Soil Health Nexus

Increasing Access to Soil Health Research, Extension, and Resources

Background

During the past century, the focus of maximizing agricultural production and profitability has centered on technological innovations – improving genetics for disease and insect resistance, herbicide-tolerance, drought and heat tolerance, and higher yields. Traditional yet important agricultural methods, such as building and caring for soil, have gotten less attention. For some farmers, this trend has reduced their long-term sustainability by exacerbating problems such as herbicide resistance, erosion/nutrient runoff, and yield losses from drought and flooding. Soil health improvement can help meet surface and ground water quality goals, reduce soil erosion, and mitigate the impacts of climate change. Recently, private companies, government agencies, and non-profits have begun to recognize the value of soil health and the ecosystem services it can enhance. Implementing a soil health system in the production of food, fiber, and fuel can dramatically impact not only air and water quality, but improve farm economic sustainability and quality of life in rural areas.

Issue

Investment in research and Extension efforts vary widely from state to state, resulting in a wide variation in expertise and support available to farmers and agronomists in soil health in the Midwest region. Research has shown that the information agricultural advisors in the public and private sectors are using frequently originates with land-grant universities and Extension. With the strong renewed interest in soil health science and practice, it is critical that Extension specialists and educators are ready to provide the best science and the best advice for farmers, farm advisors, and the agriculture and food industries.

Addressing the Challenge

The Soil Health Nexus was initiated in 2015 with seed funding from the North Central Region Water Network. Representatives from 12 land-grant universities, SARE, InterTribal Ag Council, National Soil Health Partnership, and NRCS are:

- Working with partners to increase access to soil health-related research and educational programs.
- Increasing critical soil health knowledge and skills among Extension educators, partner staff, farm advisors, and farmers.
- Collaborating with partners to deliver soil health information across the North Central Region.
- Promoting adoption of conservation system practices that enhance soil health and associated ecosystem services.
- Providing long-term organizational support for soil health research and education.

Progress Made

The Soil Health Nexus has made significant strides since it began. To date, the project has:

- Developed research, outreach, and resource priorities.
- Conducted a preliminary online inventory of soil health training and educational resources.
- Initiated a detailed listing of soil health-related research projects, both at land-grant and non-land grant institutions.
- Developed a directory of land-grant soil health experts. The directory is being used to foster communication among states.

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- Held four virtual roundtable discussions on manure and key soil topics featuring subject-matter experts, farmers, consultants, and producer-led groups. In total, 331 participants who influence over 48,000 farmers joined the roundtables.
- Produced eight new extension publications synthesizing and interpreting the latest science on linkages between manure management, soil health, and water quality.
- Created the Soil Health Nexus website for soil health communications where the team hosts a monthly blog on soil health best practices.

Moving Forward

The team is setting out to accomplish four objectives in 2018 and 2019:

- Characterize the obstacles and challenges encountered by growers and agribusiness stakeholders in adopting soil heath practices.
- Develop an educator/adviser toolkit of soil health educational resources.
- Build educator capacity through professional development workshops.
- Facilitate implementation of on-farm research and soil health demonstrations and citizen science initiatives.

How Can You Help?

To maintain and build on the momentum generated by Soil Health Nexus, we are seeking support for the following activities:

- Continuing to grow participation among land-grant researchers, Extension educators, and other partners to ensure access to locally relevant soil health information across the North Central Region.
- Maintaining and growing our inventory of soil health research, training, and educational resources.
- Developing regional research projects and publications to promote conservation systems and practices such as cover crops and no-till technologies that will lead to the improvement of soil and water quality in the region.
- Forming a research and education technical committee that will build a regional infrastructure for future development of new science in the area of soil health.

CONTACTS

Christina Curell, Michigan State University Extension
curellc@msu.edu

Paul Gross, Michigan State University Extension
grossp@anr.msu.edu

Leslie Johnson, University of Nebraska-Lincoln
leslie.johnson@unl.edu

NORTH CENTRAL REGION WATER NETWORK

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