

# Technical Assistance for Conservation: Landscape Report and Synthesis

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# Executive Summary

The demand for readily available, high quality technical assistance (TA) to help United States (US) working land managers (producers) adopt and expand conservation practices is steadily increasing. Private working lands – farms, pastures, grazing lands, and forests – play a critical role in conservation and climate change mitigation, especially considering they account for more than one-third (38% as of 2022) of the US's total land area (NASS 2024). Even though producers are offered TA at the local, state, and national levels from a variety of both public and private providers, key opportunities for TA to be expanded and enhanced remain to best meet the specific needs of producers across the agriculture and forestry sectors, now and into the future. Inspired by evidence that demand for TA for conservation is increasing at a pace that the current TA workforce lacks the capacity to fully meet (Keith Campbell Foundation 2023), this report reviews the existing literature around opportunities for barriers to TA. Our intent is to inform efforts to enhance the quality and quantity of TA offered to producers for conservation.

## This report:

- defines technical assistance for conservation and the array of actors involved in providing TA to producers and forest land managers

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- explores the current capacity of the educational and training pipeline to ensure an adequate and skilled supply of TA providers; and

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- identifies effective forms of technical assistance and the current challenges being faced across agriculture and forestry, as well as gaps that are specific to diverse production systems, geographies, scale of production, and producer groups.

As we build upon existing insights regarding TA for conservation, we also highlight gaps that hinder a comprehensive understanding of what we consider the "TA system" – networks of actors who facilitate conservation action on working lands by engaging and partnering with producers. While we believe this report provides an essential foundation for envisioning a more robust future TA system, more work is needed to develop a complete picture of what TA for conservation looks like across the entire United States. That said, we provide key findings to help further discussion around this important topic.

## Technical assistance for conservation

In this report, we define technical assistance for conservation as substantive expertise, information, and tools given to farmers, ranchers, and forestland owners by a diverse range of public, private, and individual actors through a wide range of methods and systems. The National Resources Conservation Service (NRCS) of the US Department of Agriculture (USDA) is considered the most central actor in the provision of TA for conservation – due to its historical role as a TA provider and the fact that the main source of public funding for conservation comes from the conservation title (Title II) of the US Farm Bill, of which NRCS is the main implementer of conservation program funding. However, since the creation of the Soil Conservation Service in 1935 (now NRCS), an array of other TA providers has emerged in both the public and private sectors that complement and expand the types of services offered by NRCS. Within this report, we provide a typology of these TA providers, which characterizes the whole TA system as composed of three sub-categories of TA systems: formal, semi-formal, and informal.<sup>1</sup>

The formal TA system comprises federal and state agencies, conservation districts, cooperative extension, private and non-profit organizations, and individuals certified or otherwise vetted to receive public funds to provide TA to producers. The semi-formal TA system is made up of non-profit and private-sector organizations that often have touchpoints with the formal TA system but also function outside of federal requirements for specific experience or credentials related to conservation practice implementation with Farm Bill funds. Finally, the informal TA system describes producer-led organizations and peer networks that support information exchange, shared learning, and place-specific innovation. To date, the vast majority of publicly available literature and reporting has focused on the formal TA system, although new emphasis has been placed on investing and expanding semi-formal and informal TA systems to complement the formal TA system as well as better meet the needs of historically underserved producers.



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1 The use of terms such as "formal," "semi-formal," and "informal" is intended to describe different structures and approaches within the TA system, without implying any value judgments. As such, "informal" should not be interpreted as indicating a lower level of quality or importance compared to "formal" or "semi-formal" categories.

## The educational and training pipeline

Across the US, a broad range of programs exist that can prepare the next generation of TA providers for careers in conservation, agriculture, and forestry. Within the higher education system, there are 1,160 2-year and 4-year programs available to students wishing to study natural resources and 750 programs related to agriculture (DataUSA 2024). Most of these programs are housed at public colleges and universities, where students are learning skills in focus areas such as animal science, agronomy, forestry, agricultural engineering, and rangeland management.

However, while the sheer number of programs that could lead to a career in TA for conservation is impressive, less is known about the quality of these programs and how receiving an education in these areas translates to a job in conservation. Future research that links education to job outcomes is thus necessary – especially considering the apparent gap in TA workforce capacity, with NRCS alone reporting a current record of 3,000 unfilled positions (Fatka 2023).

Furthermore, relatively few programs in agriculture, forestry, and natural resources are housed at Historically Black Colleges and Universities (HBCUs) and Tribal colleges and universities, inherently limiting the recruitment of Black, Indigenous, and people of color (BIPOC) students into conservation-related positions. That said, while a degree is often needed to obtain formal certifications related to providing TA (e.g., education or extensive experience is needed to become a Technical Service Provider (TSP) or Certified Crop Advisor (CCA)), higher education is not the only method of obtaining skills relevant to providing TA for conservation. First-hand, familial, and even childhood experience is also valuable, especially when paired with professional training opportunities offered through Cooperative Extension, NGOs, and the private sector. Kindergarten through grade 12 programs that offer youth a foundation in agriculture and forestry are particularly robust in the US – with over 900,000 members of Future Farmers of America (FFA), 19,000 members of Minorities in Agriculture, Natural Resources, and Related Sciences (MANNRS), and nearly 6-million children reached through 4-H programs housed at over 100 universities, among many other youth-based programs.

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## What's working and what needs improvement

Across the TA system, commonalities can be found both in terms of the opportunities that may be leveraged and the challenges faced. Regardless of production system, TA is most effective when it is reflexive and adaptive to the unique needs of producers, locally provided, and based on trust. Looking into specific production systems (field crops, specialty crops, grazing land, confined animals, agroforestry, and forestry), the dominant providers of TA change depending on the production system, meaning that there is no "one size fits all" approach for what constitutes "good TA." For instance, while producers growing row crops generally get their TA from private crop advisors who are a highly trusted source of information among farmers, producers in systems such as grazing lands rely on other sources of TA. Ranchers receive the bulk of their TA through semi-formal TA systems, likely due to the limited number of NRCS grazing specialists and private-sector consultants. Yet regardless of the production system, innovation is occurring that can be further leveraged to enhance the TA that is available to producers through the providers that they already work with. Technology, new funding opportunities such as the Partnerships for Climate-Smart Commodities (PCSC) program, and renewed attention being placed on place-based and peer-to-peer learning opportunities are all helping provide producers with more tools to improve conservation in their operations.



STEPHEN AUSMUS, USDA

Of course, the TA system is not without its challenges. Current challenges in the TA system include uneven distribution of opportunities across the educational pipeline, limited recruitment, and uneven retention of both formal and semi-formal TA providers, especially in rural communities. Additionally, there is an overall lack of equity in capacity to support historically underserved communities in accessing funds and expertise to support conservation practices on working lands. This may be at least partly because historically underserved communities, namely communities of color, often have a lingering distrust of USDA and its agencies after facing decades of discriminatory practices.

Moreover, there is evidence that BIPOC producers are often providing and receiving TA through the informal TA system (Smith & Mormile 2021), which is generally limited in its ability to receive federal funding. That said, even within the formal TA system, private consultants and crop advisors may also be limited in their ability to access federal dollars for TA, thus reducing the ability of private actors to complement



NRCS and other federal agencies that are currently unable to meet demand for TA. This underscores how a lack of collaboration across formal, semi-formal, and informal TA providers hinders the ability of producers to receive both funds and TA to meet their conservation goals.

These challenges, along with gaps specific to each production system, point to a need for more integration and collaboration across TA providers and systems and across sources of funds for conservation practice implementation. Several new federal initiatives seek to address gaps in the TA system, but a clear roadmap does not yet exist for how to leverage investments in increased capacity and resources for conservation practices on working lands.

## Key conclusions

This report highlights key areas for improvement and investment within the technical assistance (TA) system to better support producers and ensure the sustainability and effectiveness of conservation practices on working lands.

The report emphasizes the following:

- 1** Thousands of qualified professionals are working across the TA system and their expertise could be more fully leveraged to support producers and conservation outcomes. At the same time, there are concerns about whether the workforce pipeline is up to the challenge given a steady increase in demand from producers.
- 2** Equitable access to TA services can be supported by investing in TA providers and systems that are embedded in local communities and production systems.
- 3** New and innovative federal conservation programs should be leveraged into pathways that can support long-term professional TA positions.
- 4** Targeted investments in TA systems should focus on gaps in capacity that are specific to each production system.
- 5** The education and training pipeline is strong but should be expanded and enhanced to provide opportunities for appropriate training, including in ways that support providers within the informal TA system.
- 6** Supporting and enabling collaboration across TA systems provides an important opportunity to maximize the impact of financial assistance (FA), TA, and the evidence base for conservation practices.

As the federal government and other actors make new investments to bolster TA capacity, further research should identify specific ongoing gaps and future challenges in sustaining a more robust and varied TA system that meets the needs of more producers than are currently supported. The need to support and expand adoption of conservation practices on working lands is especially critical as the pressures of climate change – extreme weather, pest and disease outbreaks, supply chain disruptions – increase and require more adaptive management by producers. At the same time, conservation practices on working lands can contribute to climate change mitigation. Through greater holistic investment in TA systems, we can ensure the continued development of innovative solutions, enhanced collaboration among stakeholders, a reinforced workforce that can ensure producer success in their conservation goals, and the adaptability necessary to address the dynamic and diverse requirements of working lands across the United States.



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## ABOUT MERIDIAN

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Meridian Institute is excited to be facilitating and managing the Technical Assistance Accelerator for Conservation. We see tremendous potential to accelerate the provision of high-quality technical assistance that is suited to diverse producer and landowner needs. Meridian is a trusted convenor in U.S. agriculture and forestry policy. As a third-party knowledgeable about the challenges facing U.S. agriculture and forestry, we have a proven track record helping diverse interests forge practical solutions that support conservation and producer profitability and resilience.

## CONTACT US

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We welcome new ideas and perspectives on how the current conservation TA system can be expanded and enhanced. Please contact us with any questions or suggestions: [taaccelerator@merid.org](mailto:taaccelerator@merid.org)