CLIMATE SMART AGRICULTURE and HEALTHY SOILS

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California’s Climate Strategy

Reducing Greenhouse Gas Emissions to 40% Below 1990 Levels by 2030

**VISION**

**GOALS**

- 50% reduction in petroleum use in vehicles
- Carbon sequestration in the land base
- Safeguard California
- 50% renewable electricity
- Double energy efficiency savings at existing buildings
- Reduce short-lived climate pollutants
California’s Climate Strategy

IMPLEMENTATION

SCOPING PLAN
- Climate Action Plans
- SLCP Plan
- Forest Carbon Plan

LEGISLATION
- Cap and Trade Regulation
- GGRF Investment Plan
- AB758 Energy Efficiency Plan
- 2040 CA Transportation Plan
- Healthy Soils Action Plan

Other plans/regulations for renewables, efficiency, transportation, fuels

BUILDING BLOCKS
- Partnerships
- Incentives
- Voluntary Action
- Local Action
- Research
- Grants
- Regulations
Climate Smart Agriculture is an integrated approach to achieving greenhouse gas (GHG) reductions while also ensuring food security in the face of climate change.

The concept is defined by three main pillars:

- Sustainably increasing farm productivity and incomes.
- Adapting and building resilience to climate change.
- Reducing/removing greenhouse gas emissions, where possible.

*California’s working lands offer substantial opportunities to reduce GHG emissions while building resilience to maintain our food and economic security.*
California’s Climate Smart Ag Practices

- Soil Carbon Sequestration - Healthy Soils
- Manure Management - Dairy Digester Research and Development
- Water Management - State Water Energy and Enhancement Program (SWEEP)
- Pollinators and Biocontrol - Perennial plantings to support pollinators
- Fine-tuning Fertilizers
- On-farm Renewable Energy - Solar, wind, biomass and digesters
- Agricultural Land Conservation
Milestones: Investments & Achievements

**State Water Efficiency and Enhancement Program (SWEEP):** $20 million invested to improve irrigation practices that save water, reduce energy use and reduce greenhouse gas emissions. An additional $40 million has been allocated through the state’s Green-house Gas Reduction Fund.

**Dairy Digester Research and Development Program:** $12 million invested to develop and install dairy di-gester technology to turn emissions into energy.

**Healthy Soils Initiative:** Governor Brown incorporated this initiative into his most recent budget directing agencies to expedite efforts contributing to soil health and appointing CDFA as lead agency for this effort.
Why Soils?

- Soils are fundamental to farming. Farmers need the right soil, along with the right climate and the right amount of water to produce food and fiber.
Healthy Soils Initiative
An Interagency Plan to Reduce Greenhouse Gases and Improve Drought Resiliency by Innovating Farm and Ranchland Practices.

- **Climate Benefit:** Sequester and Reduce Greenhouse Gases

- **Co-benefits**
  - Increase water retention
  - Improve plant health and yields
  - Reduce sediment erosion and dust
  - Improve water and air quality
  - Improve biological diversity and wildlife habitat
Examples of Practices

Managed Grazing

Field Buffers

Crop Residue, Cover Crop

Compost

Photos: USDA NRCS
Actions for the Healthy Soils Initiative

- Protect and restore soil organic matter in California’s soil
  - Set goals for building soil organic matter
- Identify sustainable and integrated financing opportunities
  - To incentivize voluntary on-farm management practices
  - Governor 2016-17 Budget Proposal Healthy Soils: $20 million
- Provide for research, education and technical support
- Increase governmental efficiencies to enhance soil health on public and private lands
- Promote interagency coordination and collaboration