CalCAN
California Climate & Agriculture Network

"Climate change could be a huge threat to the future of California agriculture. It will be best if farmers are actively involved in designing solutions."

— Judith Redmond,
Full Belly Farm

"California is a leader on climate policy and sustainable agriculture. I want to figure out how our ranches can contribute to both."

— David Gates,
Ridge Vineyards, Inc.

What Does California Climate Legislation Have to Do with Agriculture?

THE SCIENCE AND POLITICS OF CLIMATE CHANGE are complex, dynamic and sometimes confusing. The issue touches on every aspect of our lives — including food and farming. Farmers and ranchers with a basic understanding of current climate science and policy and the implications for agriculture will be better positioned to make good business decisions, and to influence policy outcomes. For example, if properly designed, existing California climate change legislation could offer opportunities for California's farmers and ranchers to be rewarded for climate-friendly agricultural practices.

How will climate change impact California agriculture?

California agriculture is uniquely vulnerable to climate change because of its dependence on weather and the availability of natural resources, especially water. Unless the worst impacts of climate change are avoided, California agriculture will face challenging conditions in the coming years and decades. State climate change science suggests that California agriculture will experience a number of challenges, including:

- ✔ Severe water shortages
- ✔ Changing weed, disease and pest pressures
- ✔ Increased animal diseases
- ✔ Loss of winter chill hours for grapes, fruit and nut tree crops
- ✔ Increasing intensity and frequency of extreme weather events

An April 2010 report[1] from the Climate Action Team, made up of 16 state agencies, found that "the agricultural sector stands to lose the most under a business-as-usual scenario — up to $3 billion per year by 2050, compared to $1.5 billion if action is taken (to reduce greenhouse gas emissions)." A 2007 study found that decreased water availability alone could produce losses of up to $1,700 an acre[2] in California.

Much is at stake. California is the fifth largest producer of food in the world. California's 75,000 farms and ranches generate revenues of nearly $37 billion a year from more than 400 different crops. Adapting to climate change will require innovation, leadership, research and financial investments.

How can farmers and ranchers help to slow down climate change?

Agriculture can be part of the climate solution. Many agricultural practices offer climate benefits by reducing greenhouse gas emissions, and by storing (or sequestering) atmospheric carbon in soils and woody plants. Some of the practices with the greatest potential for addressing climate change include:

- ✔ Improving on-farm water and energy efficiency
- ✔ Producing on-farm renewable energy
- ✔ Reduced synthetic fertilizer inputs and increased organic amendments
- ✔ Manure management that reduces and/or captures methane emissions
- ✔ Planting perennial crops, trees, hedgerows
- ✔ Rotational livestock grazing
- ✔ Use of cover crops
- ✔ Conservation tillage
- ✔ Organic soil management
- ✔ Farmland preservation

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"Climate change (or maybe more accurately 'climate weirdness') is real. We are already seeing the effects in the increase of unusual weather events in our orchards. California agriculture has much to lose if we do not act now to reverse this trend. With a few simple changes in our farming practices, we can make great strides toward ensuring a more secure future. The future of our industry depends on our actions."

— Russ Lester,
Dixon Ridge Farms

"I don't think the American public has gripped in its gut what could happen [with climate change]. We're looking at a scenario where there's no more agriculture in California."

— Steven Chu,
Secretary of Energy for the
Obama Administration

What is AB 32?

In 2006, California passed the country's most comprehensive climate bill, known as the Global Warming Solutions Act, or Assembly Bill 32. AB 32 requires California to reduce its greenhouse gas (GHG) emissions to 1990 levels by the year 2020 — a reduction of 20 to 30 percent. It also requires the state to put in place a cap-and-trade system by the beginning of 2012. The largest industrial emitters of carbon dioxide will have caps on their GHG emissions. They will receive, buy or trade permits to emit GHGs up to their assigned cap. The sales of permits by the State of California may generate revenue that state can use to invest in activities that help reduce GHGs. The design of this program is currently underway.

Implementing AB 32 will help California avoid the environmental, social, and economic impacts projected to result from unabated climate change, estimated to cost tens of billions of dollars annually[3].

How will AB 32 impact farmers and ranchers?

California farmers and ranchers will not have caps placed on their GHG emissions, and they will not have any regulatory burdens for reporting emissions. AB 32 regulation will increase the cost of energy, fuel, and perhaps other inputs, but the amount is unknown because many details have not been decided upon. To offset increased costs, farmers and ranchers can increase water and energy efficiency, produce renewable energy, and use cost containment measures. Some may also take part in selling credits in a carbon market. Also, AB 32 may establish an investment fund that could provide incentives for agricultural practices that mitigate climate change.

What is the California Climate & Agriculture Network?

The California Climate and Agriculture Network (CalCAN) and its allies are working to ensure that a portion of the revenue generated by an AB 32 cap-and-trade system is invested in research, technical assistance and financial incentives for agricultural practices that provide climate benefits. Many climate-friendly agricultural practices also improve air and water quality, increase biodiversity and wildlife habitat, and reduce soil erosion. We make the case that farmers and ranchers should be rewarded for their practices that provide climate and other environmental benefits.

How can California farmers get involved in policy?

Good policy can create financial incentives for voluntarily reducing GHGs and sequestering carbon on farms and ranches. California farmers will need research, technical and financial support for adapting to the coming climate changes and contributing to climate solutions.

Now is the time for California farmers and ranchers to influence the implementation of AB 32. The design of several key AB 32 programs is already underway. To ensure that the interests of California agriculture are represented, the voices of farmers must be heard.

To get involved with the California Climate and Agriculture Network (CalCAN) — the voice of sustainable agriculture in California climate policy — contact us at: www.calclimateag.org
(916) 441-4042 or (707) 823-8278 or e-mail info@calclimateag.org ■

Threat to AB 32

Proposition 23 will be on the November 2010 ballot. If passed, it would suspend the implementation of AB 32 until the unemployment rate reaches 5.5% or less for one year. This will create a great deal of regulatory uncertainty, and freeze innovations and investments in green technology, climate-friendly farming techniques, and energy efficiency. Prop 23 is funded by two Texas-based oil companies.

There are hundreds of bipartisan opponents of Prop 23, including businesses, labor, and environmental and public health organizations. For more information on the No on Prop 23 campaign, see: http://www.stopdirtyenergyprop.com

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1 Climate Action Team Biennial Report. April 2010.
http://www.energy.ca.gov/2010publications/CAT-1000-2010-004/CAT-1000-2010-004.PDF

2 Schlenker, W., W.M. Hanemann, A.C. Fisher. 2007. Water availability, degree days, and the potential impact of climate change on irrigated agriculture in California. Climatic Change. 81:19-38.

3 California Climate Action Team Biennial Report, March 2009.
http://www.energy.ca.gov/2009publications/CAT-1000-2009-003/CAT-1000-2009-003-D.PDF.