Challenges & Opportunities

Climate Change & Agriculture

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**Mission**: CalCAN serves as the voice of sustainable agriculture on climate change policy

**Goal**: To secure resources for agriculture’s climate change solutions
Overview

- Climate impacts on agriculture
- Increasing agricultural resilience to climate change
- Farmer stories
- Investments & policies to support agricultural climate resilience
Drought Impacts

- 400,000 acres fallowed in 2014
- 17,000 agriculture-related jobs lost in the Central Valley in 2014
- Losses in the billions of dollars

[Images of drought impacts in the 1930s and 2014]
Other Climate Impacts

- Reduced chill hours
- New pests & diseases
- Erratic & extreme weather events
- Heat stress for humans & livestock

Reduced yields
Climate Resilient Agriculture

- **Soil building**
  (compost, manure, cover crops)

- **Wildlife habitat**
  (agroforestry, hedgerows, riparian planting)

- **On-farm renewable energy**
  (bioenergy, biochar from agricultural waste)

- **Water & energy conservation**
  (irrigation efficiency, catchment, soil moisture monitoring)
Multiple Benefits

- **Soil building**
  - Improved water and air quality
  - Sequester carbon in soils

- **Wildlife habitat**
  - Sequester carbon in woody plants
  - Habitat for pollinators and beneficial insects; improved riparian health

- **On-farm renewable energy**
  - Energy independence
  - Savings for growers

- **Water & energy conservation**
  - Savings for growers
  - Drought resilience
Protecting Farmland

UC Davis case study in Yolo County:
Urban land emits 70x more greenhouse gases than farmland

Co-benefits of farmland conservation:
- Food security
- Rural economic vitality and jobs
- Wildlife habitat
- Water catchment
Farmer Stories

Joe & Julie Morris (San Juan Bautista)

• Use intensive grazing and adaptive management strategies

• Have been testing soil carbon for five years

• Recently results indicate a 7-11% increase in soil carbon up to a depth of 6-12 inches, even during past three drought years
Fetzer Vineyard (Mendocino)

- Produce compost from crush waste
- Plant cover crops
- Efficient irrigation; ponds for catchment
- Protect wildlife habitat
- Solar energy on winery: Reduced GHG emissions by 1,500 tons/year
- Reduced wine bottle weight by 17%; reduced GHGs by 3,000 tons
Farmer Stories
Investing in Agricultural Climate Solutions

To unleash the potential of agriculture, we need:

- On-farm demonstration projects & research
- Technical assistance
- Research
- Incentives for growers
- Farmland conservation
California Climate Policy

Global Warming Solutions Act of 2006 (AB 32)

- Establishes an ambitious GHG emissions reduction goal
- Includes a cap-and-trade program
- Largest emitters of GHGs must pay into a fund used to incentivize voluntary emissions reductions

Higher 2030 and 2050 targets are being debated now. We cannot reach these goals without agriculture.
2015 Inaugural Address:
“We must manage farms and rangelands...so they can store carbon.”

Healthy Soils Initiative:
“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 new initiatives to increase carbon in soil and establish long term goals for carbon levels in all California’s agricultural soils.”
Greenhouse Gas Reduction Fund

2014-15 Budget:

Total allocated = $832 million

Total for agriculture = $30 million

Farmland conservation = $5 million

Water conservation = $10 million

Bioenergy projects = $15 million
SB 367

Introduced by Senator Lois Wolk
Co-sponsored by CalCAN and CAFF

The bill would:

• Authorize CDFA to fund on-farm demonstration projects
• Allocate Greenhouse Gas Reduction Funds in 2015-16:
  • Farmland conservation = $20 million
  • On-farm demonstration projects = $50 million

For more information: www.calclimateag.org/sb-367
Thanks!

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