

A Sustainable Agriculture Perspective on the California Carbon Market

Fundamental principles to guide the California carbon market

1. Take a whole farm approach
2. Consider economic and agronomic benefits in addition to GHG emissions
3. Prioritize health and environmental co-benefits to California
4. Create a transparent and accountable marketplace
5. Practitioners should be the beneficiaries of offset credits
6. Level the playing field for early adopters and small and mid-scale producers

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In 2006, the Global Warming Solutions Act (AB 32) directed the California Air Resources Board (CARB) to develop mechanisms for limiting the state's greenhouse gas (GHG) emissions to 1990 levels by the year 2020. CARB determined that implementation of a cap-and-trade system was one tool to achieve approximately 20 percent of these reductions.

Under cap-and-trade, farmers and ranchers from throughout North America will have opportunities to create and trade carbon offsets (also known as offset credits) in the California carbon market. Farmers and ranchers wishing to participate in the carbon market will have to carry out eligible GHG emission reduction projects that meet the criteria described in offset protocols approved by CARB. It is likely that one or two new agriculture-related protocols will be approved each year following the launch of California's cap-and-trade program in January 2012.

A sustainable agriculture viewpoint

The California Climate and Agriculture Network (CalCAN) is a coalition of the state's leading organic and sustainable agriculture organizations, formed to be the voice of sustainable agriculture on California climate policy. We came together out of concern that agriculture, dependent on weather and natural resources, is uniquely vulnerable to climate change and has much to lose if the worst impacts of a changing climate are not avoided.

We also understand that agriculture can significantly contribute to reducing its emissions and sequestering carbon dioxide, particularly provided with adequate incentives and resources. CalCAN recognizes a potential role for the carbon market if designed to achieve maximum GHG reductions that result in real, verifiable GHG emissions reductions that do not unintentionally result in greater GHG emissions elsewhere.

Furthermore, it is essential that the carbon market not cause disadvantages to either farmers and ranchers who are early adopters of conservation measures or small and mid-size producers. In addition, public health and environmental benefits should be considered in the design of the carbon market along with climate benefits. And, finally, the California carbon market should be transparent, and its participants should be accountable for delivering the GHG emission reductions for which they are provided offsets.

Here we outline principles that we argue should guide the development of the California carbon market vis-à-vis agriculture.

6 Principles to guide the California Carbon Market

Principle #1: Take a whole farm approach

In complex biological systems such as agriculture, GHG emission can be displaced and other unintentional negative impacts can be caused if whole farming systems are not considered in the design of offset protocols. The marketplace tends toward simplified approaches to agricultural GHG mitigation, rewarding single practices rather than assessing and rewarding whole farming system approaches. Altering certain agricultural management practices to reduce GHG emissions may lead to changes in management practices elsewhere on the farm or ranch that could cause greater, unintended GHG emissions.

Recommendation: To minimize the chance that agricultural protocols will fail to account for displaced GHG emissions within agricultural operations, only offset protocols that account for the full life cycle impacts of the farming practices incentivized by the protocols should be developed and adopted. To take advantage of synergies within farming systems and to avoid missing opportunities for greater emissions reductions, agriculture protocols should be based on science that examines whole farm systems and when possible should be designed to reward suites of practices rather than isolated single practices.



Principle #2: Consider economic and agronomic benefits in addition to GHG emissions

AB 32 explicitly states the market mechanisms used to achieve GHG emissions reductions must “maximize additional environmental and economic benefits for California.”¹ In agriculture, ensuring economic sustainability and viability is essential to California’s food security and ability to continue to produce the majority of the country’s fruits, vegetables, nuts and dairy products. When developing agriculture protocols, priority should be given to practices that have climate benefits and have economic value for producers.

Importantly, focusing on soil health and soil building is essential to ensure the long-term productivity and agronomic sustainability of farmland. Isolated practices associated with reductions in GHG emissions (e.g., changing the timing or placement of synthetic nitrogen fertilizer to decrease nitrous oxide emissions) may not necessarily be those that build healthy soil. Increasing the organic matter in soil is the foundation on which California farms will be increasingly dependent for resilience to the expected impacts of climate change. Soils with high organic content sequester more carbon. They are more fertile, and they absorb and retain more water which increases water use efficiency and storage and reduces runoff and erosion.

Recommendation: Consideration should be given to protocol development that incorporates weighted values for practices that address economic and agronomic benefits such as soil building in addition to GHG emission reductions or carbon sequestration.

¹ AB 32. Global Warming Solutions Act of 2006. Section 38570 (b)(3).

Principle #3: Prioritize health and environmental co-benefits to California

Many of the agricultural activities associated with reduced GHG emissions and/or carbon sequestration also have additional environmental and health benefits such as improved air and water quality. Practices with multiple environmental and health benefits should be prioritized. In addition, by structuring the offset credit market to prioritize the sale of credits available in California—and there are plenty of opportunities in state to supply sufficient credits—those additional environmental and health benefits will accrue here in the state.



Recommendation: In agriculture protocols, consideration should be given to using weighted criteria to reward the use of practices that have both climate benefits and other environmental and health benefits.

We also urge the design of a mechanism that gives priority or greater weight to offset credits from California agriculture compared to credits from other states and countries. Implementing a price signal that encourages carbon credit purchases from within California, or establishing a minimum in-state purchase requirement, could provide not only GHG emissions reductions, but could also potentially provide a host of co-benefits, including improved water quality from reduced nitrogen fertilizer use and greater efficiency in water use through cover-cropping and irrigation management.

Principle #4: Create a transparent and accountable marketplace

The creation of a new carbon market will inevitably lead to the proliferation of third-party offset credit verifiers and aggregators, all seeking to work with farmers and ranchers on offset credit projects. It is incumbent upon the state of California to develop clear and transparent rules for this new market to avoid unfair contract terms for the farmers and ranchers who will be responsible for delivering GHG emission reductions.

Recommendation: Standards must be created for offset credit contracts with third party participants, making that information readily accessible online and in paper form to farmers and ranchers. Farmers and ranchers should be able to easily compare the contract terms across offset credit aggregators and verifiers.

CARB should have an office, website and guidebooks that answer questions from farmers and ranchers about entering into offset credit contracts. Farmers and ranchers should also be able to file complaints about offset credit aggregators and verifiers with CARB, which should be responsible for investigating and addressing any problematic activity by aggregators or verifiers.

Principle #5: Practitioners should be the beneficiaries of offset credits

Farmers and ranchers who take on the risk of adopting the practices required for the offset protocols should be the financial beneficiaries of the credit, regardless of whether or not they own or lease their land.

Recommendation: In cases of farmers and ranchers who lease their land, they must be given the opportunity to demonstrate their ability to maintain control of the land during the period of the offset credit project. The Natural Resource Conservation Service of USDA can provide examples of how it handles multi-year contracts for conservation practices conducted by farmers and ranchers who lease their land.

Principle #6: Level the playing field for early adopters and small and mid-scale producers

Small and mid-scale agricultural producers, because of the size or nature of their operation, may find that they alone do not qualify for a sufficient number of offset credits to make the project application and verification process worthwhile. Such producers, who must compete on price for their commodities with larger competitors who may benefit financially from new revenues derived from carbon credit sales, may be subject to new unfair market conditions inadvertently created by the carbon market.

Moreover, the additionality criteria for offset protocols limits projects to those that would not have occurred without the carbon market incentive, which may result in unintended consequences. Farmers and ranchers currently using on-farm conservation practices with climate benefits may temporarily halt these practices, or may delay implementation, in order to qualify for offset credits in the future, creating a perverse incentive that could lead to short-term increases in GHG emissions and false gains in the long term. To avoid this and to reward those who have adopted beneficial conservation practices, the state must take action to support long-term maintenance and enhancement of on-going agricultural conservation efforts.

Recommendation: Consideration should be given to non-market based mechanisms—including a state-funded agriculture conservation program— that support the following two important potential contributors to climate change mitigation:

- a. Innovative, conservation-oriented small and mid-scale farmers and ranchers who provide climate change mitigation benefits in California, but who may not be eligible for, or derive sufficient value from, participating in the carbon market application and verification process.
- b. Long-time practitioners of agricultural conservation measures who cannot meet the additionality requirements, but provide climate benefits.

To make this possible, a portion of revenue from the auctioning of allowances should be designated for state



agricultural research, technical assistance for California producers and financial incentives for the state's farmers and ranchers for climate mitigation and adaptation activities, separate from and in addition to the carbon market. When designing the criteria for

allocating these resources, care must be taken to ensure that access for small and mid-scale agricultural producers is protected and that sufficient resources are directed toward research on organic and other whole farm systems approaches.



About CalCAN

The California Climate and Agriculture Network (CalCAN) is a coalition of California's leading sustainable agriculture organizations advocating for policy solutions on climate change and agriculture. We cultivate farmer leadership to face the challenges of climate change and to serve as California's sustainable agriculture voice on climate change policy.

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