

Agriculture and Land Management Sector Discussion September 2, 2020.

Missing Feasible & Practical Strategies/Technologies	Pitfalls & Dangers of Identified Actions	Prioritizing Our Actions
<p>Tom Richard: Agriculture is a big part of the solution, inventory does not capture that because it only looks at the problems. We need some analysis and quantification of our ability to address the problem. Look at switching annual croplands into perennials (water quality, economic, biodiversity and other benefits). Example: erosion control sock material. Poultry bedding industry. Anaerobic digestion - expand feedstock to include perennials and winter cover crops. About 20% of the landscape isn't making money with annuals but could be profitable as perennials.</p>	<p>Most farmers do not have the tools (yield monitors on tractors, satellite data, GIS) to identify their unprofitable acres.</p> <p>Anaerobic digesters are expensive, and the current paradigm (manure only feedstock) requires economies of scale larger than individual Centre County farms. Adding perennials and cover crop feedstocks can increase scale, and also open the door to low- and potentially no-cost loans from PennVEST, the state agency that funds wastewater treatment and is charged with funding Chesapeake water quality including agriculture - if there is a business model with products to repay the loans.</p>	<p>Analysis to quantify these opportunities at field, farm and regional scales.</p> <p>Technical assistance and support through Cooperative Extension, NGOs, state and local government, federal agencies and other programs.</p> <p>Financial support for sustainable transitions, including on-farm changes like digesters and disadvantaged cropland conversion to perennials, but also new market development.</p>
<p>Kristy Borelli: Information for sustainable lawn care and management - empower residents to help.</p> <p>Waste to fuel program - particularly with increased in poultry production (not as much opportunity to reduce that waste on farm).</p>	<p>Balance - anaerobic digesters are very expensive, but how can we expect farmers to invest? Important to limit the strain we're putting on farmers. Funding pit digesters (lagoon covers?).</p> <p>Make sure we involve local businesses (nurseries) in thinking about sustainable lawn care.</p>	<p>seconds perennials for energy and sequestration.</p>

<p>Deb Nardone: alternative solutions for consumption - what's the intersection for agriculture and energy production? (Solar on farm roofs) Are there lands in critical habitat that shouldn't be in agriculture? What about energy production on our marginal lands? Important to think out of the box.</p>	<p>Assistance to landowners - Clearwater provides a lot of technical assistance to the agriculture community. But a lot of that work isn't funded (education and tech assistance and follow up of BMP implementation).</p>	
<p>Diana Griffith: Solar - State says farmers can only put solar on their buildings if it supports their farm operations (in ag security areas). No commercial solar contracts.</p>	<p>Challenge - getting farmers comfortable with the process; no surprises, informed all throughout. Understanding the importance of the projects.</p>	
<p>Dorn Cox: quantifying environmental benefits (infiltration - extreme weather events); carbon capture - improved soil health.</p> <p>Provide support in/incentives around the planning process.</p> <p>Rapid in-field carbon assessment - remote sensing.</p>	<p>Technical assistance (through community ag orgs) to improve soil health management can be a barrier. Need this support to measure the improvements over time.</p>	<p>Equip community ag organizations with tools to quantify benefits.</p>
<p>Tony Buda: . Importance of assessing the performance of best management practices - this data isn't usually available, just modeled.</p>	<p>This is as much a social problem as a technical problem - include Rural Sociologists in the discussion.</p>	<p>perennialization of the landscape (in context of building resiliency of the landscape to extreme weather events). Can really help with the excess nutrient load that comes from a few extreme events</p>

<p>Derek Kalp: habitat loss, biodiversity, invasive species, underused/wasted spaces - how can we do a better job creating more beautiful and ecologically healthy landscapes? Mini-forests. Agroforestry - if you can show buffers are economically beneficial to farmers.</p>		<p>Encouraging residents and commercial spaces to change their landscapes.</p>
<p>Denice Wardrop: make economic and ecosystem services co-benefits clear</p> <p>Assistance to farmers - educational opportunity; building relationships with farmers - training people to be able to do that</p>	<p>Monitoring is also a challenge.</p>	<p>Monitoring always gets lost, but we can't learn how to do things better and show that things are working. It never gets included, though. You can't manage what you don't monitor.</p> <p>Adaptive monitoring</p>
<p>Larry Hutchinson: landowners who have agreed to place their land into some sort of long-term easement - they need education to be early adopters of these practices (ex. electric farm equipment, biomass production). These folks are a good place to start because they've already made a long-term commitment.</p>		<p>long-term easement - early adopters of these practices - reach out to as stakeholders to help gain momentum</p>
<p>Mitch Hunter:</p> <p>Planning for the long-term future of agriculture - what will the production be? Keep those farms and their infrastructure viable. Move industries in a sustainable direction.</p> <p>Cooperative conservation efforts (RCPP) - outreach, monitoring, and quantification</p>	<p>During 2001-2016 over 10k acres of Centre County farmland converted</p>	<p>reinforce and hold firm on the region's growth boundary (non-ag development has 66x GHGs than farms).</p>

<p>of activities to reduce emissions and increase sequestration</p>		
<p>Jamie Miereu: need to look at long-term planning for economic viability</p>		
<p>Haley Stauffer: Challenge how we view the future of Centre County agriculture - market opportunities and future incentives. Poultry production is projected to more than double - nutrient pollution / Bay impact. Transition away from animal agriculture?</p>		
<p>Franklin Egan: . Are there ways to think more broadly about what farmland preservation really means? Farmland preservation as a transition to a forest farmland? Supporting local ag will need to include supporting infrastructure for local ag.</p> <p>Solar grazing</p> <p>\$\$ options: Reiterate potential for RCPP grants and Resource Enhancement and Protection (REAP) Program tax credit - cost share to implement best management practices</p>	<p>Failed attempts to get beyond thriving farmers markets to food hubs and co-ops.</p> <p>We need more farmers and more farmland, but we don't necessarily need more farm products (ex. dairy is oversupplied). Long term planning needed</p>	<p>perennials, farmland preservation</p>

Betsy Whitman - educate retailers/citizens about invasive species, such as barberry, promote native plants and pollinator gardens

Tony Buda - demonstration farms to showcase best practices and performance measures