

**Agriculture and Land-Based Training Association
California Certified Organic Farmers (CCOF)
California Climate & Agriculture Network
Center for Food Safety
Community Alliance with Family Farmers
Dixon Ridge Farms
Earthbound Farm
Ecological Farming Association
Full Belly Farm
Hedgerow Farms
Marin Organic
National Center for Appropriate Technology
Occidental Arts & Ecology Center
Organic Farming Research Foundation
SAGE
Wild Farm Alliance**

December 15, 2010

California Air Resources Board
1001 "I" Street,
Sacramento, CA 95812

Re: Cap and Trade Final Regulation

Dear Chairman Nichols and Members of the Air Resources Board,

On behalf of the organizations and businesses listed, we welcome the opportunity to comment on CARB's cap and trade final draft regulation. California is leading the country in addressing climate change and supporting a transformation to a clean energy economy. However, the cap and trade regulation, as written, represents a missed opportunity in achieving climate solutions in one of the state's leading economic sectors – agriculture.

California agriculture is the most diverse and productive agricultural system in the United States. The state's farms and ranches supply nearly 50 percent of the country's fruits, nuts and vegetables and California is the top producer of dairy products. A \$35 billion dollar industry, California agriculture covers over a quarter of the state's land mass and accounts for 80 percent of the state's developed water use. The future of California agriculture is, thus, not only of state significance, but has national implications as well.

That's why climate change scenarios for the state's agriculture are of state and national concern. Climate change models suggest that by 2050 California will experience extreme water shortages. Increases in temperature threaten to reduce crop yields and more extreme weather events, like increased heat waves, flooding and droughts, could significantly hamper agricultural production. Agriculture has much to lose if climate change is not addressed and the worst impacts averted.

Investments in research, technical assistance and financial incentives are urgently needed to help meet the goals of AB 32, reduce GHG emissions in agriculture, sequester atmospheric carbon in our agricultural lands, and keep California farmers on the land.

CARB can help California agriculture meet the challenges of climate change by doing the following:

- Include in the final cap and trade regulation CARB's recommendations to the legislature on how allowance revenue can help meet the state's climate change goals, including allocating a portion of allowance revenue to support climate change mitigation and adaptation activities in agriculture.
- Establish strong guidelines for agricultural offsets that will provide real reductions in greenhouse gas emissions, focused on whole farm systems, and create a system that provides the greatest benefits to California.

CARB Advisory Committees Recommend Investments in GHG Emissions Strategies in Agriculture

In 2008, as part of the AB 32 Scoping Plan, the Agriculture Climate Action Team (AgCAT) and the Economic and Technology Advancement Advisory Committee (ETAAC) reviewed agricultural practices that may reduce GHG emissions and sequester atmospheric carbon in soils and woody biomass¹. They found that through a variety of practices California agriculture may reduce GHG emissions between 9.1 to 16.7 MMTCOe.

Many of the mitigation practices identified by AgCAT and ETAAC may also provide additional environmental benefits such as improved air and water quality, water conservation and enhanced wildlife habitat.

The AgCAT and ETAAC recommended funding additional research, technical assistance and financial incentives to achieve GHG emission reductions in California agriculture. The ETAAC report noted:

While the carbon cycle returns the majority of this carbon to the atmosphere, sequestering a portion of this carbon or converting it into renewable energy, fuels or permanent products, would translate into a significant reduction of California's carbon footprint. Thus, the agricultural sector also offers the opportunity to reduce GHG emission reductions through the capture of carbon and/or production of renewable low-carbon fuels. Other specific farm-related GHG emission sources can also be controlled and mitigated. Yet a concerted research, development and demonstration (RD&D) effort and new regulatory incentives and programs will be needed to meet the GHG emission reduction goals in AB 32². (emphasis added)

In their final report to the Governor, the Economic and Allocation Advisory Committee also recommended investing a portion of allowance revenue in biological carbon sequestration activities in agriculture and forestry³.

These recommendations are echoed at the regional level. The Western Climate Initiative Partners suggest that one of the public purposes of allowance revenue could be promoting emission reductions and sequestration in agriculture⁴.

¹ Agriculture Climate Action Team. December 2008. Agriculture Sector Write-Up for Public Distribution. AB 32 Scoping Plan.

http://climatechange.ca.gov/climate_action_team/reports/CAT_subgroup_reports/Ag_Sector_Summary_and_Analysis.pdf

ETAAC. February 11, 2008. Recommendations of the Economic and Technology Advancement Advisory Committee (ETAAC). Final Report. A Report to the California Air Resources Board. Chair: Alan Lloyd Vice Chair: Bob Epstein. <http://www.arb.ca.gov/cc/etaac/ETAACFinalReport2-11-08.pdf>

² Page 6-1. ETAAC report. 2008.

³ See pages 33, 54 & 55. EAAC. March 2010. Allocating Emissions Allowances under a California Cap-and-Trade Program. http://www.climatechange.ca.gov/eaac/documents/eaac_reports/2010-03-22_EAAC_Allocation_Report_Final.pdf

⁴ AB 32 Scoping Plan. December 2008. Appendix D: September 23, 2008. WCI Design Recommendations (page 7).

Carbon Market Cannot Fulfill the Needs of Agriculture in Addressing Climate Change

We cannot rely entirely on future carbon markets to achieve GHG emission reductions in agriculture. The marketplace lacks adequate funding for research to understand opportunities within farming systems to achieve GHG emission reduction. Translating research findings into real opportunities for California agriculture to provide voluntary GHG reductions requires technical assistance. And, in some cases, when transition costs may be high, financial incentives for farmers and ranchers are essential. Allowance revenue can turn research into opportunities for agricultural activities to help meet the state's GHG emissions targets and help farmers and ranchers adapt to climate change.

Communicating with the Legislature

The cap and trade regulation provides an important opportunity for CARB to communicate with the legislature on how allowance revenue may be used to further the state's climate change goals. The EAAC committee report provides a strong basis for these recommendations. We strongly encourage CARB to include agricultural mitigation and adaptation activities within the scope of allowance revenue funding areas.

Rewarding California Farmers and Ranchers for Emissions Reductions

To the extent that agricultural offset credits are used in the California cap and trade program they should be based on the following principles:

1. Whole Farm Systems. In biological systems such as agriculture, altering one practice to reduce GHG emissions may lead to the unintended consequence of increasing GHG emissions elsewhere in the system. Considering agricultural practices as integrated parts of the whole farming or ranching system will provide a more complete picture of an operation's carbon footprint and the opportunities within it to reduce GHG emissions and sequester carbon.

For example, current USDA research⁵ on grain cropping systems in Maryland finds that when comparing organic, no-till and conventional tillage agricultural production systems, the total carbon footprint of the organic system is lower than the no-till and conventional tillage production systems. While the organic system, in some years, had higher NO₂ emissions compared to the no-till and conventional tillage systems, those periodically higher NO₂ emissions were offset by lower overall CO₂ and CH₄ emissions. This research provides one example of the imperative to consider the entire farming system in order to accurately assess and manifest the opportunities within agriculture to provide real and significant GHG emissions reductions.

All agricultural offset protocols developed by CARB should account for the carbon footprint of the whole farm or ranch production system.

2. Farmers and ranchers should receive the greatest financial reward from offset credits. For agricultural offset credits to provide real incentives for agricultural conservation practices that provide reductions in GHG emissions, farmers and ranchers must receive the greatest benefit possible. Currently, the carbon offset market is largely unregulated and farmers and ranchers may find themselves entering into offset credit contracts that do not adequately compensate them for their change in agricultural practices. Third party offset credit aggregators must be regulated to provide a fair share of the credit value to the producers providing the emissions reductions. To that end, CARB should establish contracting rules for offset credits that provide transparency and allow farmers and ranchers to compare contract terms across third-party aggregators.

3. Agricultural offset credits should come from California. Agricultural practices that reduce GHG emissions can provide multiple environmental and health benefits, including improved air and water quality and enhanced wildlife habitat. Offset credits should be limited to California to realize the co-benefits of these activities.

⁵ For more on the USDA research findings, see <http://www.extension.org/article/30850>

4. Transparency. All credited offset projects should be made available in a searchable, online database.

In summary, the cap and trade regulation provides an important opportunity for CARB to communicate with the legislature about the significance of allowance revenue in helping to meet the state's climate change goals. We strongly encourage CARB to include in its allowance revenue recommendations allocation of a portion of allowance revenue to support climate change mitigation and adaptation activities in agriculture. Additionally, we support establishing strong guidelines for agricultural offsets that will provide real reductions in GHG emissions, focused on whole farm systems, and create a system that provides the greatest benefits to California.

Sincerely,

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Full Belly Farm

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Hedgerow Farms

Helge Hellberg
Executive Director
Marin Organic

Rex Dufour
National Center for Appropriate Technology

Dave Henson
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