



California's Healthy Soils Initiative: *Sustaining Soil...Combating Climate Change*



California Environmental Protection Agency
Air Resources Board



An Interagency Plan to Reduce Greenhouse Gases and Improve Drought Resiliency by Innovating Farm and Ranchland Practices

California's Healthy Soils Initiative is a collaboration of state agencies and departments, led by the California Department of Food and Agriculture, to promote the development of healthy soils. A combination of innovative farm and land management practices contribute to building adequate soil organic matter that can increase carbon sequestration and reduce overall greenhouse gases.

Background

California leads the nation in agricultural production in both value and crop diversity – and soils are fundamental for those crops to grow and food production to remain secure. With limited arable land and the effects of ongoing drought, it is critical, now more than ever, that California soils are “healthy” and productive long into the future, resilient to drought and climate change impacts, and continue to produce crop yields that will sustain a growing local and global population.

Benefits of Healthy Soils

- **Improve plant health and yields** –contain important nutrients, that improve plant growth and yields.
- **Improve biological diversity and wildlife habitat** – at least a quarter of the world's biodiversity lives in the soil; healthy soils improve habitats and other natural resources.
- **Reduce sediment erosion and dust** – improve aeration, water infiltration, flood management and resistance to erosion and dust control.



- **Sequester and reduce greenhouse gases** – carbon stored in soil reduces overall greenhouse gas emissions from agriculture.
- **Improve water and air quality** –affects the persistence and biodegradability of pesticides and other inputs.
- **Increase water retention** – healthy soil has the ability to hold up to *20 times* its weight in water.

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Actions

Protect and restore soil organic matter in California's soil.

Working with stakeholders, establish short- and long-term goals for building soil organic matter in California's agricultural and degraded soils.

Identify sustainable and integrated financing opportunities.

Develop and fund incentive and demonstration programs with new and existing resources to promote greenhouse gas reductions, sequester carbon, increase water-holding capacity and increase crop yields, through on-farm management practices (such as cover crops and managed grazing).

Provide for research, education and technical support.

Secure resources to work with academic institutions to develop a user-friendly soil management database to host research findings and practical applications.

Secure funding sources to support a robust scientific research program to support and enhance healthy soils.

Increase governmental efficiencies to enhance soil health on public and private lands.

Increase the generation and use of compost in California to improve soil health, by permitting 100 new composting and anaerobic digestion facilities in California by 2020.

Promote interagency coordination and collaboration

Coordinate agency activities and work across Cabinet to facilitate broader discussions on soil health and climate change. For example, utilizing Healthy Soil Initiative practices to promote increased groundwater supply and quality and working with the Air Resources Board on dust mitigation.

"Taking care of the soil not only helps us grow more food, but it helps us protect the environment.

Simple farming practices, like planting cover crop, adding compost or leaving crop residue instead of tilling, can conserve water, regulate climate, and improve food security for Californians.

Farmers have a critical role in sustaining the soil that can sustain us all."

Don Cameron
Fresno Farmer
Member, State Board of Food & Agriculture

"As the leading agricultural state in the nation, it is important for California's soils to be sustainable and resilient to climate change...in the upcoming year, the Administration will work on several new initiatives to increase carbon in soil and establish long term goals for carbon levels in all California's agricultural soils. CDFA will coordinate this initiative under its existing authority provided by the Environmental Farming Act".

Governor Jerry Brown
2015-15 January Budget

Global Importance

The importance of soil health has state, national and even global impacts, with the United Nations Food and Agriculture recognizing 2015 as the **International Year of Soils**. The United States Department of Food and Agriculture has set **soil health** as a "building block" for climate smart agriculture and forestry. Governor Brown has proposed carbon storage in our working and natural lands as a "pillar" of California's climate strategy, and his Executive Order B-30-15 prioritizes natural resource solutions for climate change adaptation.



2015
International
Year of Soils

To learn more, visit the California Department of Food and Agriculture's Environmental Stewardship website:
<http://www.cdfa.ca.gov/EnvironmentalStewardship/HealthySoils.html>

