

Nebraska Climate Pollution Reduction Plan Stakeholder Engagement Notes

Date/Time: Wednesday, December 14th, 2023; 10:00-11:30 AM (Central)

Sector: Agriculture (Round 2)

Welcome & Presentation of Measures:

- Introductions
- Overview & Ground Rules
- NDEE Presentation- EPA scoring criteria, program timeline, and list of measures from Session 1
- Q&A
 - Many of the projects are good, but they are one-off things. In regenerative ag, incentives are good but not sufficient. We need to look holistically- pulling multiple levers and stakeholders. Are those types of things within the scope of this plan?
 - Anything we propose has to have quantifiable GHG reductions. We'd need more guidance on the longer-term stuff and more specificity.
 - There seems to be an emphasis on shovel-ready projects, but there are a number of other implementation measures that may be longer-term- when should we talk about those longer-term things?
 - The short term for the priority plan is what is of most interest at this point. But the longer-term stuff may be revisited and go into the comprehensive plan.

Regenerative Agriculture/Conservation Breakout Room 1:

Poll Results:

- 9 participants responded to a poll ranking the measures (highest priority to lowest) as follows:
 - Assistance in acquiring Precision Ag equipment and tech, including training to analyze the data for highest impact.
 - Incentives to producers to implement soil health & regenerative ag practices.
 - Incentivize the adoption of chemigation for improved nutrient management.
 - Incentivize the prevention of conversion from grasslands.
 - Incentives for decreasing reliance on fertilizers & pesticides.
 - Incentives to get carbon intensity (CI) score for acres certified and in use of existing CI score programs (45Z).
 - Investment in biochar production/distribution (cornstalks, western cedar)

Discussion of Priority Measures:

- If we're going to focus on precision growth, what specifically are we talking about?
 - Nitrogen management tools in NE that are getting some traction (Sentinel and Adapt N and chemigation equipment)
 - Fertigation equipment for irrigation
 - Focused on second-gen precision ag
 - Some tools exist that focus on looking at soil organic nitrogen and such – more third gen stuff that isn't proven yet.
 - We're seeing more and more tools to assess what the additional yield is on each new acre. These will be able to better assess which areas of the farm should be more heavily farmed and which should be ignored, which would be better for efficiency and reducing greenhouse gas emissions.
 - You have to be careful with chemigation. We need to have some irrigation management with that – it has caused some of the biggest leaching events in other areas of the state.
 - Soil moisture growth? Sensors? It should be included in our plan.
- Incentives to implement soil health and regenerative ag practices – there are a lot of programs already in place. We need to assess barriers to growers accessing those programs – adding more money to the pot without doing that may not actually help.
 - Incentives are the easy button, but they are not sufficient to create change.
 - There's a lot of money already available, so this particular approach probably won't have as big of an impact as we want without additional considerations.
 - Incentives could go beyond money. Help the growers filter relevant information, help them with their soil health, etc.
 - Having producers understand what info and tech is available to them would be more helpful. Do producers actually know where they need to be looking for information?
- Incentives for new carbon intensity scores – Upper Blue has a program for soil health. They've seen that even 50% of producers in phase 2 and 3 are still overfertilizing.
 - Getting low carbon score corn by providing tax incentives would help cut carbon.
 - Give incentives to reduce commercial fertilizer.
 - Educate farmers on better crop fertilization.
 - Focusing on soil health would improve water quality.
 - The existing programs are voluntary, which also encourages buy-in from growers.
 - Make sure that the first portion of fertilization is manure-based, possibly to reduce over-fertilization.
 - Growers would need to adapt equipment to implement some of these measures.
 - About half of the carbon intensity from corn comes from nitrogen fertilizer.
- General comment – the plan as a whole looks better as a diversified plan. Include nitrous oxide, methane, and carbon so we don't only focus on only one problem.
- These are really tight timelines – we want to make sure we're avoiding reinventing the wheel.
 - As we think about regenerative ag and soil health, let's look at what has already been done.
 - LB 243 (I think 2019, but I'm not 100% sure) proposed something that produced a report related to this topic.

- LB 95 – provided money for overcoming barriers identified in the earlier report. (I may have gotten this number wrong because I can't find this one.)
- There is a lot of good work that's already been done.
- Incentivization of prevention of conversion from grasslands
 - ELE? The program that is already in place funds up to 75% of conservation easement programs
 - Kansas' plan for greenhouse gas reduction prioritized southwest Kansas – that area requires more intensive fertilization and irrigation.
 - Developing a voluntary market for carbon credits would likely help (we're not there yet, but that could tie in eventually).
 - Basically, we could model it based on Kansas's program.

Discussion of NDEE's Preliminary Priority Categories:

- NDEE shared preliminary priority categories as follows:
 - High Priority:
 - Incentives to get carbon intensity (CI) score for acres certified and in use of existing CI score programs.
 - Has Potential- Longer Term:
 - Incentives to producers to implement soil health & regenerative ag practices.
 - Assistance in acquiring precision Ag equipment and tech, including training to analyze the data for highest impact.
 - Investment in biochar production/distribution (cornstalks, western cedar).
 - Incentivize the adoption of chemigation for improved nutrient management.
 - Incentivize the adoption of chemigation for improved nutrient management.
 - Lower Impact/Higher Difficulty:
 - Incentivize grassland conversion.
 - Incentives for decreasing reliance on fertilizers & pesticides.
- Move “incentivize grassland conservation” up to the middle category.
- Regenerative ag is a big bucket – some measures will cause immediate impact and be quick to implement – split that into multiple buckets since it's a huge umbrella.
 - I.e., be more specific about the particular practices and benefits of regenerative ag – be clear that some come quickly and some come much later.
- Funds come from the EPA
 - The method of implementation is TBD.
 - We need to demonstrate that existing funding is not sufficient in order to get funds.
 - In reality, there's probably never going to be enough funding
- “Incentives for decreasing reliance on fertilizers” could be rephrased to “increasing efficient utilization of fertilizers” – rework that whole idea into precision ag.
- Caution incentivization of considering cornstalks a waste product can be very useful in fertilization.
- Change “western Cedar” to “Eastern Red Cedar” – that's the problematic invasive species. That's in western Nebraska, but the species is Eastern Red Cedar.

Regenerative Agriculture/Conservation Breakout Room 2:

Attendance:

Poll Results:

- 13 participants responded to a poll ranking the measures (highest priority to lowest) as follows:
 - Incentives to producers to implement soil health & regenerative ag practices.
 - Incentives to get carbon intensity (CI) scores for acres certified and in use of existing CI score programs (45Z).
 - Incentives for decreasing reliance on fertilizers & pesticides.
 - Assistance in acquiring Precision Ag equipment and tech, including training to analyze the data for highest impact.
 - Investment in biochar production/distribution (cornstalks, western cedar).
 - Incentivize the prevention of conversion from grassland.
 - Incentivize the adoption of chemigation for improved nutrient management.

Discussion of Priority Measures:

- Focus on practices that could embolden the farmers
 - E.g., Diverse dropping, range-land management, agro-forestry, civil pasture, shelter-belt respiration, nutrient management planning, precision nutrient, food waste project, on-ground infrastructure support, small meat processing, etc
 - Dollars for some of their practices are well incentivized but could incentivize more of them.
- The biggest gap is in technical support, the knowledge of the know-how/ what the right things for my farm are, the technical support, and logistics.
 - The two biggest challenges are economic constraints and logistic constraints.
 - Encouraging farmers to change, data and quantification of establishing a baseline and tracking changes over time, soil sampling- Greek model, comet model
 - For those measurements, you could establish a baseline for 5 dollars an acre; more aggressively, you can do it for 15 dollars an acre.
 - Better understand the CI score and how that comes into play.
 - How do you create an overall program that is comprehensive of the work that's being done but can affect the overall CI score and provide benefit incentives and secondary benefits as well?
 - CI scoring is a really good way to tap into those existing 45Z dollars.
 - CI scores can be done cost-effectively, verified, and utilized tools to monitor the impact of this group's efforts.
 - The main drivers of lowering CI scores are adding coverage crops, using tillage, effectively using manure, efficiently using energy,
 - Helping farmers get CI scores, providing technical support to document and get third-party marketing and awareness, and encourage farmers to adopt practices on their own.
 - Ensure there is some collaboration and alignment between farmers, other stakeholders, and biogas processors.

- Suggest funding to support recommendations of the Healthy Soils task force.
 - It could be a foundation, not reinventing the wheel.
- Excited to see incentives for decreasing reliance on fertilizers and pesticides – a lot of improvements we could make.
 - Added benefits for some of these practices that are not super easy for the direct correlation of GHG reduction- something NDEE wants to consider
 - Greek model can measure fertilizer and pesticide on GHG
 - Soil sampling, technical support (not just telling farmers to cut, cut, cut)
- Investment in biochar
 - Many of these things are connected. Biochar is going to assist in getting down Cis and reducing reliance on fertilizers, tool in the tool belt-
 - Useful to incentives biochar production and help support the work the NRCS is already doing
 - In some cases, biochar, thinking of it in a narrow context, might not be the best approach. Urban agriculture and urban wood waste are good places to start. Better define biochar and how it's included in the CI reduction.
- Curious about biochar- where it is coming from, grant money awarded for biochar machine- have you guys started making biochar locally?
 - The Lincoln biochar initiative is one of three using urban wood waste, mostly for urban ag. Want to do broader use? Right now, a lot of farmers across the state want to use biochar, but we don't have the facilities.
- Added support for ag plastics recycling to the conversation as well as more emphasis on compost use for soil health. Feedlot manure composting projects as well.

Discussion of NDEE's Preliminary Priority Categories:

- NDEE shared preliminary priority categories as follows:
 - High Priority:
 - Incentives to get carbon intensity (CI) score for acres certified and in use of existing CI score programs.
 - Has Potential- Longer Term:
 - Incentives to producers to implement soil health & regenerative ag practices.
 - Assistance in acquiring precision Ag equipment and tech, including training to analyze the data for highest impact.
 - Investment in biochar production/distribution (cornstalks, western cedar).
 - Incentivize the adoption of chemigation for improved nutrient management.
 - Incentivize the adoption of chemigation for improved nutrient management.
 - Lower Impact/Higher Difficulty:
 - Incentivize grassland conversion.
 - Incentives for decreasing reliance on fertilizers & pesticides.
- Question- on the 45Z program and approach of having CI scores as a higher priority- who benefits?
 - For larger area impact vs small farms (small farms can still participate), it would not necessarily tap into other things like Urban ag.
 - The interesting piece is that it could set up opportunities for non-biofuel crops.

- Incentives for farmers, agronomic, ag retailers,
- It can drive other practices and ancillary impacts, but it requires multiple efforts to get to other stakeholders.
- The nature conservancy has a private-public partnership with NRCS and local natural resource districts to offer financial and technical assistance to farmers for regen ag practices. From our conversations, farmers are very intrigued with the CI scores but unaware of how to begin working with it due to a lack of technical experience. Suggest considering NRDs as a network for injecting funds to offer technical assistance as they have been great partners and have an established network on the ground.
- Agro-forestry models—don't forget how we are utilizing trees as we create more diverse systems.

Animal Agriculture & Energy Efficiency Breakout Room:

Attendance:

Poll Results:

- 11 participants responded to a poll ranking the measures (highest priority to lowest) as follows:
 - Promote/Incentivize climate-smart livestock management practices.
 - Solar panels on barn roof- ensure new construction can support panels.
 - Incentives for regional anaerobic digester network to convert ag waste to biogas.
 - Incentivize rotational grazing on deep-rooted pasture.
 - Roller compacted concrete at feedlots for manure management with digesters.
 - Upgrade lighting, pumps, fans, heating, and cooling in buildings.
 - Irrigation well conversion from diesel to electric (expand Clean Diesel program).
 - Incentives for low-e ammonia-clean hydrogen.
 - Electrify fleet and equipment.

Discussion of Priority Measures:

- Regional anaerobic digesters are interesting what we call hub and spoke system. Digesters near a natural gas pipeline, regional producers can bring waste into the central digester and get benefits that way. Don't have to be a large animal ag producer to have your own digester.
 - Manure is not the only thing that can be digested, there could be food waste from nearby towns/cities.
 - Could add pyrolysis. Heats methane in the absence of oxygen, and you get hydrogen or carbon. Take the last step out of greenhouse gas.
 - Permitting gets complicated if you mix the waste in with it. If they can keep it as manure, there are benefits.
- Solar panels on barn roof-
 - Been a lot of blow-ups about solar arrays taking up acres of farmland. These are small. You'll see more of them in the country. It would easily fit on site and wouldn't need to be pulled for farmland.

- Is there a way to place solar on compact concrete to add shade? Incentive for smart livestocking, smart composting that can create more sellable products as a natural fertilizer. It might be something in line with the roller compacted feed lots.
 - My wife composts rabbit manure. Maybe she can benefit
- Rotational grazing has a lot to do with CRPS programs. Might go into different programs.
- Roller compacted concrete at feedlots. Can't digest manure since typically on dirt. Don't digest in a digester well.
- Fixtures and lighting are not cheap for smaller producers. It could be quick and easy for folks to do.
- Most ideas from session one, so we're happy to pull additional data and information.
- Animal Ag & Energy Efficiency Measures

Discussion of NDEE's Preliminary Priority Categories:

- NDEE shared preliminary priority categories as follows:
 - High Priority:
 - Upgrade lighting, pumps, fans, heating, and cooling in buildings.
 - Electrify Fleet and equipment.
 - Solar panels on barn roofs- Ensure new construction can support panels.
 - Irrigation well conversion from diesel to electric (Expand Clean Diesel Program).
 - An incentive for regional anaerobic digester network to convert ag waste to biogas.
 - Promote/incentivize climate-smart livestock management practices.
 - Has Potential- Longer Term:
 - Roller compacted concrete at feedlots for manure management with digesters.
 - Lower Impact/Higher Difficulty:
 - Incentivize rotational grazing on deep-rooted pasture.
 - Incentives for low-e ammonia- clean hydrogen.
- Support for biochar and red cedar tree burning
- Electrify fleets and equipment. Have a greater chance with regen fuels instead of electric for better opportunities. Getting folks on E-85 or whatever.
 - Why doesn't everyone use a B-20 in warmer months? It's not available in the state. Farmers can't be B-20 over the summer despite soybean production. Push for biofuels as opposed to fossil fuels.
- Companies out there separating liquid from manure to recycle water and not use fresh water in the barn. Similar to a belt press. Create a product shipped, and you can create an export for this stuff.
- Talking about regional digesters, some counties don't have local control over siting ag facilities. Thinking of communities affected by manure traffic and how much say as to whether they would want it near them.
 - Not all counties have implemented zoning. Neighbors could be caught off guard,
- In NE, 25% of the economy is ag. To make a big impact, since we have a small pop, we should focus on agriculture. MN sets a good example, and maybe we could look to the past to figure out what to incorporate.
- Livestock Siting Matrix

- We have concerns with the Livestock Siting Matrix, primarily with how points are awarded for details that aren't protective of public health and water quality.

Large Group Discussion:

Animal Agriculture & Energy Efficiency Summary:

- The group ranked the measures similar to the NDEE preliminary priority categories.
- You can reduce methane emissions from cattle through diet and genetics (breeding). Longer-term things could be worked on.
- Besides digestion, there is also composting manure. There are unique ways to compost- how would that score?
- Any farm across the state may need upgraded lighting for quick and immediate impact. It would not be large individually, but over the state, it would have a large impact.
- Hub & Spoke Regional Digester is very creative and forward-thinking, but it would take some work to see how it would work more efficiently.
- Instead of electrifying the fleet, look into renewable fuels (which would be easier).
 - Need to do work on biofuels and their availability across the state.
 - No plant that makes biodiesel in Nebraska. We have blending facilities. Maybe a legislative solution, maybe a tax incentive. Mandates have been tough in Nebraska. Minnesota has a B20 mandate.

Regenerative Agriculture/Conservation Room 1 Summary:

- A bit of differences in polling and preliminary priority categories.
- Talked about 2nd generation precision ag.
- Enabling chemigation would have an impact.
- Soil health/regenerative ag measure- throwing more money won't help growers overcome barriers. Need to identify the obstacles and figure out how to overcome them.
- Provide tools for data collection.
- Help with soil testing.
- Training for producers
- A lot of work in the area through the Healthy Soils Initiative
 - Don't reinvent the wheel. Take advantage of existing mechanisms. See how we can work with D&R on that general topic.
- More support for incentives for CI scoring
 - CI scoring includes reducing over-fertilization direct water benefit.
- Manure-based fertilization to help offset chemical fertilizers- provide incentives.
- Preventing the conversion of grasslands should be moved up along with incentives for decreasing reliance on fertilizers.
- Some measures provide quick benefits, some long-term. Need to be specific on particular regenerative ag practices for the proposal.

Regenerative Agriculture/Conservation Room 2 Summary:

- Some differences between rooms one and two in ranking, but the discussion was similar.
- The Healthy Soil initiative was brought up.

- A lot of discussion regarding CI scoring.
- Some other measures tie into the actual CI scoring.
- Our state has a unique value chain. Think about practices that impact all areas across the state when looking at the regenerative ag component.
- A gap in CI scoring is logistics and technical support needed.

General Group Discussion:

- Discussed that the Greek model on CI scoring is pretty established on the grain and plant side. Is there potential for a better sustainable label, as meat labels are being pushed?
 - In the pork industry, partners have already been asking for sustainability reports.
- Usually, the EPA likes to see measurables, goals, and those types of figures. Are we setting those, or is it a voluntary “see what we get approach”?
 - According to the plan, it’s up to states on how to reduce GHG emissions. This can be done through policy and legislation but is not required. Most Midwest states are looking at incentives/voluntary actions vs regulations. Will be monitoring, however.