New York State Climate Action Council

Agriculture and Forestry Advisory Panel

November 18, 2020

Meeting 5

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Agenda

- Welcome
- Roll Call
- Agricultural GHG emission reduction/sequestration recommendations
- Land conversions and forestry and bioeconomy related sequestration recommendations
- Recap and next steps
- Set next meeting date

Recommendations

Agricultural – Livestock Management: Enteric Fermentation

Rationale: Reduce methane emissions by an estimated 2.1 mmt CO2/year by increasing precision feed management (PFM) planning and implementation, conducting/reviewing research on novel approaches (e.g. feed additives), advancing information, training, outreach and technical assistance to livestock producers at various scales.

Equity considerations: Increasing planning and technical services improves access to programs and effective practices for all farmers. Improvements in food production capacity, resiliency and diversity have a positive effect on communities. These practices reduce methane emissions and have many co-benefits, e.g. local food production/security and water quality, which benefits communities throughout the watershed and foodshed.

Potential implementation challenges: Expanding/advancing precision feed management have up front costs to farmers. Further investments in applied research, education, continued feed industry engagement, improved diet planning, feed and forage management, and implementation is needed. The practice demands sustained implementation for continued benefit. CH4-reducing feed additives require more applied research to gauge efficacy, and some may require FDA review/approval. Need more surveys/pilots to benchmark and demonstrate ways to improve profitability while improving PFM (what's involved, who's involved, how frequent is the process, what is measured and how?).

Recommendations

Agricultural – Livestock Management: Enteric Fermentation cont.

Issues to explore: PFM has largely been driven by Cornell University research/extension and market forces (feed is largest input cost to dairies) and will likely continue as such. Track other panels progress on mechanisms to spur private investments and outcome driven payments to farms (seeking opportunities for incentives to farms with long records of PFM adoption as well as farms in early adoption stages).

Additional thoughts: Develop a "Carbon" Farm Plan template through AEM. Continue to implement PFM through water quality programming. National Milk, DFA, etc. have goals for dairy farms to be net zero by 2050 regardless of state initiatives. The state should coordinate and track progress toward this goal by developing planning, implementation, and evaluation methodology.

Recommendations

Agricultural – Livestock Management: Alternative Manure Management

Rationale: Reduce methane emissions by an estimated 4 mmt CO2/year by implementing cover and flare systems, anaerobic digesters and other systems that abate, collect, capture and combust methane from manure storages.

Equity considerations: Increasing planning, technical services and financial assistance improves access to programs and effective practices for all farmers. These systems can improve community relations by reducing odors from the storage, and increase resilience to extreme precipitation events preventing water quality concerns by reducing the risk of overtopping.

Potential implementation challenges: Upfront cost to farmers. Milk pricing and other economic impacts can affect a farm's ability to participate in cost-share programs. Further technical assistance and engineering required for retrofitting current storages and planning new projects. SWCD, private planner, and private engineering capacity must be addressed to increase number of systems being implemented.

Recommendations

Agricultural – Livestock Management: Alternative Manure Management cont.

Issues to explore: Increasing funding for methane reduction through the State's Climate Resilient Farming Program. Using a stepwise approach to implementation that focuses on projects that are ready for implementation while engaging in research on innovative approaches to manure management and supporting implementation of emerging technologies (such as dewatering manure) in the long term.

Additional thoughts: Develop a "Carbon" Farm Plan template through AEM. Explore innovative financing and private sector funding mechanisms for these projects. Work with other panels to determine if policies will be developed that create a market for manure based methane for fossil fuel displacement (heat, electricity, transport fuel).

Recommendations

Agricultural – Nutrient Management to reduce Nitrous Oxide Emissions

Rationale: Reduce N2O emissions by an estimated .2 mmt CO2e/year through continued and expanded nutrient management planning and implementation.

Equity considerations: Increasing planning and technical services improves access to programs and effective practices for all farmers. Improvements in food production capacity, resiliency and diversity have a positive effect on communities.

Potential implementation challenges: This is an active area of applied, on-farm research, which continues to advance nutrient management guidelines and tools for use by planners, the fertilizer industry, and farmers. It hinges on applied research, training, industry technical assistance, management effort, and technology. The practice demands sustained implementation for continued benefit.

Recommendations

Agricultural – Nutrient Management to reduce Nitrous Oxide Emissions cont.

Issues to explore: Crop insurance to cover risk of innovating or insurance discounts with verified N reduction practices. Explore the feasibility of establishing N efficiency crop contest to promote farmer to farmer adoption of N use efficiency while maintaining/increasing crop yields.

Additional thoughts: Nutrient management is a key water quality as well as GHG emission reduction practice. The 4R NY Nutrient Stewardship Certification Program (private sector initiative) will likely continue to drive adoption of nutrient management. Investments may increasingly lead to 4R as standard practice and market driven. Need to make steps taken by farmers that implement nutrient management visible to consumers.

Recommendations

Agricultural – Soil Health (regenerative agricultural practice adoption)

Rationale: Increase carbon sequestration by an estimated 1.47 mmt CO2e/year with the adoption of soil health management

Equity considerations: Increasing planning, technical services and financial assistance improves access to programs and effective practices for all farmers. Improvements in food production capacity, resiliency and diversity have a positive effect on communities. These practices have the potential to elevate local food production, water quality, air quality, storm/flood mitigation, public infrastructure protection, drought resiliency, habitat, scenic vistas/tourism, economic development and jobs.

Potential implementation challenges: Uncertainty in potential mitigation and impermanence of increasing soil carbon. Difficulty in verification. Equipment affordability and access. Planting windows for cover crops – highly dependent on weather conditions throughout the growing season. Practices require sustained adoption to realize benefit.

Recommendations

Agricultural – Soil Health (regenerative agricultural practice adoption) cont.

Issues to explore: Explore the possibility of establishing a Payment for Ecosystem Services (PES) mechanism that will provide incentives to farmers for verified outcomes rather than focusing only on cost share for implementation of specific practices.

Additional thoughts: Create incentives to keep perennial vegetation from converting to annual cropping or other systems with higher GHGs. Provide additional points through competitive programs and higher incentives for stacking practices, (e.g. cover crops with no till, rolling/crimping cover crop). Develop a “Carbon” Farm Plan template through AEM.

Recommendations

Agricultural – Agroforestry, including silvopasture, alley cropping & forest buffers

Rationale: Incorporating trees into areas of agricultural production (agroforestry) have the potential to reliably increase carbon sequestration and have numerous other environmental benefits.

Equity considerations: Increasing planning, technical services and financial assistance improves access to programs and effective practices for all farmers. Improvements in food production capacity, resiliency and diversity have a positive effect on communities. These practices have the potential to elevate local food production, water quality, air quality, storm/flood mitigation, public infrastructure protection, drought resiliency, habitat, scenic vistas/tourism, economic development and jobs.

Potential implementation challenges: Upfront costs and learning curve due to rarity in adopting certain agroforestry practices in New York State. Potential for loss income with practices such as riparian forest buffers. Cultural shifts and more research needed into combinations of species, effective management, pilot projects, field trials, market analysis needed before a farm is likely to adopt agroforestry practices.

Recommendations

Agricultural – Agroforestry, including silvopasture, alley cropping and forest buffers cont.

Issues to explore: Explore the possibility of establishing a Payment for Ecosystem Services (PES) mechanism.

Additional thoughts: Establish more applied research, field trials, and education on agroforestry practices and techniques. Create a funding track for agroforestry through CRF that provides both technical design services and implementation cost-share. Continue to emphasize riparian forest buffers as an important water quality practice. Develop a “Carbon” Farm Plan template through AEM.

Recommendations

Land Use Conversions – Agricultural Protection and Access

Rationale: Maintain land base for food production, reduce sprawl development, sequester and store carbon, and avoid vehicle travel emissions associated with development.

Equity considerations: Farmland access and affordability to beginning farmers

Potential implementation challenges: Expanding funding, ensuring farmland protection planning is enhanced at the municipal level and conservation easement implementation is streamlined

Issues to explore: Intergenerational transfer and farmland access; Leasing state land to new farmers; Incentives for farmers to lease or sell land to qualified farmers; Comprehensive plans; Farm succession and farmland access programs; Current use taxation

Additional thoughts: Targeting programs for highest impact

Recommendations

Land Use Conversions – Forestry

Rationale: Maintaining the land base of forestland will help ensure that NY's forest continue to sequester and store carbon for the long-term ..

Equity considerations: Job recruitment and training, land availability and access

Potential implementation challenges: Funding, Legislation, Home Rule

Issues to explore: Expanding land conservation efforts through conservation easements and fee acquisition by government or non-profit entities; Forest tax law changes; Supporting forest landowners; State requirement for forestland to be considered in local comprehensive plans; Statewide Community Preservation Act

Additional thoughts: Targeting programs for impact

Recommendations

Forestry – Urban Forestry

Rationale: Increase percentage of tree canopy in urban and settlement areas to provide substantial carbon benefits. Utilize urban wood created from construction, deconstruction, regular maintenance and events (weather and forest health) to reduce waste and costs while storing carbon.

Equity considerations: Job training and recruitment, gentrification

Potential implementation challenges: Funding, planting and maintenance resources, coordination of effort

Issues to explore: Increase planting and maintenance efforts, Public land vs Private Land, Invasive species impacts, Coordination role, Communication and education, Reuse programs – building supplies, Community benefit from vacant land

Additional thoughts: Targeting programs for impact

Recommendations

Forestry: Increase statewide afforestation/reforestation efforts

Rationale: Increasing the afforestation and reforestation efforts statewide will increase carbon sequestration and provide numerous co benefits. Up to 3 metric tons CO2 e per acre per year.

Equity considerations: Workforce development and training opportunities. Increasing forestry sector workforce to meet demand for services.

Potential implementation challenges: Scale, land availability, costs, short and long term maintenance, deer, invasive species, statewide nursery capacity, and workforce availability

Issues to explore: NY Tree Corp, increasing statewide nursery capacity, and developing financial incentives for landowners. Expanding current programs. Creative financing to reach max acres

Additional thoughts: Make it easy for landowners to establish and maintain forests, Need to identify acres, species selection important

Recommendations

Forestry: Scale up improved forest management to maintain and increase carbon sequestration

Rationale: Improved forest management for forest carbon will help New York' forest land sequester more carbon than the current baseline. Scaling up and delivering these practices to provide forest landowners is critical.

Equity considerations: Supporting the economy through forest sector job creation

Potential implementation challenges: Legislative, scale and delivery of programs, available workforce, budget impacts for locals and state, ease of use for landowners, and public knowledge of forestry and forest carbon

Recommendations

Forestry: Scale improved forest management to maintain and increase carbon sequestration cont.

Issues to explore: Monetize forest carbon, increase forestry technical/stewardship services, integrate forest carbon management into existing programs, reform 480a or develop new incentives. Enhancing/protecting regeneration through deer and invasive management. Role of forest product markets and private forestry services. Improve public outreach and knowledge of forestry to public

Additional thoughts: More boots on the ground, Landowner values vs program needs, Co-benefits can outweigh carbon benefit, NY Green Bank, Family Forest Carbon Program, Role of urban forests

Recommendations

Forestry: Develop incentive to increase the manufacture and use of NY grown forest products

Rationale: Retaining and expanding local forest products markets provide forest landowners with the financial tools to keep and manage their lands and a carbon substitution benefit.

Equity considerations: Workforce development and training opportunities. Increasing forestry sector workforce to meet demand for services.

Potential implementation challenges: Price of wood, Business climate in NY, Perception of forestry and forest industry.

Issues to explore: NY Grown and Certified, Incentives, Reform Right to Practice Forestry Law, building codes, outreach to builders, planners and architects, state procurement preferences, using more wood generally and using creative financing

Additional thoughts: Define and prove sustainability for the public. People like wood, Tell the story.

Recommendations

Forestry: Incentives and regulations to ensure professional forest management

Rationale: To deliver effective forest carbon management a base level of training, certification or licensing should be established for forestry professionals

Equity considerations:

Potential implementation challenges: Legislative, unintended consequence of making it more difficult for landowner to find forestry services

Issues to explore: Requiring certification/licensing for loggers and foresters who work under state programs/contracts, incentives/regulation for using a certified or licensed professional during a harvest, carbon certification, defining a forester in NYS, requiring a timber sale contract on harvest

Additional thoughts: Needs further development.

Recommendations

Forestry: Develop incentives and regulations for harvest and harvested wood product reporting

Rationale: Harvest wood products produced from sustainably managed lands provide a carbon benefit.

Equity considerations:

Potential implementation challenges: Legislative, lack of support,

Issues to explore: More robust reporting system than voluntary TPO, Connect reporting to HWP incentive for industry, general harvest location, etc

Additional thoughts: Needs lots more discussion. What is need under CLCPA for industry to get credit?

Recommendations

Bioeconomy

Rationale: Enhancing the markets for sustainably-harvested, NY-grown products can provide direct benefits in the State, such as through carbon sequestration, as well as indirect benefits through the substitution bio-based products for fossil fuels based products.

Equity considerations: Workforce development opportunities

Potential implementation challenges: Existing economic challenges, a lack of commercial viability

Issues to explore: How to maintain current industries while reducing emissions and facilitating growth in new areas, including through State procurement policies, incentives for buildings [discuss with Housing Panel], exploring specific sources of demand (such as RNG production co-located with industrial users) [discuss with Waste Panel and EITE]

Additional thoughts:

Next Meeting: December 9th, 2020 at 1:00 pm?