

Community Workforce Partnerships Summary 2025

Background

In 2024, the National Science Foundation recognized North Dakota's potential to lead the future of agricultural innovation by selecting the Ag Tech Engine in North Dakota as one of nine inaugural Engine awardees. This transformative investment—up to \$160 million over 10 years—aims to accelerate the adoption of agricultural technologies while strengthening rural economies and expanding workforce opportunities.

To better understand agriculture technology (ag tech) workforce needs in North Dakota, the AgTech Engine Workforce Team¹ facilitated eight Community Workforce Partnership (CWP) sessions across North Dakota from December 2024 to March 2025. These sessions brought together 228 participants from 44 counties, representing educators, industry leaders, community organizations, and workforce development specialists (See Fig. 1).

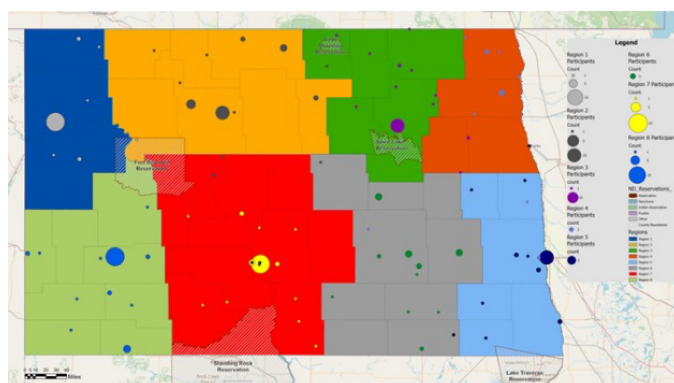


Figure 1. CWP Participants' Geographical Location

Key Themes

Themes were drawn from discussions in small-group sessions and validated by on-site facilitators to ensure an accurate reflection of community voices.

Theme 1: *Empowering Ag Tech Talent Through Education and Skill Building*

North Dakota is well-positioned to become a national leader in preparing tomorrow's agricultural technology workforce. The CWPs revealed enthusiasm for enhancing and expanding current educational efforts—from school-based agricultural programs to career and technical education (CTE), work-based learning, and hands-on training.

Participants highlighted the importance of staying ahead of the curve in a fast-evolving Ag Tech landscape. They called for agile systems that foster both technical and transferable skills: a blend of mechanical, digital, and agricultural knowledge, grounded in critical thinking, creativity, and adaptability. North Dakota has a robust foundation of community-driven learning, and by building on this strength, the state can create flexible, responsive pathways that prepare learners of all ages for high-wage, high-demand careers.

Theme 2: *Thriving Ag Tech Industries Start with Supportive Communities*

The CWP's underscored the deep connection between a strong Ag Tech workforce and resilient rural communities. Participants emphasized that North Dakota communities offer unique strengths—tight-knit networks, strong work ethics, and deep-rooted agricultural legacies—that may be leveraged to attract and retain talent.

To support workforce growth, communities are eager to invest in key assets like housing, broadband, childcare, healthcare, and transportation. Participants noted the need for local leadership development and collaborative recruitment strategies—especially those that engage returning North Dakotans, alumni, and new Americans. With the right infrastructure and support systems, rural communities can be magnets for innovation, entrepreneurship, and family life.

Theme 3: *Reimagining the Agriculture Narrative to Inspire the Next Generation*

Participants suggested reshaping public perceptions of agriculture to better reflect the sector's diversity and modernity. Many noted that young people are excited by purpose-driven, tech-enabled careers—but often don't realize those opportunities exist in agriculture. To spark early interest, communities could embrace creative outreach efforts, including elementary Ag education, immersive career fairs, field trips to agribusinesses, and youth-driven media and storytelling. By reframing agriculture as a cutting-edge, high-impact industry—with roles in data science, robotics, sustainability, and entrepreneurship—North Dakota can inspire a new generation of innovators and leaders.

Recommendations

The following recommendations aim to build on FARMS goals and North Dakota's momentum and potential:

1. **Expand Access to Ag Tech Education:** Grow the availability of ag tech courses and equipment in schools and colleges, while supporting CTE expansion and innovation.
2. **Create Seamless Career Pathways:** Strengthen articulation agreements, dual credit options, and certification programs to support lifelong learning and career advancement.
3. **Boost Work-Based Learning Opportunities:** Scale internships, apprenticeships, externships, credentialing and job-shadowing programs to connect students with real-world Ag Tech experiences.
4. **Foster Education-Industry Partnerships:** Build strong collaborations between educators, ag producers, industry leaders, and youth organizations to facilitate a unified approach to workforce development.
5. **Champion Workforce-Ready Communities:** Support community-led strategies for talent attraction and retention, focusing on infrastructure, leadership, and welcoming environments.
6. **Invest in Quality of Life in Rural Areas:** Encourage industry and public-private partnerships to ensure rural employees and families have access to essential services and vibrant communities.
7. **Elevate Career Awareness and Storytelling:** Develop engaging materials and digital campaigns to showcase the full spectrum of Ag Tech careers and the people driving innovation.
8. **Enhance Western ND Engagement:** Host events like Ag Tech Week to build regional awareness, celebrate successes, and connect youth with emerging technologies.
9. **Promote Ag Tech Entrepreneurship:** Provide training, mentorship, and storytelling platforms for entrepreneurs, spotlighting local innovation through panels, media, and showcases.
10. **Establish an Ag Tech Knowledge Network Hub:** Create a statewide digital platform for educators, employers, students, and community members to share resources, access training, and discover opportunities in Ag Tech.

Looking Ahead

The insights from the CWP sessions paint a hopeful, energized picture of North Dakota's future in agriculture technology. Communities are ready. Education systems are evolving. Industry is innovating. With continued collaboration and investment, North Dakota is poised to lead a national transformation by growing a future-ready workforce.

Assessment and Facilitation Team

This information was collected, reviewed, and synthesized by the FARMS Workforce Team¹ consisting of Lynette Flage, Ph.D.; Langston Johnson; Carmel Miller; Brooke Thiel, Ph.D.; Shumaila Parveen; Jane Vangsness Frisch, Ph.D. Additional facilitation support was provided by the NDSU Extension Leadership and Civic Engagement team: Jodi Bruns; Katie Tyler, Ph.D.; Andrea Bowman.

Supported by the U.S. National Science Foundation.
Award #2315315

