**

### Funded AMMP Practices

- Compost Bedded Pack Barn: 7%
- Flush-to-Scrape Conversion: 17%
- Solid Separation: 58%
- Combination: 18%

### CA Agricultural GHG Emissions

- DDRDP and AMMP GHG reductions are equivalent to 12% of total manure management GHG emissions.
Current Solicitation and New Technologies

• CDFA appropriated $99 million from Greenhouse Gas Reduction Fund (GGRF) in 2018-19 for DDRDP and AMMP.

• New technologies and practices not currently incentivized by DDRDP and AMMP:
  • Grants up to $1 million: AMMP
  • Grants up to $2 million: DDRDP

• Advancing farmer-to-farmer education and outreach of alternative manure management practices. Up to $250,000 grants.

• 2018-19:
  • DDRDP: 66 applications requesting approximately $101.7 million in funding; 4 demonstration proposals requesting approximately $7 million.
  • AMMP: 91 applications requesting approximately $54.6 million in funding; 5 demonstration proposals requesting approximately $3 million.
Irrigation Water and Energy Savings –
State Water Efficiency and Enhancement Program (SWEEP)

- Since 2014.
- $62.7 million awarded to 614 projects, $40.8 million in matching funds.
- Grant size: up to $100,000.
- GHG reduction of 75,000 metric tons of CO$_2$ equivalent (MTCO$_2$e) per year.
- Water savings estimated at 100,000 acre-feet per year.
Current Solicitation

• CDFA received $20 million through SB 5, the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018.

• Two application periods to award approximately $10 million each.

• 2018-19: over 350 applications requesting approx. $27 million.

• [https://www.cdfa.ca.gov/oefi/sweep/](https://www.cdfa.ca.gov/oefi/sweep/)
Cumulative Impacts

$213.8 million invested in 838 projects.
GHG reduction of $1.5 million MTCO₂e per year – 4.4% of total CA agricultural GHG emissions.

- RCNG from DDRDP: 19,074,860 gallons of gasoline consumed
- Water Savings from SWEEP: 35,991 passenger vehicles driven for one year
- Water Savings from SWEEP: 47,000 Olympic sized swimming pools
- Soil Carbon from HSP: 19,020 acres of U.S. forests in one year
Technical Assistance for Climate Smart Agriculture

• Since 2016-17.
• SWEEP, HSP and AMMP application assistance.
• Funding through USDA-NRCS, Strategic Growth Council, Greenhouse Gas Reduction Fund and Prop 68.
• Competitive grants:
  • Universities’ cooperative extension, Resource Conservation Districts, non-profit organizations
  • Funding for outreach, workshops (optional) and one-on-one assistance (mandatory).
  • Bi- and/or multi-lingual expertise encouraged.
• Grant size: $5,000 in 2016-17, up to $20,000 currently.
Increased Technical Assistance for SWEEP, HSP and AMMP
Technical Assistance for Climate Smart Agriculture – AB 2377

• AB 2377 (2018) requires CDFA to establish a new technical assistance (TA) grant program.
• Assistance to include outreach, education, project planning, application assistance, project implementation and reporting assistance.
• Minimum 5% of funds allocated to HSP, SWEEP and AMMP, up to a maximum of $5 million.
• Grants of up to $100,000 annually for no more than 3 years.
• Prioritize farms and ranches 500 acres or less.
• 25% funds to assist socially disadvantaged farmers and ranchers.
• Annual information sharing between CDFA, TA providers and other key stakeholders.

Under Development
Public Comments (April – May, 2019)
Program Finalized and Released (July 2019)
Awardees Selected (Fall 2019)
THANK YOU!

Questions?
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