

Ag Sector Workgroup Meeting Summary

Monday, June 23 10:00am – 4:00pm

Moses Lake, WA

In Attendance

Co-Leads:

Kirk Cook, Washington State Department of Agriculture

Chad Kruger, Washington State University - CSANR

Workgroup Members:

Jim Armstrong, Spokane County Conservation District

George Boggs, Whatcom County Conservation District

March Fuchs, Washington Department of Ecology

Patrick Mazza, Climate Solutions

Larry Cadwell, Cherryview Farms

Warren Morga, Double Diamond Fruit

Maurice Robinette, Washington Sustainable Food and Farm Network

Ron Schultz, Washington State Conservation Commission

*Russ Evans, Pacific Northwest Direct Seed Association

John Stuhlmiller, Washington Farm Bureau

Randy Uhrich, Washington Association of Wheat Growers

Zach Willey, Environmental Defense Fund

*Alternate for Mark Sheffels, Pacific Northwest Direct Seed Association

Absent:

Dan DeRuyter, George DeRuyter and Sons Dairy

Ted Durfey, Natural Selection Farms

Craig Smith, Simplot

Support:

Athena Bertolino, process support/facilitator, Ross & Associates Environmental Consulting, Ltd.

Background Documents (available online at: http://www.ecy.wa.gov/climatechange/2008FA_agr.htm)

- Agenda
- Logistics
- Draft Ag Workgroup Charter
- Member and Co-Chair Roles and Responsibilities
- Presentation: Carbon Sequestration in Washington State
- Presentation: Modeling Farmer Behavior with Carbon Markets
- Presentation: Anaerobic Digestion – GHG Emissions Reductions

Discussion Items and Key Issues

1. Welcome and Introduction
 - 1.1. The Workgroup Co-Chairs and Janice Adair at the Department Ecology thanked Workgroup members for participating in this process and provided an overview of the goals for the group.
 - 1.1.1. The Workgroup is charged with looking at how agriculture products, lands, and practices might be able to participate in a cap-and-trade program/ be an active player in a carbon market economy. This includes mechanisms to ensure money is well spent and that there is a level of consumer protection.
 - 1.1.2. A lot of what the Workgroup is looking at could be precedent setting as the Agriculture sector, in general, is well behind others in looking at addressing greenhouse gas issues.
2. Workgroup Charter Review
 - 2.1. The Workgroup reviewed the Draft Workgroup Charter, with the following overview provided by the Workgroup Co-Chairs:
 - 2.1.1. The Charter outlines three categories of actions this Workgroup is to accomplish by October 20, 2008: 1) Discerning what the Washington state baselines are; 2) identifying practices already happening or that can easily be put into place and developing recommendations on how to implement these practices; and 3) identifying those areas within the Ag sector that may be potential offsets opportunities, but that need additional research on the potential for offsetting and economic value.
 - 2.1.2. Workgroup members suggested and agreed to the following amendments to the Charter:
 - 2.1.2.1. The scope of the group's work should focus on addressing limitations in reliable baselines, and determining how to remove obstacles and barrier. To reflect this, item 2 in Section III will be amended to read "With regard to GHG reducing/C sequestering practices and technologies by Washington state farmers and ranchers - What techniques are available; are they currently being used; what are the limitations and barriers to use; and how can more use be encouraged."
 - 2.1.2.2. The Workgroup is working under the baseline assumption that the Ag sector is not capped, and this statement will be added to the beginning of the Charter for clarity.
 - 2.1.3. The Workgroup provincially adopted the Charter with these two amendments. The updated Charter will be distributed to members for review prior to the July meeting. Any additional issues will be discussed at the July meeting. If no additional issues are raised in response to the updated Charter, the Charter will be considered fully adopted.
3. Ground Rules and Round Table Member Introductions
 - 3.1. The Workgroup reviewed member and Co-Chairs roles and responsibilities, as outlined in the document with the same name.
 - 3.2. Each Workgroup member introduced themselves and provided a brief overview of their connection to and goals for this Workgroup.
4. Review of Technical Team Work Underway
 - 4.1. Members of the Washington State University Technical Team presented on their work to develop baseline data sets for agricultural systems in Washington State, and then using those data sets for modeling a series of emissions reduction scenarios to look at how certain mitigation actions would apply across the landscape - in any given system or location.

- 4.2. The purpose of these presentations was to provide the Workgroup with an overview of the current technical research in the field, including preliminary findings which could help inform the policy discussions of the Workgroup.

Following are highlights from the discussions around each presentation:

4.3. Presentation 1: Carbon Sequestration in Washington State

- 4.3.1. Similar modeling is being conducted for dairy operations.
- 4.3.2. Not much has been done with perennial operations; however the tool is capable of looking at these systems. Modeling on pastures and orchards would be more difficult to implement – the model could predict growth, however these systems have not been looked at from a C storage perspective.
- 4.3.3. Calibration of the model does not give confidence intervals, but it could.
- 4.3.4. C-Farm is one of many types of modeling applications. The model that has a national reputation is the Century model. However, as there are not many ways of looking at these issues the C-Farm and Century models are very similar. The difference is the C-Farm model is more management oriented. No other model has data sets specifically for Pacific Northwest systems; therefore the C-Farm model provides the most accurate baselines.
- 4.3.5. Findings show that the C increase is concentrated in the top foot of the soil, and accompanying N₂O released could offset C reduction. There needs to be a way to compare the value of C-sequestration to GHG reduction.
- 4.3.6. There should be a way to model what would happen with an across-the-board change in orchard practice – if croppings were incorporated into the soil rather than burned.
- 4.3.7. The value in terms of climate change savings may not be in C-sequestration, but may be in the reduction of fossil fuels. However, the use of fossil fuels is not considered in Ag GHG inventories; they are included in inventories for transportation. In the past this has been good for the Ag sector, however if the Ag Sector is to look at potentials for offsets there is some disconnect in having fossil fuel consumption measured under a different sector.
 - 4.3.7.1. It may take more fuel to implement C-sequestration practices and a Carbon tax will increase the cost of fertilizers and fuel.
- 4.3.8. One potential to look at is biochar – depending on the manner of the C and location, putting biochar deeper into the soil could present a great sink for C and could work against the net N₂O releases.
- 4.3.9. Legumes and cover crop should also be looked at.
 - 4.3.9.1. If the composition of organic material can be described, they can be run through the C and N modeling cycles.

4.4. Presentation 2: Modeling Farmer Behavior with Carbon Markets

- 4.4.1. Capital requirements, especially fixed and variable machinery costs, are often a barrier to switching to conservation or no till practices.
- 4.4.2. Fuel costs are not a large part of the overall budget for farming, however reducing the number of trips across the field could reduce fuel and maintenance costs.
- 4.4.3. Mid and no till practices work best in high rainfall areas (above 10 in.).
- 4.4.4. The preliminary calculations do not include N.
 - 4.4.4.1. Fuel utilization/fossil fuels burned must be factored in because the charge is to consider total emissions and C offsets, not just C-sequestration.
 - 4.4.4.2. All inputs should be included in the calculation, which would result in a much great differential.

- 4.4.4.3. One option is to look at the inverse relationship – start from the desired end emissions result to get the N input.
- 4.4.5. **Research recommendation:** Look at the entire operation – create enterprise budget sheets and carbon dioxide equivalents for every production activity. Comprehensive accounting is needed at the level offsets are created. *At a minimum, fossil fuels consumption should be included.*
- 4.5. **Presentation 3: Anaerobic Digestion – GHG Emissions Reductions**
 - 4.5.1. Anaerobic digestion is promising, but there is concern about the application of N that needs to be resolved as volatilizing additional ammonia can be problematic from an environmental standpoint.
 - 4.5.1.1. There is ongoing field research on what coming out of the digester related to GHG emissions.
 - 4.5.1.2. There is a multitude of nutrient recovery technology being tested, but none is ready for widespread use.
- 5. Defining the “Playing Field”
 - 5.1. **The Workgroup discussed defining the playing field of potential mitigation actions within the broader context of all potential Ag sector actions and policy mechanisms (both market-based and other), with an eye towards developing an initial list of early action recommendations, as well as identifying those areas where further research is needed.** Highlights from the discussion are as follows:
 - 5.1.1. Data is missing for some key systems in Washington State.
 - 5.1.2. There are research gaps for biochar and utilization of organic fertilizers to supplant chemical fertilizers – mining manure.
 - 5.1.3. One potential to look at is the availability for an offset credit from precision agriculture – there are currently Federal incentives for precision farming.
 - 5.1.4. One of the key questions about offsets to keep in mind is additionality - will it make someone do something they would not have done otherwise.
 - 5.1.4.1. For verifiable Ag offsets, there may be additional values related to water quality or endangered species conservation. These additional values could make a Washington State credit that more valuable than a California or Oregon credit. If someone is looking at two different packages of carbon credits, they are likely to choose the one with more co-benefits.
 - 5.1.4.1.1. The problem has been, and still is, that it is hard to identify a private sector beneficiary that would pay. There is a dependency on the public sector to set rules but not pay. This is an area where the State could help.
 - 5.1.5. The idea of additionality and co-benefits links the Ag sector to the Forestry sector.
 - 5.1.5.1. There are opportunities for offsets and incentives around reserve lands – those lands farmers have not had in and are willing to keep out of production. CREP/CRP lands program is an Ag program, but could be covered in the Forestry Sector (*Note: The Forestry Sector Carbon Market Workgroup is not discussing these lands, therefore they are on the table for the Ag Sector to consider*).
 - 5.1.5.1.1. How could these lands be considered a crop or otherwise provide farmers a means to using these lands to participate in the carbon market and provide an incentive for keeping reserve lands in reserve?
 - 5.1.5.1.1.1. Changes in management practice with concern to reserve lands should be modeled.

- 5.1.5.1.2. Questions about where to set the baseline and attributing a value for practices that may have been in place prior to the establishment of a baseline need to be answered.
 - 5.1.5.1.2.1. The trick is to not set the baseline as such to discourage conservation practices that are in place now.
- 5.1.6. Inputs to GHG emissions from Ag practices in western Washington need to be defined.
- 5.1.7. Other potential emissions reduction/ energy efficiency actions such as creating a program to phase out old tractor engines and keeping them out of use could be considered.
 - 5.1.7.1. There is less information from a technical standpoint on energy efficiency options – this is a data gap that needs to be filled. The West Coast Collaborative has emissions data for agricultural diesel engines that could be tapped.
- 5.1.8. The goal of this Workgroup should be to identify a small list of low-hanging fruit, and to ensure that at least one of the actions is applicable to all areas in the state.

Next Steps and Agreements:

1. All scheduled meeting dates are now full day (10am – 4pm) face-to-face meetings in Moses Lake (one per month June – October).
2. The Workgroup is working under two competing forces – the desire to consider the full range of options in detail, with limited time to develop final recommendations. Therefore, recommendations will fall into two categories; 1) Near term actionable items and 2) Longer term actions that should be kept on the table for consideration, but for which significant data gaps exist that need to be filled before specific action recommendations can be made. All recommendations will point towards policy initiatives to support a carbon market.
3. The Ag Workgroup Co-Chairs will develop a “Roadmap” for this Workgroup, including a defined list of potential mitigation actions for discussion, drawing from the list identified as a result of last year’s TWG process. This Roadmap will provide direction and clarity to the Workgroup on where to focus their energy in the limited amount of time available. Workgroup members will be asked to review the list and prioritize potential actions for discussion and recommendation prior to the next meeting. The next three Workgroup meetings will then focus on those priority areas, with the goal of reaching consensus recommendations for each of the areas. Additional areas will be considered, time permitting.
4. Potential action areas identified at this meeting for further discussion were biochar, energy efficient pumps, precision farming, diesel engines, and reserve lands. These areas will be included in the Roadmap option list.
5. Ross and Associates will distribute links to various background materials on the Western Climate Initiative, last years TWG process, and related items for reference, per Workgroup request.

Public Comment

No members of the public provided comments at this meeting.

Next Meeting

The next Ag Sector Workgroup meeting will be held at Big Bend Community College in Moses Lake, WA on July 14. The meeting will focus on discussion and preliminary recommendations on at least two priority action areas.