

Agriculture & Forestry Advisory Panel Meeting

Meeting Teleconference - WebEx

19 October 2020

1:00 pm

At a Glance

- The Advisory Panel reviewed the work plan that was accepted by the Climate Action Council.
- The Advisory Panel discussed concepts for the development of recommendations to meet the goals outlined in the work plan.
- Each sector's workplan will be brought to the Climate Action Council for review at their November - December meetings.
- Subgroups were discussed by the panel in order to allow for deeper discussions and adequate time to discuss and develop recommendations.
- Information regarding meetings and materials can be found on – www.Climate.ny.gov

Present

WebEx: (74 total attendees including panelists and agency staff)

Advisory Panel:

Commissioner Richard Ball, Chair AGM; Michelle Brown, TNC; Samantha Levy, AFT; Robert Malmshaimer, SUNY ESF; Peter Woodbury, Jenifer Wightman (invited) Cornell University; Tom Gerow, Wagner Lumber Co.; Elizabeth Wolters, NYFB; John Bartow, Empire State Forest Products Assoc.; John Noble, Noblehurst Farms; Amanda Barber, Cortland SWCD; Julie Suarez, Cornell University; Nelson Villarrubia, Trees NY; Suzanne Hunt, HuntGreen LLC/Hunt Country Vineyards; Rafael Aponte, Rocky Acres Community Farm; Ned Sullivan, Scenic Hudson; Peter Lehner, Earth Justice; Donna Wadsworth, International Paper.

Absent: Peter Innes, DEC; Stephanie Morningstar, Northeast Farmers of Color Land Trust

Agency Staff:

David Valesky, Brian Steinmuller, (Presenter), Jennifer Clifford (meeting host), Lindsey McMahon, AGM; Suzanne Hagell, Willow Eyres, Jeffrey Mapes, Jason Drobnack, Gregory Mumby, DEC; Stephanie Wojtowicz, DOS.

Welcome

Commissioner Ball, NYS Department of Agriculture and Markets

Panel Member Role Call

Absences are listed above.

Final Workplan Review

Commissioner Ball, NYS Department of Agriculture and Markets

GOAL: Gain a full understanding of the panel’s final workplan including timeline for developing recommendations, conducting public meetings and process for cross-sector collaboration.

- **Section 3 – Goals**
 - o Greenhouse gas emissions reduction goals
 - o Carbon sequestration goals
 - o Goal to maintain and enhance the agriculture and forestry sectors in New York State
 - o Goal to capture greenhouse gas emission reduction potential by substituting New York State grown and produced products for imported fossil fuel intensive products.
- **Section 4 – Scope of Work include topics relating to:**
 - o The reduction of GHG from agriculture
 - o Land use conversions
 - o Forestry and forestry management, including reforestation and afforestation efforts
 - o Cross-cutting topics that will assist other sectors in NYS in meeting CLCPA goals
- **Section 5 – Plans for Public Participation**
 - o At least one public meeting in January
- **Section 6 – Timeline**
 - o Present recommendations to CAC in November/December meetings
- **DISCUSSION**
 - o John Bartow – Carbon Sequestration Goals should address forestry GHG emissions. Need a goal to reconcile the difference between biogenic emissions and geologic emissions, recognizing the important role of biogenic feedstocks in harvested wood products manufacturing. Cross Sector suggestion: Reduce fossil fuel use in the agriculture and forestry sectors in consultation with Energy Intensive & Trade Exposed Industries, Transportation and Power Generation Panels, and the Just Transition Working Group.

Recommendations

Brian Steinmuller, NYS Department of Agriculture and Markets

GOAL: Review goals and begin discussion about recommendations

- Over the next several meetings the panel will begin to develop recommendations
- Recommendations to achieve the goals outlined for this panel should be actionable mitigation strategies that can include the following:
 - o Development of new policies
 - o Revision of existing policies
 - o Research and development
 - o Incentive programs
- Recommendations should focus on the following topic areas:
 - o Agricultural emission reductions and sequestration
 - o Forestry protection, management, and sequestration
 - o Afforestation, woodland management
 - o Cross-cutting ideas with other panels
 - o Bioeconomy advancement

AGRICULTURAL LIVESTOCK MANAGEMENT

Enteric Fermentation

- Current levels are 12.46 mmt CO₂e/yr
- -2.1 mmt CO₂e/yr full emission reduction potential
- Mitigation Strategies: feed management improvements for dairy livestock
- Action Steps: Increase AEM planning, conduct research on new approaches (i.e. feed additives), increase technical assistance, provide financial incentive for management changes, others
- **Discussion:**
 - o Peter Woodbury – There is room for technical improvements to estimates from Carbon Farm Study.
 - o Can we demonstrate that more monetary support is needed for the Climate Resilient Farming Program and other existing initiatives?
 - Commissioner Ball - Current AGM programs are oversubscribed.
 - o Suzanne Hunt – Innovative financing will be imperative to financing innovation and develop markets. The government will not be able to finance this alone, how can the financial resources of the private sector be leveraged?
 - o Jennifer Wightman - NYS is exemplary for feed efficiency which has greatly reduced enteric emissions from dairy. NY milk production is efficient in terms of its GHG mitigation. These emissions reductions have been implemented because they save money and increase amount of milk produced. These are likely to be cost-effective to further improvement of efficiency.
 - Julie Suarez – The Capper study that shows that the dairy industry both nationwide and statewide has made significant strides in reducing its carbon footprint through greater efficiencies - which include a reduction in density of animals. Julie indicated she would post that study in SharePoint. It's important to see how much the industry has done in reducing its carbon footprint over time.
 - o Peter Lehner - How can we produce less methane on-farms? Can fewer animal numbers or changing management practices lead to less methane production? Can we take a bottom up approach and ask farmers what they need to achieve these goals?
 - o John Noble - Grow NY is an example of incentivizing innovation that could be used as a framework for other programs.
 - Julie Suarez - <https://www.grow-ny.com/finalists/> Here's one finalist Crystal Clear Organics that's developing a technology to remove phosphorous from liquid manure to repurpose it as a fertilizer. If this works - how do we deploy this technology (or others) statewide & commercialize it in a way that makes sense for the farmer to profit from it?
 - o Amanda Barber – Proven practices should be pursued first to meet near-term goals.

Manure Management

- Current levels are 7.65 mmt CO₂e/yr
- -4.33 mmt CO₂e/yr estimated full emission reduction potential
- Mitigation Strategies: manure storage cover and flare systems, improved manure management strategies and storage facilities
- Action Steps: Increase funding for the Climate Resilient Farming (CRF) Program and associated programs to incentivize implementation through public cost-share. Partner with NYSERDA, DEC, and others to assist farms to enhance these projects with anaerobic digestions systems and renewable natural gas opportunities to improve the economics of the system and replace fossil fuel emissions. Encourage new manure storages funded through the AgNPS Program to incorporate methane abatement strategies including retrofit capacity. Others?
- **Discussion**
 - o Important to consult farms who deal with high amounts of manure on the feasibility of new ideas.
 - o Peter Lehner - Potential strategy is to de-water manure allowing for the drier product to be composted or used as fertilizer on fields and the water to be safe to return to waterways
 - o Peter Lehner - Methane abatement such as flaring can cause other pollutants to be released, unintended consequences of recommendations must be weighed
 - o Need to be cautious of the capital-intensive nature of investing in new equipment that might lock smaller or financially fragile operations into a single innovation when more advancements might be available shortly
 - o Jenifer Wightman - There is separation of solids/liquids. Wightman noted that aerobic (dry) conditions facilitates N₂O emissions (268x as potent). Anaerobic (wet) systems retain the N and increases the methane (84x as potent but a lot more feedstock). In the near term, we have >500 point-sources of large volumes of manure. This cover and flare system have multiple co-benefits and is a real near-term solution to reduce large amounts of CH₄ while retaining the N in the liquids that can be very effective way in spring application when the plants can take it up most effectively.
 - o Julie Suarez – A lot of farmers are screening manure for dry solids and utilizing it as dry cow bedding. See link here for some R&D and extension.
<http://cwmi.css.cornell.edu/bedding.htm>
 - o Amanda Barber -If there are 4000 dairy farms in NY, and only 500 manure storage structures, what are our strategies for the rest of the farms?
 - o Julie Suarez - Smaller dairies may experience a push to add storage for water quality purposes which may or may not be the right strategy long term for the farm or for the environment or for the rapidly evolving technologies. I'm, for instance, very interested in pyrolysis technology (mobile) at some point on farms in NYS and whether that could be widely deployed. It would help spread manure out to soils that need it - in the form of biochar - and help significantly with water quality. The technology is probably not quite there yet, from a regulatory perspective what do farms do in the meantime while they're awaiting technology innovation.

AGRICULTURAL SOIL MANAGEMENT

Nitrogen and Fertilizer N₂O

- Current levels are 2.93 mmt CO₂e/yr
- -0.2 mmt CO₂e/yr full emission reduction potential
- Mitigation strategies: strategic nutrient management planning and efficient fertilizer use and application
- Action Steps: Increase AEM planning, increase technical assistance to farms and provide incentives
- **Discussion:**
 - o There is potential for co-benefits with water quality here
 - o Could potentially look at the use of time release fertilizers
 - o Julie Suarez - The NMSPEAR program has evaluated new innovative technologies and focuses on utilizing manure-based fertilizers as effectively and efficiently as possible given our dairy industry in NYS. They are now working a lot with various drone technology to provide farmers with better tools to estimating when their crop needs fertilizer in a more science-based way rather than guessing based on prior years of applications.

Soil Carbon Management

- -1.47 mmt CO₂e/yr full sequestration potential
- Mitigation strategies: adoption of cover crops and increase in perennial crop use
- Action steps: Increase Climate Resilient Farming Program and AgNPS funding, increase technical assistance, provide advanced quantification and measurement tools, advance perennial grain production, convert annual crop land to perennial pasture
- **Discussion:**
 - o Would encourage that producers stack these practices to focus on several co-beneficial strategies at once
 - o Emphasize benefits of agroforestry and silviculture
 - o Examine the cost of converting land to development
 - o Where would food processing or manufacturing fit into this picture?
 - o Can we make sure barriers to all recommendations are addressed?
 - o Amanda Barber - If we can assign a value to carbon sequestration and emissions reductions, then we can start to assess cost/benefit and the need to improve/change delivery or to promote/incentivize management changes.
 - o Tom Gerow – How can we engage more practitioners in the conversation? Further, emphasized importance of peer-reviewed research as opposed to anecdotal information. There is a need to ensure that there is adequate research being done, which echoes comments from previous meetings.

CROSS-CUTTING TOPICS

- Cost and innovative financing, market availability, government or private funding
- The role of energy crops, mass timber, etc. in forming a bioeconomy

- Energy siting, emissions, production and distribution, food waste and waste-based fuel production
- Land use and local government issues
- Wetlands
- **Discussion:**
 - o Can workforce retention and job creation be emphasized?
 - o Can a threat analysis be performed so that we are anticipating future barriers like supply chain issues?
 - o The Carbon Cycle Institute might be a good resource to explore further
 - o Could goals be defined that establish a standard for soil health such as there is for water quality?
 - o Can the marketability of food produced using “green” methodologies be emphasized i.e. innovative labeling like Climate Neutral Food? Cannot allow it to provide inequality in food system if label leads to more expensive products in stores.
 - o Could popular language such as “circular economy,” “industrial ecology,” “rural to urban,” etc. be included so that other panels easily identify areas where our ideas potentially align with theirs?
 - o The visibility of farming practices needs to be increased so that consumers see that even conventional farms are sustainable in many ways

POTENTIAL SUB-GROUPS

- Organizing as sub-groups will be useful. From today’s discussion and previous discussions about this specific portion of the work plan, groups could focus on the below:
 - o Agro-forestry, including ally-cropping, Silvopasture and forest buffers
 - o Livestock and dairy management, including manure management and renewable natural gas (RNG) development
 - o Nutrient management and regenerative agriculture, including soil health and grazing land management
 - o Land use conversions, including forest and farmland protection/access and wetlands
 - o Forestry and forest management, including forest regeneration, afforestation, reforestation and harvested wood products
 - o Bioeconomy, including energy crops

Next Meeting

The next meeting is scheduled for November 2nd. The next few upcoming meetings will be scheduled in advance to allow people to reserve space on calendars. A sub-group sign up will also be sent around.

Meeting concluded at 3:08pm

Please contact Peter Innes, NYSDEC; Deputy Commissioner David Valesky (AGM) or Brian Steinmuller, Assistant Director of the Division of Land and Water Resources (AGM), if you have questions.

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