

# Opportunities for Next Generation Technical Assistance

## Policy Memo

### Introduction

In the face of mounting pressure and historic federal investments to shift agriculture toward more profitable and resilient modes of production, producers of all sizes, production systems, and geographies require modern technical assistance. The Natural Resource Conservation Service (NRCS) defines technical assistance as the process of equipping farmers, ranchers, and forestland owners with the knowledge and tools they need to conserve, maintain, and restore the natural resources on their lands and improve the health of their operations for the future. **The current demand for conservation technical assistance exceeds existing capacity**, leaving many farmers with long wait times or insufficient support to implement practices critical to the health of their land.

There is both a near-term need to quickly scale the number of technical assistance providers equipped with the right expertise, and a long-term need to grow the pipeline of conservation professionals trained in diverse agriculture, engineering, and resource management disciplines. Given this challenge, the **AGree Climate, Food, and Agriculture Dialogue (CFAD) is convening a series of discussions to develop recommendations for Congress and USDA. The convenings are intended to learn from and inform actions by farmers, commodity organizations' check off programs, certified crop advisors, state and local governments, universities, and NGOs to expand and modernize technical assistance for farmers.**

The following memo details challenges in the current U.S. technical assistance system, highlights innovative models of technical assistance, and proposes policy recommendations to expand technical assistance resources and offerings. This memo focuses on technical assistance funded by the federal government and administered by the NRCS, the land grant extension system, and NGO and private technical assistance providers funded through government contracts. Recommendations I – III deal with near-term training and partnership needs to build technical assistance capacity and networks. Recommendations III – IV deal with longer-term needs assessments, workforce development, and ensuring consistent investment in technical assistance over time.

### Policy Recommendations

NRCS, in partnership with local soil and water conservation districts, is the main USDA agency responsible for providing technical assistance. Beyond NRCS, technical assistance is provided to farmers from a wide range of entities, including land grant extension programs, technical service providers, certified crop advisors, nonprofits, commodity groups, and private companies interested in expanding conservation practices. This policy memo outlines current challenges these technical assistance

providers face in working with farmers, examples of where technical assistance programs are working well, and draws lessons learned to propose policy recommendations for USDA and Congress.

USDA and Congress have several opportunities to invest in social innovation to create strong networks and communities around conservation, expand the use of partnerships to bolster and improve technical assistance, and create opportunities to research and co-create knowledge with producers.

## **RECOMMENDATION I: INVEST IN TECHNICAL ADVISOR TRAINING AND INNOVATIVE WAYS TO DISSEMINATE KNOWLEDGE**

There are many public and private organizations working with farmers on conservation adoption. However, many of these entities do not have a shared understanding of available practices, programs, and incentives. Many NRCS field offices have gaps in institutional expertise and lack of training in new and emerging conservation practices that limit agents' ability to assist innovative farmers in their conservation efforts. There is a need to train NRCS field staff and technical assistance cooperators on conservation issues, programs, policies, and emerging technologies that can help drive adoption of conservation practices on working lands. This can be done through cooperative training programs that target both producers and technical assistance providers, such as the Master Irrigator Program or the Testing Ag Performance Solutions (TAPS) program highlighted here. Additionally, to meet the needs of

### **Master Irrigator Program**

[Master Irrigator Program](#) is an irrigation management curriculum made up of 32 hours of intensive irrigation education about advanced conservation irrigation management and conservation practices that work together to save water, conserve energy, build soil health and enhance farm profitability. The program began in Texas and has spread to other southern and western states. The program has enjoyed success not only because it teaches farmers facing water scarcity to improve their water use in a way that helps them be more sustainable and profitable, but also because the program creates a peer-to-peer learning community of farmers, extension agents, and irrigation technology providers that often endures after the class has concluded.

### **Testing Ag Performance Solutions**

The University of Nebraska [Testing Ag Performance Solutions](#) (UNL-TAPS) is an innovative program developed by University of Nebraska research and extension specialists and educators. The program facilitates interactive, real-life farm management competitions. These competitions bring together UNL scientists and extension professionals, producers, industry leaders, and others to become part of a network focused on evolving profitability and input-use efficiency. The low-risk environment offers participants the ability to test a variety of seeding, irrigation, fertilizer, crop insurance, and marketing strategies and technologies in a competitive format to see who can achieve the greatest profit, input efficiency, and yield. The competition ends each year with a community banquet, where winners are recognized, and competitors have a chance to reflect on which crop management strategies were most effective and why.

today's increasingly diverse farming and ranching populations and the conservation challenges they face, NRCS should invest in updating training methods and methods for delivering technical assistance for staff and partners on to optimize the effectiveness of TA delivery and engagement of landowners and operators. It is critical to ensure that TA is effective in communicating effectively with today's farmers and ranchers and taking advantage of advances in understanding how people learn, including behavioral science. USDA should consider the following recommendations to ensure technical assistance continues to serve NRCS's increasingly diverse audience:

- Two organizations that incorporate behavioral science into technical assistance that NRCS could engage as expert advisers include [Center for Behavioral & Experimental Agricultural Research \(CBEAR\)](#) and [Evidn](#). NRCS should work with key advisors such as CBEAR and Evidn, as well as additional expert advisors, to revise and update the agency's approach to staffing and technical assistance to meet the needs and learning approaches suited to today. This process should include learning and technical assistance experts as well as the target audience, farmers and ranchers that represent all sizes and backgrounds, to develop new training approaches and curriculum.
- USDA should explicitly allow a Tribe or a group of Tribes within a state or region to develop traditional, ecological, knowledge-based (TEK) technical standards that will control the implementation of all conservation projects allowed under the Farm Bill. This can be done in a new section of the Conservation Title that would codify current NRCS practices that encourage TEK-based conservation and would further recognize the fact that Tribal jurisdiction and use of traditional practices to improve conservation project implementation are decisions best left to Tribal governments and individual Indian producers who live on those lands and are engaged in ongoing activities that are designed to improve environmental conditions, habitats, and their lands for agricultural purposes. These TEK-based standards already have a solid scientific basis and are acknowledged by various federal research organizations and agencies. USDA committed to recognizing TEK in the [Department's 2022 Equity Action Plan](#). Incorporating Indigenous Knowledge is further supported by the recent [Indigenous Knowledge Guidance for Federal Agencies](#), [OSTP-CEQ Indigenous Knowledge Guidance](#), and [Implementation Guidance for Federal Agencies](#). USDA should use IRA funding to follow through on this current commitment to hire individuals with TEK expertise and leverage NRCS's Science and Technology leadership to explore opportunities for Tribes to engage in Alternative Funding Arrangements to specifically implement TEK practices under existing Conservation programs.

## **RECOMMENDATION II: EXPAND TECHNICAL ASSISTANCE PARTNERSHIPS AND STREAMLINE AGREEMENT PROCESSES**

Although NRCS has made efforts to accelerate hiring, the agency remains critically understaffed. One opportunity to meet demand for technical assistance is to engage non-federal technical assistance providers. Private partnership agreements to deliver technical assistance to producers have produced some of the most successful technical assistance programs, including the USA Rice and Ducks Unlimited RCPP agreement and the Precision Conservation Management program in Illinois.

However, current processes to write agreements and partnership projects with private technical assistance providers are burdensome and difficult to navigate. Existing policies and programs should be altered to remove obstacles to, and establish a strong network of, private providers of technical assistance. There are several actions USDA and/or Congress can take to accomplish this.

- Increase compensation and streamline the process for becoming a TSP and participating in a RCPP grant. To recruit more TSPs, NRCS should simplify the sign-up process and provide market-driven payment rates for third-party providers at a level not to exceed the comparable costs to the agency for staff time and support costs.
- Expand funding for technical assistance providers that already work with small, beginning, and BIPOC farmers and ranchers engaging in NRCS programs.
- Prioritize expanding use of these partnerships to fill gaps NRCS expertise and to expand understanding and adoption of regionally specific and ecologically appropriate approaches and systems.
- Require USDA to engage in outreach to all technical assistance professional and certifying organizations to take advantage of existing professional certification programs for technical advisors.

## Precision Conservation Management

Illinois Corn Growers Association [Precision Conservation Management \(PCM\)](#) is the premier conservation program of the Illinois Corn Growers Association, established with funding from the RCPP program. PCM's goal is to integrate conservation practices and financial data to help farmers understand how specific management changes can impact both their environmental impact and their bottom line. They accomplish this by combining precision technology and data management with farm business and financials. This allows PCM to equip farmers with management information about where to adopt conservation practices and financial insights around transitioning to conservation practices and the financial results of transitioning. PCM provides small payments in the first and second year of farmers' enrollment and helps connect farmers to NRCS and private conservation programs that offer financial incentives. This model is innovative because it combines financial assistance and technical assistance for adopting conservation, as well as highlighting the financial costs and results of transitioning to increased conservation in its technical assistance approach.

### RECOMMENDATION III: SUPPORT AND PROMOTE PEER-TO-PEER FARMER NETWORKS

Establishing peer-to-peer networks where farmers can share their experiences and knowledge with one another is a powerful strategy to build momentum and support for conservation adoption. States such as Wisconsin have intentionally invested in the creation of farmer-led peer groups to catalyze conservation innovation and adoption. One model for creating these opportunities through USDA programs is the NRCS Grazing Lands Conservation Initiative. This model could be replicated to leverage the knowledge and experiences of early adopters to build trust and expand conservation practice adoption.

#### Wisconsin Producer-Led Watershed Groups

Wisconsin's [Producer-Led Watershed Protection Grants](#) provide funding to producer-led groups that focus on nonpoint source pollution abatement activities through the Producer-Led Watershed Protection Grant Program (PLWPG). Grants provide support to groups to deliver cost share programs, on-farm demonstration and research projects, and education and outreach efforts on conservation systems and innovative practices that improve water quality to farmers and other community members within their local watersheds. The program provides an innovative example of government leveraging public dollars to create farmer-led conservation communities.

### RECOMMENDATION IV: INVEST IN PROGRAMS TO GROW THE PIPELINE OF CONSERVATION PROFESSIONALS

Across the nation, public and private providers of technical assistance face common challenges employing conservation professionals to meet demand. The sector needs a higher number of professionals with expertise in a wide range of conservation practices and technologies, including topics such as integrated crop-livestock systems, conservation irrigation, and agroforestry. Furthermore, the lack of diversity among the conservation workforce inhibits efforts to effectively engage BIPOC producers. Low pay can also make it challenging for organizations providing technical assistance to attract and retain quality talent, especially in the public sector. At NRCS, the paperwork burden of program administration makes jobs less desirable for conservation professionals who would prefer to spend time doing what they love most – working with farmers.

USDA should consider the following recommendations to grow the pipeline of diverse young people interested in agricultural extension careers.

- Commission a gap analysis to map current and projected demand for conservation professionals against the current pipeline of students to support targeted investments in long-term workforce development. This could include a survey of current employees and projected retirements at state and federal agencies and agriculture conservation focused NGOs, including an assessment of what expertise and disciplines are needed for current and future projects. This could be compared against projections of graduates in agriculture and conservation disciplines from higher-education institutions.

- Invest in programs such as 4-H, Future Farmers of America (FFA), the Edible Schoolyard Network, the School Garden Support Organization Network, the Children and Nature Network, and the National Conservation Foundation Envirothon.
- Grow and foster partnerships to provide scholarships and paid internship opportunities for young professionals, such as the Thurgood Marshall College Fund (TMCf) and NRCS partnership that offers students attending Historically Black Colleges and Universities and Predominantly Black Institutions to develop future agriculture and conservation leaders.
- Consider opportunities such as student loan forgiveness for technical assistance professionals in rural areas.
- Help support and create pathways for students who attend technical or community colleges to enter conservation careers.

## RECOMMENDATION V: MAKE CONSISTENT INVESTMENTS IN TECHNICAL ASSISTANCE

At the federal level, technical assistance is funded through both discretionary and mandatory appropriations. Since discretionary funding can fluctuate depending on congressional decisions, it has historically led to an unpredictable funding environment with negative consequences for NRCS program continuity and staff capacity. Moreover, the technical assistance system is receiving a significant influx of funding from the Bipartisan Infrastructure Bill and the Inflation Reduction Act, which presents both an opportunity to considerably increase technical assistance services and a challenge for NRCS to quickly increase agency capacity to properly utilize funds. Providing consistent, sufficient funding for technical assistance over time will help build a stable workforce and programs.

## Lessons Learned

The following lessons learned are based on the challenges and models of success outlined in this document and can be referenced to guide future investments in technical assistance. These lessons learned reflect the need to build a more flexible and resilient technical assistance network that can adapt to evolving challenges in the food and agriculture sector.

- **Invest in social innovation.** It is not enough to distribute money. Federal investments in technical assistance need to consider how people learn (and not just what they learn) by creating strong social ties and networks around conservation, including peer to peer learning environments for farmers.
- **Opportunities to learn and experiment are critical to innovation.** Farmers are more likely to adopt or improve conservation practices when they can learn and experiment without taking on additional risk. USDA can invest in these learning opportunities through land grant universities.
- **Stronger working relationships between the public sector and private sector are needed.** Strong relationships between organizations and NRCS offices are key to establishing successful partnership agreements. Through collaboration, private and public stakeholders can provide services that neither could provide alone.

- **Conservation technical assistance needs to include clear accounting of the financial costs and benefits of conservation practices.** Without a clear understanding of the return on investment of adopting conservation practices, producers are less likely to risk adoption. Likewise, better understanding costs can help NRCS improve program performance over time.
- **Technical assistance and financial assistance should always be coupled.** Pairing technical assistance with financial assistance when implementing conservation plans ensures that producers have a full ecosystem of support to ensure practices are successful.
- **Develop a program to ensure systematic transfer and adoption of conservation innovations.** USDA needs to develop a better system to ensure innovations produced by Conservation Innovation Grants, the Partnerships for Climate Smart Commodities program, the Agricultural Research Service, universities, and partners, are incorporated into NRCS programs, technical assistance, educational approaches, technical standards, and conservation planning.