

Agriculture & Forestry Advisory Panel Meeting

Meeting Teleconference – WebEx

March 2, 2021

Start time 1:00pm

At a Glance

- Five complete draft recommendations were discussed by the panel on manure management, feed management, soil health, nutrient management and agroforestry.
- Two key enabling measures for the five agricultural recommendations were discussed, highlighting planning support and measurement & baseline development.
- Summary recommendations to the Land Use & Local Government panel on adaptation and resilience were reviewed by the panel.
- The Next advisory panel meeting will be on March 16th at 1pm ET to discuss recommendations from the bioeconomy, forestry, and avoided conversions sub-panels

Information regarding meetings and materials can be found on – www.Climate.ny.gov

Feedback can be submitted at any time by emailing agriculture.forestry@agriculture.ny.gov.

Present:

WebEx: (88 total attendees including panelists, agency staff and the public)

Advisory Panel:

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

Absent: Stephanie Morningstar, Northeast Farmers of Color Land Trust; Julie Suarez, Cornell University;; Nelson Villarrubia, Trees NY.

Agency Staff:

Greg Albrecht, Bethan Bzduch, Jennifer Clifford, Scott Fickbohm, Kevin King, Lindsey McMahon, Brian Steinmuller, David Valesky **AGM**; Ian Crisman, Jason Drobnack, Suzanne Hagell, Laura Heady, Maureen Leddy, Jeffrey Mapes, Timothy Wenskus, Stephanie Wojtowicz, Randall Young, **DOS**; Brendan Hannon, Laurie Machung, George Profous **DEC**; Christopher Eastman, Anarupa Roy **DOS**; Elisabeth Lennon, **DOT**; Giovanni Holmquist, **ESD**; Hillel Hammer, Stephen Hoyt, Kathleen O'Connor, Ziggy Majumdar, Chenxi Zhu, **NYSERDA**.

Welcome

Commissioner Ball, NYS Department of Agriculture and Markets

Panel Member Rollcall

Absences noted above

Public Participation

To submit feedback to Panel Members and agency staff during the meeting, members of the public can use the WebEx Chat function. Questions and comments issued by the general public during the meeting will be collected but not directly responded to during the meeting. Feedback can also be submitted at any time by emailing agriculture.forestry@agriculture.ny.gov.

The next meeting of the Agriculture & Forestry Advisory Panel will be March 16th at 1:00pm ET. For more information visit <https://climate.ny.gov>.

Alternative Manure Management

Brian Steinmuller, NYS Department of Agriculture and Markets

Brian Provided an overview of the Alternative Manure Management recommendations, highlighting key impacts, specific initiatives, and costs. The recommendation centered on supporting farm-specific measures to mitigate methane emissions with manure management through infrastructure, education and technical assistance.

Overview:

- In the short term (2030) the subgroup expects medium to high GHG reduction potential with high reduction potential by 2050
- Manure management can build off of existing programs and practices under way in New York state and take advantage of more advanced technology in the future.
- Expanded funding for agricultural programs including NYS Climate Resilient Farming (CRF), Agricultural Non-Point Source Abatement and Control (AgNPS) and NYSERDA (for energy production) provides an opportunity for overcoming potential barriers to the initiative.
- Further research is needed to refine technical monitoring and verification around methane impacts for manure management.
- Increased technical assistance, training and direct support for farmers will play a notable role in directly in implementing farm-specific measures.
- Noted the potential for providing higher percentages of cost-share resources to disadvantaged communities to help facilitate the transition.
- Highlighted the opportunity for manure management to elevate local food production and resilience while diminishing local pollution and contaminants.

Discussion & Comments:

- How can mid-sized farms approach manure management effectively?
 - The sub-panel has been looking at how to address situations where farms have manure management systems in an anerobic state where methane is emitted. If you don't have manure storage, you likely don't have methane creation from manure.
 - As more farmers transition to storage rather than daily spreading, we will work to facilitate storage in ways that either do not produce methane or have technologies to mitigate methane.
- The sub-panel has discussed the proper siting of community digesters as a way smaller farms could contribute to methane management.

- The cost assessment is a broad estimate based off the carbon farming study. It sits somewhere within the range of \$250m to \$1bn over 30 years when considering current and future solutions and technology.
- Several panelists noted their support for including organic, waste-generated biogas as part of the renewable energy definition in line with the International Panel on Climate Change (IPCC) and International Energy Agency (IEA).
 - This is still subject to some consideration and discussion.
- Panelists noted that there is also ongoing discussions to collect better, more detailed data on the number of farms in disadvantaged communities, the demographics of farmers in the state, and the experience of minority farmers.
- There has not yet been specific discussion on regulation. The recommendations focus more on incentive structures, investment, and existing programs over regulation.
 - It was stated that we are not looking to add additional burdens on these agricultural industries and would not be in favor of regulations unless it included clear mechanisms for compliance support.
 - The CLCPA language around regulating emissions from livestock does not prevent limiting methane from manure. The DEC already regulates combustion emissions from digesters.
 - Tying regulation to performance could be a method for ensuring that the public receives the climate benefits. For example, ensuring that a biodigester that is supplying renewable energy meets leakage requirements could be a prerequisite for financial support.
- Panelists noted the need to identify where the money will come from to support further expansion of funding for specific programs.

Precision Feed & Forage Management

Brian Steinmuller, NYS Department of Agriculture and Markets

Brian provided an overview of the recommendations for Precision Feed & Forage Management. The discussion focused on reducing enteric fermentation methane and nitrous oxide emissions from more targeted feed particularly for dairy.

Overview:

- The solution is likely to be a low-cost (under \$250m over 30 years) effort with medium emissions impacts on the short and long term.
- Precision feed management builds upon existing programs and practices in farms but requires continued and enhanced training and outreach for farmers and industry.
- Additional research is needed to identify opportunities for further efficiency in specific management strategies, such as feed additives, and improve monitoring and decision tools on farms.
- A payment for ecosystem services program could be established to provide incentives for maintaining practices that mitigate GHG emissions.
- Increased planning, technical services, and financial assistance for precision feed management will be required to ensure that these services benefit disadvantaged communities.
- The Climate Justice panel is working to provide data around disadvantaged communities to support the efforts to target these communities.
- Further workforce support is needed to enable these recommendations.

Discussion & Comments:

- Panelists suggested enhancing funding for County Soil and Water Conservation Districts to support their capacity and work as part of this and other solutions.
- Panelists suggested that the language linking feed management efforts to increased local food production outcomes be clarified.
 - It is found that this deliberate management results in higher production and yield, particularly for dairy.
 - Enhanced profitability and efficiency results in higher returns for lower investment.
- The normal modes of education and information dissemination may miss certain populations. The statement around improving access reflects the need to ensure that all farmers have the opportunity to take part in these practices and programs.
- Payment for ecosystem services is being discussed in terms of ecosystem services rather than just carbon sequestration to acknowledge the linkages between different systems and broad environmental benefits.
 - Payments for ecosystem services on farms should also be scaled to forests.
 - Panelists requested that the language around precision feed management be expanded to ensure it applies to smaller ruminants and camelids.
 - While the current recommendation implicitly includes smaller animals and non-bovine ruminants, larger dairy is often central because it represents the larger source of emissions.
- It is important to not assume equal access to outcomes. Out of all the farmers in the state there are only 137 registered black farmers in NY state. If they are not operating a dairy, there is no net benefit for them to engage in this program. There should therefore be other mechanisms for them to benefit from the practices that they are engaging in. It may also be reasonable to have a set-aside of support for minority farmers.
- It is likely that there is low uptake of support programs among Black, Indigenous, People of Color (BIPOC) and minority farmers. There is a need to put resources for outreach and ensuring that these farmers can participate and benefit in the programs.
 - The panel needs to question assumptions on how outreach is conducted to ensure blind spots are addressed.
- Language around payments for ecosystem services could be shifted to be “payment for practices” to enable faster validation of implementation, and simple payment mechanisms.

[Soil Health \(Regenerative Agricultural Practices\)](#)

Brian Steinmuller, NYS Department of Agriculture and Markets

Brian provided an overview of the Soil Health recommendations. The recommendations focus on reducing net GHG emissions, but primarily increased carbon sequestration through the adoption of soil health management practices.

Overview:

- In the short term, these practices are likely to have low GHG reduction potential with increased reduction potential as new practices are brought online in the future. However, it was noted that soil health/regenerative agricultural practices have many co-environmental benefits beyond carbon sequestration.
- For the implementation of these soil health management practices, adoption is thought to be relatively easy, leveraging existing programs and furthering standards, measurement, verification and quantification presents a significant challenge.

- There is significant need for research to measure and quantify benefits and impacts as well as to establish a baseline to support soil health goals going forward.
- Sustainably increasing the efficiency of productive agricultural land can take the stress off more marginal lands, referred to as sustainable intensification.
- Payments for ecosystem services mechanism may enhance long-term adoption of soil health practices. This could be piloted through public funding to provide payments for practices with the framework serving as a foundation for potential private investments.
- Expanded support for education, outreach and visibility of soil health practices will help engage customers as well as promote best practices among farmers.
- A similar emphasis exists for connecting disadvantaged communities with soil health resources as well as the opportunity to connect these communities with the additional benefit of improved food outcomes and high-quality crops from healthy soils.

Discussion & Comments:

- It is important to lean on existing modeling tools and research to develop a baseline for payments for ecosystem services, particularly as additional measurement and verification tools are developed.
- Valuing not just sequestration but also carbon storage could help farmers that have been using these practices long term.
- Panelists noted the need to further consider the role of rented land in soil health. Landowners would likely receive the benefit of a payment for ecosystem services program rather than renters.
- The panel discussed the private carbon farming markets currently being established nationwide. Panelists emphasized the role of the state in preparing farmers for these markets while ensuring that benefits remained within New York.
 - If a landowner participates in a market whereby their offset is used in another state, then the benefit of that farm may not be counted toward New York's carbon goals.
 - Panelists suggested considering mechanisms such as carbon banks to ensure that the state receives the benefits of the incentives and marketplaces that involve in-state farmers.
 - In the short-term, it may be useful for farmers to receive funding for practices through these markets. However, the contracts facilitated by these markets are often 20+ years, particularly for forest landowners.
- Panelists expressed some concerns around funding for practices coming from compliance markets as opposed to voluntary markets. Compliance markets are perceived as opportunities for companies to avoid necessary emissions reductions while voluntary markets enable firms to go beyond their commitments for emission reductions.
- Panelists discussed the language of the payments for ecosystem services recommendation, noting the need for specificity around carbon sequestration while also acknowledging the need to maintain a holistic approach.
 - Many people are looking to agriculture and forestry to sequester the 15% of emissions that cannot necessarily be mitigated.
 - Panelists suggested that the language around adoption be updated to reflect "long-term adoption" to promote the sequestration practices.
- Panelists suggested that recommendation to expand education and improve visibility to the public around practice adoption include education at the point of sale to help customers understand the practices involved in products they are purchasing.
- The state is under budget constraints, so it is essential to identify funding sources and opportunities for cost savings or creating new revenue streams to support expanding funding to these programs.

- Statewide legislation for soil health may be valuable to consider as a mechanism for adopting soil health.

Nutrient Management

Brian Steinmuller, NYS Department of Agriculture and Markets

Brian provided an overview of the second proposed recommendation for nutrient management subgroup. The recommendation focuses on reducing nitrous oxide emissions while achieving target crop yields.

Overview:

- The strategy is considered to be low cost with a low-medium emissions impact in the short term and medium-high emissions impact in the long term.
- Equipment for nutrient management poses a significant barrier, so support for planning, access, use and maintenance is important.
- Nutrient management tends to be low visibility, so further support for public awareness and engagement may be important.
- The strategy emphasizes technical assistance from key partners, including SWCDs, custom farm service operators, and others.
- Payment for ecosystem services could play a role in the nutrient management solutions.
- USDA-Natural Resources Conservation Service (NRCS) is included as a partner in all of these initiatives.

Discussion & Comments:

- Some panelists suggested convening a discussion to specifically consider funding sources and cost-savings opportunities.
 - There is a need to consider funding but given the extent of the unknowns and the long-term nature of the plan, concrete funding plans is not as crucial to the role of the panel at this point in the process.
- Panelists inquired as to how do these recommendations align with private industry and suggested further incentivizing for private industry.
 - Many of the recommendations are “all hands-on deck” sort of efforts, providing data and support across stakeholders to support the transition.

Agroforestry

Brian Steinmuller, NYS Department of Agriculture and Markets

Brian provided an overview of the Agroforestry recommendation focusing on methods to add trees to areas of agriculture production to reliably increase carbon sequestration and other co-benefits.

Overview:

- The strategy is believed to be low cost, while also having low or low-medium emissions impacts over the short and longer term respectively.
- A goal for the number of acres adopting specific agroforestry practices may be a useful benchmark for implementation.
- Expanding existing programs, such as Climate Resilient Farming, AgNPS, and the Trees for Tributaries Program will continue to play a significant role in implementing this recommendation.

- Field trials for alleycropping and silvopasturing will help demonstrate the impacts of these practices.
- Payment for ecosystem services could also play a key role in helping promote agroforestry practices.
- Ensuring long-term land practices will require assisting farmers to secure long-term leases and outreach to lenders and landowners alike.
- Taking a holistic approach to connect farms with the co-benefits of agroforestry through careful planning and technical assistance will be central.
- While the overall impact to emissions sequestration may be small, agroforestry practices provide a high level of sequestration to the acre and potentially consistent and reliable benefit to farmers.

Discussion & Comments:

- The assessment of low and low-medium GHG impacts reflects the level of sequestration potential and is meant to not double-count the benefits from other forestry efforts.
- Under the time constraints of the panel process, specificity around GHG impacts for each recommendation is not realistic. Creating an informed estimate is what is expected, and refinement will take place as the process progresses through the year.
- Panelists expressed concern that the CAC will have to select the practices that are the most cost-effective. By this metric, many of these panel recommendations may not stack up to power generation, transportation and other energy related strategies. It was noted that agriculture and forestry solutions are considered long-term solutions with many co-environmental benefits.
 - The law requires that the scoping plan outline how to reach the carbon neutrality goals. Strategies that are sequestration-focused will be essential to fulfilling that requirement.
- Panelists inquired as to how decisions will be made at the CAC for prioritizing the recommendations and what will make it into the plan.
 - Each of the panels are consolidating and refining the subpanel's recommendations. Staff will assist panel chairs in reviewing and refining panel-level recommendations prior to submission to the CAC. The CAC will discuss and debate which recommendations to prioritize. Cost and impacts will be one component of that discussion but not the exclusive metric. An integration analysis will then be conducted, resulting in requests for additional information, potentially requiring additional recommendations or further points of research. This will all then be included in the draft scoping plan.

Enabling Strategy - AEM Planning

Brian Steigmuller, NYS Department of Agriculture and Markets

Brian provided an overview of the key enabling recommendations that may not directly result in greenhouse gas reductions but would facilitate reductions and provide better tracking, measurement, and reporting. The first strategy discussed was the recommendation to provide additional support for AEM planning for climate mitigation/adaptation and management and to further engage with farmers on reducing their GHG emissions and increasing sequestration capacity.

Overview:

- Careful consideration will need to be given to maintain an emphasis on water quality and soil health planning alongside GHG planning.
- There will also be the need to balance planning with funding to support implementation of plans.
- The recommendation includes forming a technical advisory panel to define planning goals, outcomes, and develop planning protocols.

- The recommendation also leans heavily on communication and educational outreach to help connect farmers with the planning support.
- The technical advisory panel would be expected to maintain regular updates to the scientific basis of the planning framework.

Discussion & Comments:

- There is a USDA guideline available that provides information with some case studies relevant to this recommendation. It will also be important to look to the work of other states.

Enabling Strategy - Benchmarking & Monitoring

Brian Steinmuller, NYS Department of Agriculture and Markets

Brian discussed the enabling measure of supporting a long-term, annual monitoring and benchmarking program to provide detailed data collection and measurement for on-farm sequestration. This would include the establishment of funding for annual data collection, standardizing of data collection, and delivery of meaningful data to key stakeholders.

Overview:

- The effort to monitor, measure, and benchmark on-farm impacts would require somewhere around \$25m-\$100m over the next 30 years to support staff and program overhead for monitoring and measurement.
- The use of farm incentives and public-private partnerships may prove useful in facilitating the roll-out of monitoring and measurements.
- The strategy would involve establishing a benchmarking and monitoring program to facilitate ongoing data collection on an annual basis.
- Data collected from this recommendation need to be delivered to farmers and stakeholders to help in key decision-making, not just public policy.

Adaptation and Resilience Strategy Summary

Brian Steinmuller, NYS Department of Agriculture and Markets

Brian discussed the adaptation and resilience strategies being considered for delivery to the Land Use and Local Government (LULG) panel. The LULG panel is responsible for compiling these recommendations for adaptation and resilience across the panels. Brian highlighted the watershed scale flood mitigation and protective measures strategy noting that it encompasses efforts beyond that of the agriculture and forestry panel.

Subgroup Status

Maureen Leddy; Jason Drobnack; Jeffrey Mapes, NYS Department of Environmental Conservation

Maureen, Jason, and Jeff noted a number of recommendations that the bioeconomy, forestry, and avoided conversions subgroups are considering and will present to the panel at the next panel meeting. Presenters noted the intention of circulating draft recommendations to the panel ahead of the March 16th meeting.

Next Steps

March 2nd 10:00am: Cross-Panel meeting on Renewable Energy Siting

March 16th 1:00pm: Next Agriculture & Forestry Panel meeting

Meeting concluded at 4:00pm

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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