CLIMATE SMART AGRICULTURE IN CDFA

5th S3 Symposium
May 12, 2017
Long Beach California, California

Amrith (Ami) Gunasekara, PhD.
Science Advisor to the Secretary
Manager, Office of Environmental Farming and Innovation (OEFI)
CALIFORNIA & THE NETHERLANDS
CLIMATE SMART AGRICULTURE

S3 SAFE · SECURE · SUSTAINABLE
LONG BEACH
Three main objectives:

1. Sustainably increasing agricultural productivity and incomes (Sustainability)

2. Adapting and building resilience to climate change (Food Security and Safe Food Production)

3. Reducing and/or removing greenhouse gas emissions (Sustainability)
SUSTAINABILITY

Protection and enhancement of carbon in soils = Long terms agricultural sustainability in CA

https://www.weather.gov
The Healthy Soils Incentive Program

Incentives = $7.5 million

Demonstration Projects

COMET-Planner estimates for the addition of seasonal cover crops to annual cropland represent the impacts of increased carbon inputs from crop residues on soil carbon stocks.

COMET-Planner Practice Information
COMET-Planner estimates for conservation cover planting are constructed from the scenario of converting strips of conventionally managed cropland to permanent unfertilized herbaceous cover. Impacts on greenhouse gases include changes in soil organic matter carbon due to cessation of tillage and increased carbon inputs from plant residues, and decreased nitrous oxide emissions from synthetic fertilizer.

Webinar: Challenges and Opportunities for Soil Management in Climate Change Adaptation and Mitigation.
February 14, 2017 • 9 – 11 a.m. PST (California) • 6 – 8 p.m. CET (Netherlands)
State Water Efficiency Enhancement Program

Incentives = $67 million
$1000/acre for technology
Incentives = $12 million + Part of $50 million in 2016
The Alternative Manure Management Program (AMMP) will be developed and implemented by CDFA to support non-digester dairy methane reduction practices. CDFA will allocate $9-16 million from the total $50 million appropriation as incentives to support project development to support the AMMP objective.

Incentives = Part of $50 million in 2016
Agricultural Land Conservation Strategies and Outcomes – Grants to counties, cities, and partners to design and implement a local or regional agricultural land conservation strategy that results in an outcome that reduces GHG emissions through the long-term protection of agricultural lands under threat of conversion by promoting regional growth within discrete boundaries.

Agricultural Conservation Easements – Grants to protect important agricultural lands under threat of conversion via permanent agricultural conservation easements.
SECURE (FOOD SECURITY)

- Leads the nations in 90 commodities (defined as sole producer of 99.9% of the crop in the U.S.)
- 77,500 farms - $47.1 billion in output (2016 data)
- Year-round production in some regions; lemons, artichokes, avocados, broccoli, cabbage, carrots, cauliflower, celery, lettuce, mushrooms, potatoes, spinach, squash
- Most “Specialty Crops” in the nation and defined as - “fruits and vegetables, tree nuts, dried fruits, horticulture and nursery crops (including floriculture)” according to USDA Agricultural Marketing Services

Data Source: 2014 Annual Crop Report by USDA NASS
We moved from Wisconsin and love it here.

Dairy industry is the #1 commodity group in California.
U.S. 2014 Billion-Dollar Weather and Climate Disasters

- Rockies/Midwest/Eastern Severe Weather, May 18–23
- Michigan and Northeast Flooding, August 11–13
- Midwest/Southeast/Northeast Winter Storm, January 5–8
- Midwest/Southeast/Northeast Tornadoes and Flooding, April 27–May 1
- Western Drought, Historic in California, Entire Year
- Rockies/Plains Severe Weather, September 29–October 2
- Plains Severe Weather, June 3–5
- South/Plains Severe Weather, April 2–3

This map denotes the approximate location for each of the eight billion-dollar weather and climate disasters that impacted the United States during 2014.
SAFE (FOOD SAFETY)

Data Source: 2014 Annual Crop Report by USDA NASS
THANK YOU FOR THE INVITATION AND YOUR ATTENTION

Amrith.gunasekara@cdfa.ca.gov

https://www.cdfa.ca.gov/oefi/