

Advancing Soil Health in New York State: Updating the Roadmap

Overview

In December 2022, over two hundred stakeholders attended the second Soil Health Summit with the goal to update the [2019 New York Soil Health Roadmap](#)¹. Participants represented 40 different organizations and included farmers, ag professionals, researchers, educators, NGOs, and government officials. The Summit focused on new initiatives in accordance with the New York Soil Health and Climate Resiliency Act, which was passed in 2021 by the New York State Legislature.

In addition to presentations on various initiatives, attendees convened in breakout rooms to discuss six key topic areas: Voluntary Soil Health Standards, Urban Agriculture, Organic Systems, Circular Economy, Crop Production in Rural Environments, and Payment for Ecosystem Services. Outcomes included new directions and policy considerations for future soil health programs in the State.

Background

The first Soil Health Summit in 2018 led to the development of the New York Soil Health Roadmap, which identified key policy, research, and education efforts needed to overcome barriers to adoption of soil health practices by farmers. It also explored strategies to integrate soil health goals with critical environmental issues like climate change and water quality. Many of the Roadmap priorities were reflected in the Soil Health and Climate Resiliency Act, which established programs to help small to large farmers from urban and rural areas improve the health of their soil. A multifaceted approach is required to meet the goals of the Act in the context of the diversity of New York's production environments in terms of cropping systems, soil types, and climate regions.



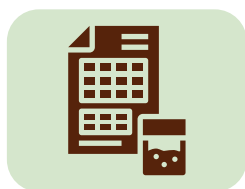
Policy Considerations

- **Adopt Voluntary Soil Health Standards and Support Education and Implementation:** Formalize adoption of voluntary soil health standards for different production environments and educate farmers and the public about implementation strategies.
- **Make Payment for Ecosystem Service Programs Operational and More Equitable:** Support farmers growing a diversity of crops at different scales, not just large commodity farms. Improve rates for small farms, reward early adopters, and reduce paperwork requirements.
- **Promote Circular Bioeconomy and Invest in Innovative Pilot Programs:** Support research and outreach efforts to separate organics from non-organics and promote programs that cycle carbon and nutrients back to farms to avoid waste accumulation, landfilling and incineration. Fund innovative pilot programs.
- **Improve Soil Health in Urban Agriculture:** Support research and education that focus on specialized strategies and needs for soil health in urban food production and green infrastructure
- **Research Improved Soil and Nutrient Management Techniques:** Continue support for research and outreach in both organic and conventional systems, specifically strategic tillage, cover crops, organic amendments, and adaptive nutrient management.

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Summit Outcomes

Six topic areas were discussed in the context of research, education, and policy needs through the following lenses: 1) reducing barriers for wider adoption of soil health practices, 2) integrating soil health with water quality and climate change adaptation and mitigation, and 3) institutionalizing stakeholder networks and organizational frameworks. Summaries of each topic area are:



Voluntary Soil Health Standards can help farmers market their successes and encourage the adoption of soil health practices, but standards must be scientifically based, fair and effective, and consider the diverse production environments across the State. Further soil health assessment is needed, and soil health standards should be integrated into certification frameworks.



Payment for Ecosystem Services can incentivize farmers to adopt soil health practices by remunerating them for the broader socio-ecological benefits. Policies and programs are needed that have proven intended impacts and are reasonable, equitable, and accessible to all farmers. Supportive technologies are also required to implement these programs.



Circular Carbon and Nutrient Economy can be achieved by using domestic and agricultural “wastes” as resources to enhance soil health, grow the next crop, and store carbon. Public-private partnerships are needed to scale carbon and nutrient management from the local to state level and integrate them into soil health practices.



Urban agriculture is a growing part of NYS agriculture. Education and research programs are needed to enhance agroecosystems in support of sustainable food production and living environments in cities and peri-urban areas.



Soil health is essential for successful production in **Organic Systems**, but issues related to tillage, nutrient availability, weed and pest management, and learning to farm organically remain as challenges. Initiatives are needed to connect nutrient sources with organic farms and help farmers integrate soil health practices into management decisions.



Greater research, education, and outreach are still needed in **Rural Environments** to further reduce soil erosion, nutrient leaching, and improve farm resilience to climate change and reduce water and air quality concerns.

¹Wolfe, D. W. (Project Leader), Gifford, K., Ristow, A., Ryan, M., Salon, P., Suarez, J., & van Es, H. (2019). [New York Soil Health Roadmap](#). Cornell University College of Agriculture and Life Sciences.