

**Comment 1 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Jeanne

Last Name: Michaels

Email Address: jeannemic@comline.com

Affiliation:

Subject: Rice

Comment:

In drought conditions, perennially, California should not be growing rice which is a water intensive product. Cotton?

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-04 12:02:18

No Duplicates.

**Comment 2 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: James

Last Name: Miller

Email Address: jrsmiller@yahoo.com

Affiliation:

Subject: No Till farming

Comment:

The open field burning rules need to be strictly enforced and no till farming more strictly enforced.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-07 17:18:53

No Duplicates.

**Comment 3 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Andrew

Last Name: Fynn

Email Address: [andrew@marincarbonproject.org](mailto:andrew@marincarbonproject.org)

Affiliation: Marin Carbon Project

Subject: Rangeland soil carbon sequestration

Comment:

Please see attached word document for comments on behalf of the Marin Carbon Project. Thanks.

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/3-marin\\_carbon\\_project\\_comments\\_on\\_dsp.doc](http://www.arb.ca.gov/lists/sp-agriculture-ws/3-marin_carbon_project_comments_on_dsp.doc)

Original File Name: Marin Carbon Project comments on DSP.doc

Date and Time Comment Was Submitted: 2008-07-15 11:09:50

No Duplicates.

**Comment 4 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Rebecca

Last Name: Overmyer-Velazquez

Email Address: rovermyer@whittier.edu

Affiliation:

Subject: Agriculture is very polluting

Comment:

Large-scale intensive agricultural run-off and air pollution contributes a huge amount of the total pollution in the U.S. CARB needs to take the lead in changing the way we farm, moving away from unsustainable practices towards truly sustainable agriculture. But this means taking the problems of massive usage of chemical inputs and water really seriously. "Encouraging" efficiency measures is not enough: CARB needs to mandate and regulate good stewardship of our land, air, and water. The research being done on sustainable agriculture is impressive (see, e.g., Sustainable Agriculture and Rural Livelihoods International Institute for Environment and Development) and should not be overlooked as you write the final plan.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-15 12:03:04

No Duplicates.

## **Comment 5 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Danila

Last Name: Oder

Email Address: dodder@usc.edu

Affiliation:

Subject: General comments and Agriculture

Comment:

General:

1. To get the public on board with both the increase in government bureaucracy and the additional fees and taxes necessitated by the multifaceted task of reducing GHG, the public has to know through transparency of allocation that all funds collected will be applied to these programs. If there was ever a case for a lock box, this is it.

2. I entirely oppose cap and trade program. Direct taxation is much easier to implement, gives returns in the short-term, is transparent, understandable to the public, not susceptible to market manipulation or phony offsets, and returns the funds directly for GHG reduction programs. Cap and trade is complicated, long-term and siphons off funds to market manipulators. It has already been proven to fail at reducing GHG. We cannot afford to trust this historic opportunity to reconfigure our economy to this failed strategy.

3. As a general principle, the Draft Scoping Plan should include suggestions on steps that should be taken now in order to facilitate GHG reductions that will be quantified in future editions. Funding is necessary in anticipation of results that will only appear later.

Agriculture:

1. Organically grown crops have significantly lower GHG emissions than conventionally grown crops, from non-use of nitrate fertilizers, the sequestration of carbon in the soil and other means. But converting a significant percentage of California farms to organic production takes time, as farmers experiment with new methods and possibly new crops, and in my opinion is a medium-term goal. Conversion requires technical assistance to farmers, additional inspection, and most importantly, marketing assistance.

Will the new (organic) production will be marketed as organic, or not? If it is, Public Outreach should design a marketing campaign "Buy California organic: it's the new standard." Even direct payments to farmers during the transition period may not be enough to keep them organic if customers are confused by finding more organic (and more expensive) and fewer conventional crops in their stores. Customers in that case may choose cheaper imported conventional crops.

The trend elsewhere to relocalizing produce production in urban areas (to save transportation-related GHG) will decrease the market for long-distance shipment of conventionally grown California produce, and give California farmers an additional incentive to try organic farming if the products can be sold at a higher price in California.

Funding should be mentioned in the Draft Scoping Plan now to assist farmers in converting to organic, to increase organic agriculture training at state universities, to offer agricultural training as vocational education at all California high schools, and to encourage new farmers to start organic farms in urban and suburban areas.

2. Locally produced flowers. Cut flowers are mostly imported into the US by airplane, and in-state production may represent a small GHG reduction opportunity.

3. Hemp. Hemp or kenaf grown in California for paper can replace timber cut for paper in Washington and Oregon. Can this kind of regional shifting be included?

4. Regarding the Sierra Club's suggestion of a carbon tax on bovine food products because of significant methane emissions from bovine digestion, I'd like to support it but I think people will resent it. Subsidized food, especially animal products, is one of Americans' most cherished privileges, available to poor and rich alike. This tax has to be applied on the federal level for broad acceptance.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-17 13:39:46

No Duplicates.

**Comment 6 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Alexander  
Last Name: Clayton  
Email Address: AlexRClayton@gmail.com  
Affiliation:

Subject: Methane Capture/Reduction  
Comment:

While I am encouraged that the ARB is looking into the agricultural sector with regard to reducing GHG emissions, I am disappointed with the low expectations for agriculture, particularly the scoping plan, which only mentions one potential ton reduction from methane capture at large dairies. It has been proven worldwide that GHG emissions from livestock are even greater than those from transportation. I have personally bought annual carbon offsets for my car, half of them coming from wind and the other half from methane capture at manure lagoons, so there is no question that "recycling" methane to keep it out of the atmosphere and use it for energy needs is already being done. We need to encourage it further.

Additionally, many in the know are aware of the significant methane emissions from bovine digestion, which raises the question of whether a carbon tax should be applied to cow products, such as beef and milk.

ARB needs to push harder in this area, which is ripe for reducing GHG emissions and closing the loop on the bovine cycle, thus creating a more sustainable environment.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-17 17:33:39

No Duplicates.

**Comment 7 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

This comment was posted then deleted because it was unrelated to the Workshop item or it was a duplicate.



**Comment 8 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Chris

Last Name: Fitz

Email Address: cfitz@mclw.org

Affiliation: LandWatch Monterey County

Subject: Agriculture

Comment:

Agriculture

Emission reductions for agriculture are voluntary. Increased water efficiency, greater reliance on organic farming and reduced use of petroleum based pesticides and fertilizers are areas that should be addressed by the agricultural sector. Additionally, enforceable emission reductions should be required of this sector.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-30 07:47:33

No Duplicates.

## **Comment 9 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Edward

Last Name: Mainland

Email Address: emainland@comcast.net

Affiliation: Sierra Club California

Subject: Ideas for Strengthening Agriculture Section, Socping Plan

Comment:

- The Plan's Agriculture Section (p. 35) is disappointing. Its expectations for carbon reduction in agriculture are low. The Plan foresees, for example, only one potential ton of reduction from methane capture at large dairies.
- Many studies by California scientists and others throughout the world have shown how organically grown crops have significantly lowered GHG emissions, from non-use of nitrate fertilizers and other means.
- Studies have shown significant methane emissions from bovine digestion, which raises the question of whether the Plan should stipulate a carbon tax to be applied to cow products, such as beef and milk. CARB is urged to consider this option.
- The Plan should support for urban agriculture, especially community gardens, as a means of carbon reduction through localization of food production.
- In line with the Department of Conservation's study of greenhouse gas emissions associated with conversion of agricultural land to urban uses, both direct and indirect emissions should be considered.
- Promoting more compact, efficient, transit-oriented urban development will not only reduce greenhouse gas emissions from vehicle travel but also conserve agricultural land by minimizing conversion to urban use.
- The Plan should reference and encourage CDFA's development of a strategic plan for agriculture. Efforts to minimize conversion of prime farmland will be helped if agricultural enterprises now on the land maintain profitability and sustainability.
- The Plan should emphasize that linking good land use with local food systems can reduce transportation-related emissions, provide a premium for farmers selling locally, and even improve access to healthier foods.
- State and local governments could increase access to local foods, for example, by direct investments, incentives and public-private partnerships to develop needed local foods system infrastructure.
- Locally produced food consumed in the state could be increased by concerted action, thus reducing more emissions from transportation. Department of Food & Agriculture, with CARB, could track and measure "food miles traveled" and seek ways to cut distances from food to producer. Cutting down on transport of agricultural products from agriculture areas to other parts of the state would cut GHG, which means emphasis on urban agriculture.
- The Plan should address turban agricultural issues, such as a) what funding can the state supply to assist municipalities in supporting urban agriculture: b) What focus can CARB bring on

removing barriers to urban agriculture, such as finding useable land for community gardens, inventories of such land, testing for toxicity, outreach to potential urban gardeners, recasting city regulations in favor of urban orchards, edible landscaping, local composting, rooftop gardens; more UC Master Gardener training and technical assistance? c) Could CARB facilitate funding of local offices in each municipality to inventory potentially available state-owned lands and mobilize local community gardeners and organizers?

- The Plan needs to highlight the greenhouse gas reduction benefits of organic agriculture. See The California Energy Commission's Climate Change Research Conference Sacramento, September 10-13, 2007 had five presentations:  
[http://www.climatechange.ca.gov/events/2007\\_conference/presentations/index.htm](http://www.climatechange.ca.gov/events/2007_conference/presentations/index.html)  
l

- Data from The Rodale Institute's® long-running comparison of organic and conventional cropping systems confirms that organic methods are far more effective at removing the greenhouse gas, carbon dioxide, from the atmosphere and fixing it as beneficial organic matter in the soil. See Laura Sayre, 2003  
[http://www.newfarm.org/depts/NFfield\\_trials/1003/carbonsequest.shtml](http://www.newfarm.org/depts/NFfield_trials/1003/carbonsequest.shtml)  
-- Another study confirmed ecological virtues of organic farming  
[www.pnas.org/cgi/reprint/103/12/4522.pdf](http://www.pnas.org/cgi/reprint/103/12/4522.pdf)  
<http://news-service.stanford.edu/pr/2006/pr-organics-030806.html>

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-31 06:23:38

No Duplicates.

## **Comment 10 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Cory

Last Name: Brennan

Email Address: cory8570@yahoo.com

Affiliation: Green Leadership Consortium

Subject: Agriculture

Comment:

Create regulations about water use and particularly water waste and enforce them. I've seen numerous fields where water is just running off down the street from leaks in the irrigation system. Regulating water use will force smart water conservation methods like water conserving irrigation methods, swales and other water catchment (which also reduce soil run off and pollution of waterways), and mulching.

Facilitate mulching via smart distribution of compost and "green waste" materials which will reduce need for artificial energy inputs (petroleum based products) and will reduce water needs.

Facilitate safe use of human waste for agriculture which will reduce the need for petroleum based fertilizer.

Facilitate polycropping instead of monocropping which protects soils, and reduces need for pest management and fertilizer products.

Facilitate wetlands, tree windbreaks and other soil conservation methods which do the same.

Facilitate local distribution practices for food and other ag products produced.

Many of the above steps will increase carbon sequestration and reduce carbon output.

Facilitate use of drylands crops in driest areas.

Implement education programs for farmers that bring them up to speed on methods that reduce need for high external energy inputs and allow them to go more organic with less water.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-31 08:47:09

No Duplicates.

## **Comment 11 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Karen

Last Name: Del Compare

Email Address: kdcyew@excite.com

Affiliation:

Subject: Agriculture and AB 32

Comment:

While I support the goals of AB 32, I strongly disagree with the methods to decrease Greenhouse Gas (GHG) Emissions from Agriculture.

1. Confined Animal Feeding Operations (CAFOs) are a danger to the environment and should not receive any subsidies and assistance. According to the Draft Scoping Plan Appendices, "Economic incentives such as marketable emission reduction credits, favorable utility contracts, or renewable energy incentives will be key to early implementation." CAFOs must be required to clean up their pollution with their own funding, including the capturing of their methane releases. In deciding whether to provide financial assistance to CAFOs, the California Air Resources Board (CARB) needs to consider all the negative effects of such operations which include water and air pollution, lower property values for rural communities, the cost of antibiotics and the associated antibiotic resistance that comes with excessive use of these medications. Antibiotic resistance is especially important as it makes human diseases much more difficult to treat. In addition, manure pits are a hazard to farm workers and have caused numerous fatalities.

2. Your scoping document does not mention the benefits of eating locally. This would decrease transportation emissions as well as support our local economy in California. Please consider supporting Community Supported Agriculture (CSA) and local farmers' markets and promote education to discourage the consumption of imported produce.

3. Your educational efforts should include health benefits as well as the decreased GHG emissions associated with eating a plant based diet.

4. Pesticides are primarily petroleum based. Organic farming methods to decrease their use must be encouraged. Education should be provided to farmers on how to change from conventional farming to organic. Subsidies should be provided to organic farmers as needed to provide incentives for this change.

5. Industrial fertilizers are typically produced using natural gas. Organic farming methods can also decrease emissions related to fertilization.

6. Please study and include in your analysis the benefits of pasture produced meat and dairy products vs. those from CAFOs.

This analysis should include health benefits as well as GHG emissions. According to a report from the Union of Concerned Scientists, "Healthy pastures are also less susceptible to erosion, can capture more heat-trapping carbon dioxide than feed crops, and absorb more of the nutrients applied to them, thereby contributing less to water pollution. Furthermore, the manure deposits by animals onto pasture produces about six to nine times less volatilized ammonia - an important air pollutant - than surface applied manure from CAFO's."

7. Biofuels will most likely NOT be the answer to our energy crisis. The amount of nitrogen based fertilizers and petroleum based pesticides used for most crops negates the energy that biofuels ultimately deliver. Burning pesticide laden crops can also add to hazardous air pollutants released into the air. Soil degradation and water pollution from nitrogen and pesticide runoff must also be considered. Increases in the price of food from converting farmland to fuel production must also be considered.

8. CARB should evaluate water consumption for different crops and in different regions. It makes no sense to farm water intensive crops in desert-like regions of California when other more arid crops can be planted.

9. Small farms and integrated crop livestock operations can form energy exchange systems which are successful with very little fossil fuel input. Please look at the link to the Rodale Institute for more information on how organic farming can decrease global warming. This should be the focus of CARB's research and subsidies to farmers.

#### References:

"CAFOs Uncovered: The Untold Costs of Confined Animal Feeding Operations" from the Union of Concerned Scientists, April 2008.  
[http://www.ucsusa.org/food\\_and\\_environment/sustainable\\_food/cafos-uncovered.html](http://www.ucsusa.org/food_and_environment/sustainable_food/cafos-uncovered.html)

"Putting Meat on the Table: Industrial Farm Animal Production in America" A Report of the Pew Commission on Industrial Farm Animal Production  
[http://www.pewtrusts.org/our\\_work\\_report\\_detail.aspx?id=38442](http://www.pewtrusts.org/our_work_report_detail.aspx?id=38442)

"Climate Change Solution" by Rodale Institute  
<http://www.rodaleinstitute.org/20080425/gw6>

[http://www.ucsusa.org/food\\_and\\_environment/sustainable\\_food/greener-pastures.html](http://www.ucsusa.org/food_and_environment/sustainable_food/greener-pastures.html)

"Leaping Before They Looked: Lessons from Europe's Experience with the 2003 Biofuels Directive" from the Clean Air Task Force, October 2007  
[http://www.catf.us/publications/reports/Leaping\\_Before\\_They\\_Looked.pdf](http://www.catf.us/publications/reports/Leaping_Before_They_Looked.pdf)

Diet, Energy and Global Warming  
<http://geosci.uchicago.edu/~gidon/papers/nutri/nutriEI.pdf>

"Facts about Pollution from Livestock Farms" from NRDC  
<http://www.nrdc.org/water/pollution/ffarms.asp>

"Preventing Deaths of Farm Workers in Manure Pits" from Center for

Disease Control and Prevention, May 1990.

<http://www.cdc.gov/niosh/90-103.html>

<http://articles.latimes.com/2006/jul/14/local/me-sbriefs14.1>

[http://findarticles.com/p/articles/mi\\_qn4176/is\\_20040922/ai\\_n14585680](http://findarticles.com/p/articles/mi_qn4176/is_20040922/ai_n14585680)

<http://minnesota.publicradio.org/display/web/2008/06/09/farm/>

<http://www.washingtonpost.com/wp-dyn/content/article/2007/07/03/AR2007070302136.html>

<http://www.health.state.ny.us/environmental/investigations/face/docs/04ny010.pdf>

<http://www.msnbc.msn.com/id/11720746/>

<http://www.public-health.uiowa.edu/face/Reports/PDF-Reports/Manure%20Pit%20Agitation.pdf>

[http://findarticles.com/p/articles/mi\\_qn4188/is\\_20080119/ai\\_n21210257](http://findarticles.com/p/articles/mi_qn4188/is_20080119/ai_n21210257)

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-31 10:18:46

No Duplicates.

**Comment 12 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Koa

Last Name: Lavery

Email Address: koamapping+ARB@gmail.com

Affiliation:

Subject: Local = Cleaner

Comment:

Please support locally produced produce and grains.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-31 19:57:06

No Duplicates.



## **Comment 13 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Shellee  
Last Name: Davis  
Email Address: colville@sonic.net  
Affiliation:

Subject: Support organic agriculture and local food systems  
Comment:

August 1, 2008

Mary Nichols  
California Air Resources Board  
1001 "I" Street  
PO Box 2817  
Sacramento, Ca 95812

RE: AB 32 Scoping Plan: Sustainable and local food systems reduce carbon emissions

Dear Chairperson Nichols and Members of the California Air Resources Board,

Our food system releases 30% of all annual emissions. I am writing to urge you to take a more comprehensive and effective approach to addressing the role of sustainable agriculture and local food systems in the state's strategy to reduce greenhouse gas emissions.

I call on the Air Resources Board, the California Department of Food and Agriculture, and city and county governments to adopt a wide range of policy, regulatory, research and funding measures that support:

- Organic, water-and-energy-efficient sustainable farming practices;
- Local food production, distribution and consumption, especially to meet the needs of under served low-income communities; and
- On farm production of wind and solar energy.

These practices will reduce greenhouse gas emissions and provide many additional benefits, including increased tax revenue for cities and counties, better air and water quality, improved farm worker and public health, reduced medical costs, and the creation of local green collar jobs. Further, one recent paper concluded that "Organic, sustainable agriculture that localizes food systems has the potential to mitigate nearly thirty percent of global greenhouse gas emissions and save one-sixth of global energy use."

I understand that there are a range of regulatory and market based options available to the State Government to curb greenhouse gas emissions. Given their lack of effectiveness in other regions, we do not support Cap and Trade and Cap and Auction-based approaches.

We are supportive of approaches that:

- Effectively, rapidly and efficiently reduces carbon emissions in the timeframe outlined by law;
- Do not increase the emissions of other health harming pollutants;
- Have strong enforcement mechanisms, including criminal and civil consequences for entities that violate regulations, as well as large emitters of carbon pollution
- Ensure we transition completely away from a fossil-fuel based economy that disproportionately harms low-income communities and communities of color to one that is efficient and run on sustainable energy technologies;
- Are democratic, meaning that Californians have a say in all major efforts to reduce carbon emissions;
- Support early and current adopters of low-carbon practices, such as today's organic farmer and cities and counties enacting carbon action plans, and
- Do not give away free or drastically cost-reduced polluting rights to big polluters.

I look forward to an implementation of the California Global Warming Solutions Act that supports a low-carbon, sustainable and just food system with meaningful, effective and democratic regulatory approaches.

Yours Sincerely,  
Shellee Davis

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-31 22:32:26

No Duplicates.

## **Comment 14 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Yichuan

Last Name: Pan

Email Address: quanyinsd@gmail.com

Affiliation:

Subject: Livestock Sector the #1 Cause of Global Warming

Comment:

The chart on page 7 of Climate Change Draft Scoping Plan - a Framework for Change shows that the whole agriculture industry causes 9% of the total greenhouse gas emissions. This is not a true representation of the reality.

According to a report published by the United Nations Food and Agriculture Organization in 2006, the livestock sector worldwide generates more greenhouse gas emissions as measured in CO<sub>2</sub> equivalent than transportation.

We have to account for all emissions related to the industry. Everyone knows that raising animals causes methane being released to atmosphere. However, we also need to consider the large amount of water needed which consumes energy and causes greenhouse gas emissions. Raising and preparing animal food also consumes energy. Besides, the land used for raising animals can be used to grow trees that can balance CO<sub>2</sub> emission. Adding all these together we will see that the true contribution of the livestock industry to greenhouse gas emission is much greater. Therefore, I call on the Air Resources Board and the Department of Food and Agriculture to take courage and recalculate the true contribution of the agriculture and the livestock sector. I recommend that the livestock industry to be divided out as a relatively independent sector. I also recommend that the protocol in the 2006 report of the United Nations Food and Agriculture Organization be followed.

Another way to look at the contribution of the livestock industry to global warming is from the amount of meat consumed by the 37 million residents of California each day and the related greenhouse gas emissions. This is equivalent to look at the amount of gasoline consumed in California each day. We may not produce all the meat and dairy products here in California. As we consume them, we are the ones to cause the related greenhouse emissions.

Therefore, I recommend that ARB and CDFA take actions to promote vegetarian or vegan diet to combat the greenhouse gas emissions. Nobel Prize laureate, the Chair of the Intergovernmental Panel on Climate Change (IPCC), plead for people around the world to tame their carnivorous impulses and stay away from meat in order to save our planet. And, experts promoted a plant-based diet not only to fight global warming, but to benefit public health. I believe when properly educated, every honorable and noble citizen will take responsibility and converts to a plant-based diet.

I also recommend that as part of the Plan, the subsidies to the

livestock sector be gradually phased out. It makes no sense to use taxpayer's money to support the meat industry which generates lots of pollution and causes health problems. Instead, the money can be used to support growing green food or organic food to benefit the environment and people's health.

We are at an urgent time, so urgent actions are necessary. Please revise the Plan to more meaningfully reflect the contribution of the livestock sector to global warming, and to include plans to curb the livestock sector and to promote plant-based diet.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-01 11:07:59

No Duplicates.

**Comment 15 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Heather

Last Name: Fenney

Email Address: heather@cafoodjustice.org

Affiliation:

Subject: Sustainable and local food systems reduce carbon emissions

Comment:

Please see attached

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/15-arb\\_scoping\\_plan\\_comments-final.pdf](http://www.arb.ca.gov/lists/sp-agriculture-ws/15-arb_scoping_plan_comments-final.pdf)

Original File Name: ARB Scoping Plan Comments-FINAL.pdf

Date and Time Comment Was Submitted: 2008-08-01 14:53:57

No Duplicates.

**Comment 16 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: David

Last Name: Runsten

Email Address: dave@caff.org

Affiliation: Community Alliance with Family Farmers

Subject: Comments on AB 32 Scoping Plan

Comment:

Attached are comments from the Community Alliance with Family Farmers. These comments have been posted to the sections on Agriculture and Land Use and Local Government.

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/16-ab\\_32\\_scoping\\_plan--caff\\_ltr\\_8-1-08.doc](http://www.arb.ca.gov/lists/sp-agriculture-ws/16-ab_32_scoping_plan--caff_ltr_8-1-08.doc)

Original File Name: ab 32 scoping plan--caff ltr 8-1-08.doc

Date and Time Comment Was Submitted: 2008-08-01 16:34:46

No Duplicates.

**Comment 17 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Katy

Last Name: Mamen

Email Address: [katy@polarisinstitute.org](mailto:katy@polarisinstitute.org)

Affiliation: Polaris Institute

Subject: CAWS input - AB 32 scoping report/agriculture

Comment:

Please find our submission in the attached letter.

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/17-caws\\_ab\\_32\\_scoping\\_report\\_comment.pdf](http://www.arb.ca.gov/lists/sp-agriculture-ws/17-caws_ab_32_scoping_report_comment.pdf)

Original File Name: CAWS AB 32 scoping report comment.pdf

Date and Time Comment Was Submitted: 2008-08-01 16:45:22

No Duplicates.

## **Comment 18 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Douglas  
Last Name: Estes  
Email Address: dce005@yahoo.com  
Affiliation:

Subject: Sustainable Agriculture/Local Food  
Comment:

August 1, 2008

Mary Nichols  
California Air Resources Board  
1001 "I" Street  
PO Box 2817  
Sacramento, Ca 95812

RE: AB 32 Scoping Plan: Sustainable and local food systems reduce carbon emissions

Dear Chairperson Nichols and Members of the California Air Resources Board,

I am writing to urge you to take a more comprehensive and effective approach to addressing the role of sustainable agriculture and local food systems in the state's strategy to reduce greenhouse gas emissions.

I call on the Air Resources Board, the California Department of Food and Agriculture, and city and county governments to adopt a wide range of policy, regulatory, research and funding measures that support:

- &#61623; Organic, water-and-energy-efficient sustainable farming practices;
- &#61623; Local food production, distribution and consumption, especially to meet the needs of under served low-income communities; and
- &#61623; On farm production of wind and solar energy.

These practices will reduce greenhouse gas emissions and provide many additional benefits, including increased tax revenue for cities and counties, better air and water quality, improved farm worker and public health, reduced medical costs, and the creation of local green collar jobs. Further, one recent paper concluded that "Organic, sustainable agriculture that localizes food systems has the potential to mitigate nearly thirty percent of global greenhouse gas emissions and save one-sixth of global energy use."

I understand that there are a range of regulatory and market based options available to the State Government to curb greenhouse gas emissions. Given their lack of effectiveness in other regions, we do not support Cap and Trade and Cap and Auction-based approaches.



I am supportive of approaches that:

- &#61623; Effectively, rapidly and efficiently reduces carbon emissions in the timeframe outlined by law;
- &#61623; Do not increase the emissions of other health harming pollutants;
- &#61623; Have strong enforcement mechanisms, including criminal and civil consequences for entities that violate regulations, as well as large emitters of carbon pollution
- &#61623; Ensure we transition completely away from a fossil-fuel based economy that disproportionately harms low-income communities and communities of color to one that is efficient and run on sustainable energy technologies;
- &#61623; Are democratic, meaning that Californians have a say in all major efforts to reduce carbon emissions;
- &#61623; Support early and current adopters of low-carbon practices, such as today's organic farmer and cities and counties enacting carbon action plans, and
- &#61623; Do not give away free or drastically cost-reduced polluting rights to big polluters.

I look forward to an implementation of the California Global Warming Solutions Act that supports a low-carbon, sustainable and just food system with meaningful, effective and democratic regulatory approaches.

Yours Sincerely,  
Douglas C. Estes

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-01 17:33:41

No Duplicates.

**Comment 19 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Tom

Last Name: Frantz

Email Address: ini@lightspeed.net

Affiliation:

Subject: Agricultural Considerations

Comment:

These comments are about methane digestors and manure management.

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/19-agriculture\\_ab\\_32\\_scoping\\_plan\\_comments\\_tom\\_frantz.doc](http://www.arb.ca.gov/lists/sp-agriculture-ws/19-agriculture_ab_32_scoping_plan_comments_tom_frantz.doc)

Original File Name: Agriculture AB 32 Scoping Plan Comments Tom Frantz.doc

Date and Time Comment Was Submitted: 2008-08-01 19:50:51

No Duplicates.

## **Comment 20 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Joyce M

Last Name: Eden

Email Address: comment@sonic.net

Affiliation: West Valley Citizens Air Watch

Subject: Greenhouse Gas Sector 10. Agriculture

Comment:

GHG 10. Agriculture

Composting of agricultural waste or use as mulch to reduce GHG.  
Eliminate both burning and rotting.

A significant portion of the moneys generated by carbon fees should also go towards helping fund wind turbines on the many small farms in California and rural dwellings. Of the 76,000 farms and ranches in California, it is surprising and heartening to learn that nearly half are classified in the smallest category. It is an asset to California to have and keep these farms viable. So solar and wind subsidies to these small enterprises in the middle and long run as the wind and solar investments pay for themselves (which will happen sooner as energy prices from the grid rise), will help enable them to keep them going. While, "one megawatt of solar panels installed on land can take eight acres or more, a one megawatt wind turbine would need only one acre of land."(California Institute for the Study of Specialty Crops report, Chapter 3, p. 18)

We are in support of carbon fees subsidizing small operations, but we do not support them for confined animal feeding operations (CAFOs). These are highly polluting and unhealthy operations, we do not want to encourage more of the same. They need to use their profits to pay to clean up their own pollution. Cleaner, smaller pasture-based operations should be subsidized and encouraged as a way to reduce emissions. Californians are more and more aware of where their food comes from and how it is treated and they care. Organic farms have lower GHG emissions and should also receive priority farm subsidies. The large operations are already over subsidized.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-04 12:15:05

No Duplicates.

**Comment 21 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Danila

Last Name: Oder

Email Address: dodder@usc.edu

Affiliation:

Subject: Compaction of soils/state lands

Comment:

The global warming contributions of livestock are not limited to the methane they produce. The effect of trampling on soils' ability to capture carbon is not yet clear (see <http://www.biologicaldiversity.org/news/center/articles/science-07-13-2008.html>), but the attached article (Teepe) suggests intact soils capture carbon better than trampled soils. On a large scale, this may be significant for CARB's purpose

For this reason, CARB should follow the science on this issue and if it has potential for significant quantifiable carbon capture, look into eliminating livestock grazing from state public lands.

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/21-teepe\\_et\\_al.pdf](http://www.arb.ca.gov/lists/sp-agriculture-ws/21-teepe_et_al.pdf)

Original File Name: teepe et al.pdf

Date and Time Comment Was Submitted: 2008-08-07 16:19:52

No Duplicates.

## **Comment 22 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: James  
Last Name: Reischutz  
Email Address: james@greenpyro.com  
Affiliation: Green Pyro

Subject: Soil Carbon Sequestration  
Comment:

While the draft sections on agriculture make some reference to biomass utilization and farm efficiency improvements, an emerging technique of biomass utilization that has synergistic benefits for efficiency and residue utilization is neglected.

"Bio-Char sequestration"- the storage of residue derived char products in agricultural soil appears to offer a large, permanent, and beneficial CO<sub>2</sub> precursor sink. "Waste" biomass from farming or forestry operations is thermally separated into a solid elemental carbon fraction and an energetic gas. The charcoal fraction is derived from atmospheric CO<sub>2</sub> captured by plants. It is bio-inert, and seems to be a permanent sink on the ~1000 year time frame. Anecdotal studies show a large decrease in methane and N<sub>2</sub>O emissions from amended soil. Further studies show ~10% decrease in irrigation demand.

Furthermore, by applying carbon to fields, primary pollutants such as NO<sub>x</sub> and pesticide runoff are reduced. Particulates from residue burning are controlled. The public health and environmental benefits from using this technique need analytical quantification.

As much as 25 MMT per year can be offset with this method in a relatively short time frame.

Although the emerging science behind this technique is promising, it hasn't reached full maturity, perhaps disqualifying it from inclusion in this scope. Opening the door in the scope to soil carbon sequestration schemes (conservation or no till carbon systems, rangeland management etc) will provide a small window for black carbon (bio char) sequestration research.

We support the use of California offset projects so Bio char programs can be used for AB 32 compliance.

The attached document is an academic analysis of some general case bio char sequestration.

Adoption of this technique means advancing leading edge science and climate policy in California.

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/22-energy\\_balance.pdf](http://www.arb.ca.gov/lists/sp-agriculture-ws/22-energy_balance.pdf)

Original File Name: Energy balance.pdf

Date and Time Comment Was Submitted: 2008-08-11 14:18:46

No Duplicates.

**Comment 23 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Patrick

Last Name: Griffith

Email Address: pgriffith@lacsds.org

Affiliation: Los Angeles County Sanitation Districts

Subject: LACSD Comments on the ARB Draft Scoping Plan: Agriculture Strategies

Comment:

LACSD offers the following comments on the discussion concerning Agriculture Strategies in the Draft Scoping Plan:

1. Page C-157: It may be overly optimistic to think that farmers may wish to operate combustion turbines.

2. Page C-158: Tank digesters are more feasible where there is a municipal sewage treatment plant nearby to handle the high-strength liquid waste.

3. Pages C-158, C-159: Research/Opportunities: We believe that biosolids applied to agricultural lands will result in net carbon sequestration and be a win-win situation for both farmers and the municipal wastewater community. This potential synergy should be mentioned in the Scoping Plan.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-11 14:48:38

No Duplicates.

**Comment 24 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Casey

Last Name: Creamer

Email Address: casey@ccgga.org

Affiliation: California Cotton Ginners & Growers Assn

Subject: CCGGA Comments

Comment:

CCGGA Scoping Plan comments. See Attachment.

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/24-ccgga\\_scopingplan\\_8-11-08.pdf](http://www.arb.ca.gov/lists/sp-agriculture-ws/24-ccgga_scopingplan_8-11-08.pdf)

Original File Name: CCGGA\_ScopingPlan\_8-11-08.pdf

Date and Time Comment Was Submitted: 2008-08-11 17:32:36

No Duplicates.



**Comment 25 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Derek  
Last Name: Walker  
Email Address: dbwalker@edf.org  
Affiliation: Environmental Defense Fund

Subject: EDF - Agriculture comments  
Comment:

Please accept the attached agriculture comments from Environmental Defense Fund on the AB 32 draft Scoping Plan.

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/25-edf\\_-\\_agriculture\\_comments.pdf](http://www.arb.ca.gov/lists/sp-agriculture-ws/25-edf_-_agriculture_comments.pdf)

Original File Name: EDF - Agriculture comments.pdf

Date and Time Comment Was Submitted: 2008-08-12 15:31:39

No Duplicates.

**Comment 26 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: CY  
Last Name: Beh  
Email Address: cybeh2000@gmail.com  
Affiliation:

Subject: Agriculture & Diet  
Comment:

Dear Sirs,  
The fact that such a plan is being devised is highly commendable. For it may well become the blue print for all other states and nations to emulate, and Planet Earth will be able to heal herself and there will be hope for sustainable living.

However, as it has been pointed out by scientists and as detailed in the UN's reports - Livestock's Long Shadow, meat diet is a much bigger contributor to greenhouse gases emissions, more than all the transports in the world combined. Thus, it is only logical that we embrace this one elegantly simple solution of encouraging more to Go Veg, adopt a vegetarian or vegan diet. This one simple change has far reaching positive impact on not just the human health but also that of the planet, such tangible positive outcomes are reasons enough for the government to take the leadership role in sharing the knowledge with all citizens, generate the awareness on the urgency and many benefits of us adopting the plant-based diet.

It is hoped that the plant-based diet solution that requires little investments and whose impact is immediate can be an integral part of the AB32 plan.

Go Veg, Be Green, Save The Planet!

Thank you.

Respectfully yours,  
cy:beh

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-20 09:46:14

No Duplicates.

**Comment 27 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Don

Last Name: Winn

Email Address: donsta@yahoo.com

Affiliation:

Subject: We can solve 80% of global warming by using animal-free products!

Comment:

Switching to a vegetarian or vegan diet is the easiest and fastest way to combat global warming. Green technologies are too slow to develop since our time toward the point-of-no-return is within a couple of years. We know the answer to solve global warming, please help spread this answer! Thank you!!

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-23 01:55:46

No Duplicates.

## **Comment 28 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Julie

Last Name: Bolton

Email Address: dr.jbolton@charter.net

Affiliation:

Subject: Support urban agriculture to reduce carbon

Comment:

The CARB plan looks at the macroeconomic industrial agriculture sector level, which is important, but I would like the board to also consider the micro level in thinking about ways to reduce the carbon footprint and water use of food. CARB should also look at ways to support food production with in cites which has the potential to dramatically decrease carbon output from food production as well as bring about other benefits public health..

I would like to see a CARB plan that supports s Victory Garden resurgence. Encourage edible backyard gardens, front yard gardens, community gardens, raised beds at apartment complexes and the wise use of public lands for food production that also serves as landscaping.

Consider this scenario - change park grass to clover which is 1) drought-resistant and 2) requires little or no mowing. This saves water and fuel, both of which lower the carbon load. Next remove the male pollen producing (highly allergenic) trees so common in city landscaping and replace them with fruit trees. The maintenance staff that once spent hours mowing thirsty grass could instead use the time tend the fruit trees. Produce could be sold for income for the city or given to food banks. This tactic further reduces carbon as it lessens the amount of food that needs to travel into a city. Additionally, the city would benefit from an increase in local food supplies at no extra labor cost. An added bonus would be improvement in allergies and asthma of city residents from both reduced carbon and reduced pollen.

Instead of landscaping like oleanders on the freeways and road medians, such properties could be used to grow kale, beets, corn, lettuce, strawberries, tomatoes...etc - crops that not only look attractive, but also taste good. This would further increases food supplies and little or no cost to the city.

Such measures solve multiple problems. Carbon miles of food is reduced, water use is reduced, food production is increases and this can also provide sources of food for the poor who have limited access due to the high cost of fresh fruits and vegetables compared to the artificially lowered prices (due to agricultural subsidies on industrial crops) of processed foods. Even now, the increasing price of energy is squeezing the poor. Food banks report being overwhelmed by calls from people that no longer can afford food at the end of the month due to the high cost of fuel. This situation worsens already skyrocketing rates of diabetes and obesity by forcing the poor to eat calorie dense but nutrient poor

fast food and cheap starchy staples such as white rice and pasta. Additionally a binge-eating like cycle occurs when food intermittently which encourages weight gain.

Hence, bringing food production into the city will not only decrease CO<sub>2</sub>, save water, and provide new sources of healthy nutritious food; it will decrease diseases like diabetes and obesity.

And if it sounds like a crazy idea, consider that more than half of the food eaten in Hong Kong - one of the most densely populated concrete cities in the world, is grown within the city limits - on balconies, patios or rooftops.

Surely, if we use just a portion of our vast expanses of urban parks, landscaped medians, banks of retaining ivy, empty derelict lots, back and front lawns, and dusty apartment complex perimeters for food production, we could expect to produce bountiful crops which will improve our health, and feed the hungry, all while reducing our carbon output.

Dr. Julie Bolton  
Family Physician  
Community Gardener  
Long Beach,

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-27 10:52:01

No Duplicates.

## **Comment 29 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Michael

Last Name: Marsh

Email Address: info@westernuniteddairymen.com

Affiliation: Western United Dairymen

Subject: Climate Change Draft Scoping Plan

Comment:

Western United Dairymen is a statewide dairy farming organization representing our members on issues of importance in all relevant venues. Our 1,100 member families produce 60% of the California milk supply. Our farms are located throughout the length and breadth of the state, and cover a wide range of geography, size, and other characteristics. We appreciate the chance to comment on the Climate Change Draft Scoping Plan.

We believe that the capture of greenhouse gas (specifically methane from manure) and its conversion to renewable energy presents an opportunity for our members, and we wish to facilitate their participation. However, any dairy methane capture program must be implemented in an appropriate and cost-effective manner. Please consider the following comments on the Climate Change Draft Scoping Plan.

General:

The total greenhouse gas (GHC) emissions of California are presented in sectors and sub-sectors. Graphs and other analyses are presented without reference back to the total state inventory. We understand the reasons for this approach, but as presented, the information can be easily misinterpreted or misquoted. We suggest that when a sub-sector graph or analysis is presented, information as to its contribution to the sector and to the state inventory be prominently included.

Climate Change Draft Scoping Plan, II. Preliminary Recommendation 16. Agriculture:

(1) Investment in manure digesters is encouraged by the Scoping Plan. At a recent international dairy summit on climate change it was recognized that bio-digesters are one of the main measures that dairy farmers can take to reduce methane emissions. We agree. However, there was universal agreement that manure digesters cannot be a part of any climate action plan without a significant contribution from the public sector for financial and technical assistance, and there will need to be considerable regulatory recognition and facilitation. We agree with this conclusion, and do so from our experience administering the California Dairy Power Production Program (CDPPP). This fact is important to include in the Scoping Plan—it is not only a California situation, but familiar around the world. Implementing a significant dairy digester program in California, like everywhere else in the world, will require substantial public investment.

(2) Western United Dairymen is unequivocally opposed to any consideration, at any time and in any manner, to a mandate to install methane digesters on dairy farms. If digesters are a requirement of law, any opportunity to acquire carbon credits and participate in the carbon marketplace will be lost to dairy

producers. We anticipate that the potential revenues generated from sales of dairy digester carbon credits will be an important part of improving the financial feasibility of digester installations. Our experience so far, as related above through our administration of the CDPPP, has shown that digester installations have a very difficult time returning competitive financial performance. Any action to worsen this situation should be rigorously avoided. Mention of future consideration of a mandate to install digesters should not appear in the Scoping Report. We request that it be removed.

(3) Reference is made to the need for further research regarding enteric methane emissions. We concur, but this does not show up in the research section of the Agricultural Appendix.

Appendix C, Chapter 11, Agriculture, Preliminary Recommendations (A-1):

(1) The title of this section reads "Methane Capture at Large Dairies." Opportunities are not limited to large dairies. We suggest simply dropping the term "large."

(2) Paragraph 1 of (A-1) leads with the statement that the "The primary driver behind the projected increase in agricultural GHG emissions is growth in dairy livestock." While this statement may be technically correct, i.e. dairy contributes to overall growth in combined agricultural emissions, as it is currently presented it tends to lead to the conclusion that the primary source of agricultural GHG is dairy manure, which we do not understand to be true. Our understanding specifically is that while dairy is the primary source for methane from manure in California, it is not true for total GHGs. Our understanding is that the major manure contribution is in the form of N<sub>2</sub>O from pastoral sources, and that pastoral enteric methane is also significant. While we agree that there is little growth in pastoral emissions from all classes of livestock, clarification in this section is necessary so that it is not misleading. Limiting dairy manure methane will not eliminate livestock GHG emissions, nor will it be sufficient to offset emissions from other agricultural sources.

(3) Paragraph 2 of (A-1) identifies that biogas can be flared, burned in a turbine, or cleaned for natural gas use. No mention of utilization in an internal combustion engine is made. This should be corrected, since as new IC engines are developed, their use is likely to remain valid for biogas. This will be in a stationary situation such as generator sets and water pumping, or as you mention in the case of landfill gas, as a vehicle fuel.

Furthermore, other technologies for the efficient and cost effective uses of dairy digester gas have so far proven to be unsustainable. Fuel cells and microturbines appear to have potential in dairy biogas applications but much work is necessary to adapt these technologies for reliable operation. Pipeline injection is receiving a lot of attention and has certain advantages; however, it is not only a very expensive alternative, but is limited to those dairy facilities located near a utility pipeline. Additionally, reliable and sustainable performance for gas cleanup and compression has yet to be demonstrated in a dairy environment. Acceptable gas standards must be met before injection will be allowed. These issues are valid considerations that must be addressed if the carbon reductions expressed in the Scoping Plan are to be realized. As we mention below, barriers—be they technical, regulatory, financial, or physical—that might be expected to impede implementation of dairy digester technology should be a prominent part of the Scoping Plan discussion.

(4) Paragraph 3 of (A-1) states "...dairies will provide early voluntary emissions reductions..." No mention of the unresolved regulatory barriers that currently exist and that are impeding the

continued development of this opportunity are presented until later in Paragraph 4, and even then it is somewhat buried in the text. In order to be complete, any report or scoping document must emphasize the kinds of difficulties encountered regarding potential adoption and utilization of any technology, including digester gas technologies. To fail to prominently display the roadblocks simultaneously with the presentation of potential opportunities will give a faulty assessment of the relevance of the technology and an inaccurate picture of the reductions available, and it may lead to misdirection of future courses of action.

Appendix C, Chapter 11, Agriculture, Areas of Research/Opportunities for Future GHG Emission Reductions, Efficiency Improvements:

(1) We appreciate and concur with the presentation of efficiency of agricultural operations as a sound strategy to accomplish GHG reductions. This is especially true for the dairy industry. Our forthcoming discussions should focus on emissions per unit of milk production, not on a per cow basis.

(2) We were surprised to note that efficiency in milk production was not identified as a research need. We believe that additional work needs to be supported in this area to quantify and inventory reductions from California-specific dairy efficiencies, especially in the areas of enteric emissions and reproduction. California dairy farms have already accomplished per unit production efficiencies far beyond what we find in other countries and other states. This contribution should be recognized in the Scoping Plan. Comparative information of dairy farming internationally is available from the International Farm Comparison Network, located in Germany. The contact is Torsten Hemme at [torsten.hemme@ifcndairy.org](mailto:torsten.hemme@ifcndairy.org).

Western United Dairymen thanks you for the opportunity to comment on the Climate Change Draft Scoping Plan. We know that our suggestions will be seriously considered. Please feel free to contact us if you wish further discussion.

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/29-scoping\\_comments.pdf](http://www.arb.ca.gov/lists/sp-agriculture-ws/29-scoping_comments.pdf)

Original File Name: Scoping comments.pdf

Date and Time Comment Was Submitted: 2008-08-28 16:26:13

No Duplicates.



**Comment 30 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Athanasios  
Last Name: Alexandrou  
Email Address: aalexandrou@csufresno.edu  
Affiliation: CSU Fresno

Subject: Turfgrass emissions  
Comment:

The following comment has been authored by:

Charlie Krauter, Professor, CSU Fresno  
Athanasios Alexandrou, Associate Professor, CSU Fresno  
John Bushoven, Assistant Professor, CSU Fresno  
Dave Goorahoo, Assistant Professor, CSU Fresno

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/30-fresno-state-arb-scoping-plan-comments-final.doc](http://www.arb.ca.gov/lists/sp-agriculture-ws/30-fresno-state-arb-scoping-plan-comments-final.doc)

Original File Name: Fresno-State-ARB-Scoping-Plan-Comments-Final.doc

Date and Time Comment Was Submitted: 2008-09-03 13:31:48

No Duplicates.

## **Comment 31 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: sophie  
Last Name: Lapaire  
Email Address: Sophie@bridgemakersconsulting.com  
Affiliation:

Subject: Missing vital information  
Comment:

Greetings,

Agriculture is responsible for approximately 30% of global warming, mainly through carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (NO<sub>x</sub>) emissions.

I couldn't help notice that you have no mention of organic farming in your plan. You may or may not know that organic farming not only produce virtually any CO<sub>2</sub> but also captures it in the soil for a very long time. Vegetative material decomposes and adds to the soil organic matter levels in the soil, thus storing carbon dioxide. Soil contains about twice as much carbon as the atmosphere

Unlike conventional agro farming which uses large amounts of nitrogen fertilizer and pesticides (all petroleum based) that are released into the air. This MUST be considered and added to your plan as a sustainable solution in the short, medium and long run.

Organic farming not only out performs chemical based farming, but protects the health of the soil, farmers, laborers, rivers, beneficial insects, consumers, animals, just to mention a few.

If only 10,000 medium sized farms in the US converted to organic production, they would store so much carbon in the soil that it would be equivalent to taking 1,174,400 cars off the road, or reducing car miles driven by 14.62 billion miles.

This isn't something small and MUST be included in your plan. You have good data so far, but this information is totally missing. Please see that it is added to it. Thank you

Below are links to more information from respected institutions on this topic:

<http://persianoad.wordpress.com/2007/04/08/organic-farming-tackles-global-warming/>

<http://www.organicconsumers.org/organic/stabalize062404.cfm>

<http://www.strauscom.com/rodale-whitepaper/>

[http://www.newfarm.org/depts/NFfield\\_trials/1003/carbonsequest.shtml](http://www.newfarm.org/depts/NFfield_trials/1003/carbonsequest.shtml)

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-09-29 20:49:37

No Duplicates.

## **Comment 32 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Susan

Last Name: Barney

Email Address: susangbarney@yahoo.com

Affiliation:

Subject: Reduce More Methane to Buy Time in Global Warming Flight

Comment:

I recommend we follow in the footsteps of Taiwan (No Meat No Heat initiative led to Government recommend eating less meat as one of top 10 personal actions people can take to reduce emissions), Queensland, Australia (Low Carbon Diet recommends reduced meat and dairy), and University of California-San Francisco (banning red meat from school cafeterias, functions and hospital).

According to Dr. Kirk Smith, UC-Berkeley, IPCC panel member and member of US National Academy of Sciences, many earth scientists are beginning to realize that with global warming happening faster than previous estimates, we can buy ourselves critical time by reducing methane. Why?

1) Methane's global warming potential (GWP) is 62 to 72 times more potent than CO<sub>2</sub> over a 20 year period according to the IPCC. Most reports use the estimate of methane as being 21 - 26 times more potent over a 100 year period. But global warming is happening too fast for us to use 100 year estimates.

2. Methane's Atmospheric Lifetime is 9 to 15 years, meaning it dissipates from the atmosphere in 9 to 15 years. CO<sub>2</sub> has an atmospheric lifetime of centuries, possibly more than a thousand years. So if we place more emphasis on methane, we see a much faster reduction of emissions in the air.

You may have noticed that the atmospheric lifetime is only 9 - 15 years and yet the global warming potential (GWP) is 62 - 72 at 20 years and 23 to 26 at 100 years. According to Dr. Michael Prather (also on IPCC) from UC-Irvine, the methane RESIDUAL is what is causing the GWP at 20 and 100 years.

There is apparently no measurement for the global warming potential at 10 years or 5 years when the methane is still in the atmosphere. this means methane is FAR more warming than our current estimates, and underscores the importance of placing a greater emphasis on reducing methane relative to CO<sub>2</sub>.

As you are aware, the single largest source of methane in California and the US is livestock.

The Livestock group at the UN's FAO issued "Livestock's Long Shadow" finding that livestock cause 18% of global warming. this assumes methane has a GWP of 23 times CO<sub>2</sub>. But if you use a GWP of 68 over 20 years, the livestock industry becomes responsible for 24 % of global warming.

And we can only imagine what the GWP of methane is in time periods when the methane is not a residual (ie under 15 years).

I highly recommend that we reduce methane by encouraging a vegan diet, banning meat and dairy from California government (including schools, prisons) and encouraging our creative chefs to use their talents to come up with good dishes to put on menus to help us all find good foods to make the transition.

In conclusion, I seek to answer two questions you might have.

1) Will people meet their nutritional needs on a vegetarian diet?

From "Position of the American Dietetics Association and the Dietitians of Canada: Vegetarian Diets"

"Well-planned vegan and other types of vegetarian diets are appropriate for all stages of the life cycle, including during pregnancy, lactation, infancy, childhood and adolescence."

Source: <http://www.eatright.org/ada/files/vegnp.pdf>

2. Will people like it?

For those doubting they will enjoy the taste, I submit Oprah Winfrey's entry to her blog during her 21 day vegan cleanse, which eliminated all animal products, wheat, grains containing gluten, alcohol and sugar:

"Wow, wow, wow! I never imagined meatless meals could be so satisfying. I had been focused on what I had to give up—sugar, gluten, alcohol, meat, chicken, fish, eggs, cheese. "What's left?" I thought. Apparently a lot. I can honestly say every meal was a surprise and a delight, beginning with breakfast—strawberry rhubarb wheat-free crepes."

SOURCE:

[http://www.oprah.com/article/food/healthyeating/pkgoprahscleanse/20080521\\_orig\\_cleanse\\_blog2](http://www.oprah.com/article/food/healthyeating/pkgoprahscleanse/20080521_orig_cleanse_blog2)

Thank you very much.

Susan Barney

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-09-29 21:42:43

No Duplicates.

## **Comment 33 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: David  
Last Name: Cranston  
Email Address: dcranston@ggfirm.com  
Affiliation: Greenberg Glusker LLP

Subject: Comments on behalf of CARES  
Comment:

October 2, 2008

Mary D. Nichols, Chair  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

Re: Comments to Draft Scoping Plan

Dear Ms. Nichols:

On behalf of the Community Alliance for Responsible Environmental Stewardship ("CARES"), we submit the following comments to the California Air Resources Board's draft Scoping Plan. CARES is an environmental coalition of California's dairy producer and processor associations, including the state's largest producer trade associations (Western United Dairymen, California Dairy Campaign and Milk Producers Council) and the largest milk processing companies and cooperatives (including California Dairies, Inc., Dairy Farmers of America-California and Land O' Lakes). Formed in 2001, CARES is dedicated to promoting a balance of economic and environmental sustainability for California dairies.

CARES agrees that the voluntary implementation of manure digester systems can be an important element in California's effort to reduce greenhouse gases pursuant to AB 32's mandate. We agree with the Scoping Plan's assessment that "economic incentives such as marketable emission reduction credits, favorable utility contracts, or renewable energy incentives will be needed" in order to make manure digesters an economically viable opportunity for California's dairy farms. With such economic incentives, we believe that California's dairy farms can become an important source of GHG emission reductions in years to come.

For the vast majority of California's family owned and operated dairy farms, the costs of building and operating a manure digester systems are prohibitive. Manure digesters are still very much a developing technology. High routine and non-routine maintenance and operational costs are the norm. Unlike other businesses, dairies are unable to pass along increased capital and operating costs as the price of milk is set by the California Department of Food and Agriculture under its Agriculture Milk Stabilization Plan. The thin operating margins that most dairy farmers operate under are simply incapable of absorbing the additional costs

necessary for the installation and operation of methane digesters.

Some income to partially offset costs may be available through sales of excess power to utilities. And for those dairy farmers that are located near utility pipelines and other necessary infrastructure, the transmission of biogas directly from the farm to a utility facility may be a more viable alternative.

In any event, more study is necessary to develop a sustainable business model from which dairy farmers can develop the infrastructure and efficiencies necessary to realize meaningful income from the capture of methane. Economic assistance to conduct such studies will help spur the development and implementation of viable models.

Even if reliable income from sale of methane or energy can be accomplished, for the vast majority of dairy farmers, manure digesters will remain economically unfeasible without the availability of income from the sale of marketable emission reduction credits. Once the market for emission credit matures, dairy farmers should be in a better position to attract the investment necessary for the implementation of methane digesters on a larger scale. It is our hope that California dairies will play an important role in a market-based cap and trade system by providing a source of marketable credits for those industries who would otherwise be unable to economically meet their greenhouse gas (GHG) emission "caps."

As the Air Resources Board recognizes, the anticipated income from marketable emission reduction credits that can make methane digesters a reality on a large scale will not be possible if methane digesters become mandated. Hence, voluntary - and not mandatory - implementation of methane digesters holds the best potential for meaningful reductions in GHGs from California dairy farms.

Indeed, the continued growth of the dairy industry in California alone will help achieve GHG reductions. Modern California dairies are well known for their efficiency and high productivity. More milk from less cows means fewer GHG emissions per gallon of milk. The shift in the production of milk to California dairies essentially means a shift in production that emits less GHGs. The California dairy industry takes great pride in its commitment to sustainability. With such commitment, we can expect that such operations will only become more efficient and sustainable.

On behalf of CARES, we look forward to working with the ARB in reaching AB 32's goals for reducing GHGs.

Sincerely,

David E. Cranston  
DEC/sl  
cc: William Van Dam, Chair, CARES

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/33-inte7.pdf](http://www.arb.ca.gov/lists/sp-agriculture-ws/33-inte7.pdf)

Original File Name: intE7.PDF

Date and Time Comment Was Submitted: 2008-10-02 16:37:46

No Duplicates.



**Comment 34 for Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) - 1st Workshop.**

First Name: Carole

Last Name: Clum

Email Address: cseghers@arb.ca.gov

Affiliation:

Subject: Manure

Comment:

please see attached letter

Attachment: [www.arb.ca.gov/lists/sp-agriculture-ws/34-9\\_27\\_08\\_caroleclum.pdf](http://www.arb.ca.gov/lists/sp-agriculture-ws/34-9_27_08_caroleclum.pdf)

Original File Name: 9\_27\_08\_caroleclum.pdf

Date and Time Comment Was Submitted: 2008-10-08 15:39:00

No Duplicates.

**There are no comments posted to Agriculture Comments for the GHG Scoping Plan (sp-agriculture-ws) that were presented during the Workshop at this time.**