

Agriculture Industry Partnership Needs Assessment

Prepared for Northern Tier Regional Planning and Development
Commission by Fourth Economy Consulting

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Report by Fourth Economy

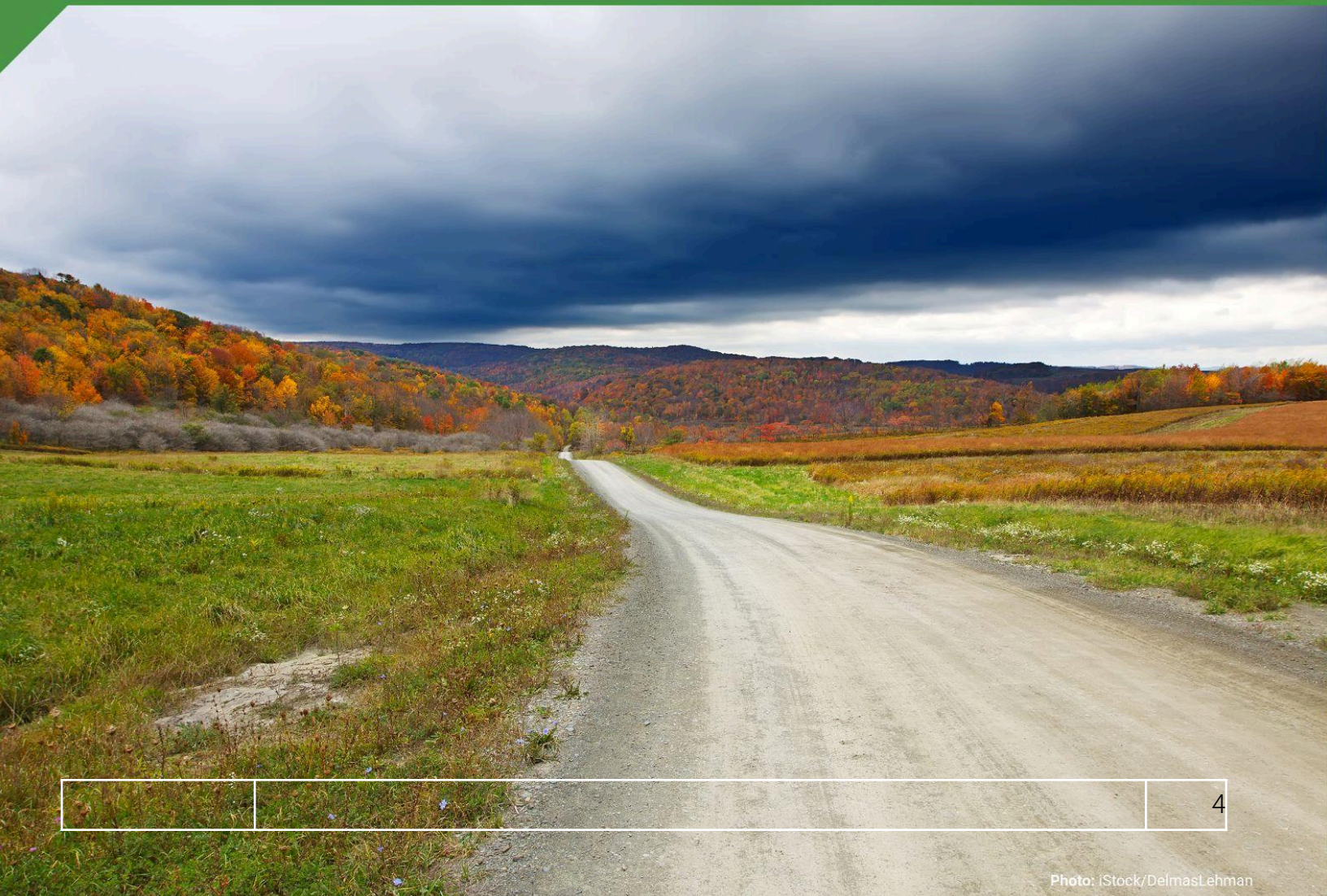
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Table of Contents

Executive Summary	4
Industry Landscape	5
Key Needs & Challenges	5
Strategic Priorities	6
Moving Forward	6
Introduction	7
Overview of the Northern Tier Agriculture Industry	8
Needs Assessment Findings	12
Immediate Priority Areas	16
1. Connecting People to Hands-On Learning for Workforce Development	17
2. Supporting Small Farms & New Producers	20
3. Providing Grant and Funding Guidance	23
4. Exploring Advocacy for Infrastructure Improvements	25
5. Elevating Industry Participation and Strategic Partnerships	27
Implementation Matrix	29
Appendix	33
I - Other Long-Term Priorities for the Agriculture IP to Consider	34
II - Glossary	34
III - Data Sources	35
IV - Agriculture Industry Definition	36
V - Charts and Tables	39

Executive Summary

In 2025, the Northern Tier Regional Planning & Development Commission (NTRPDC), serving Bradford, Sullivan, Susquehanna, Tioga, and Wyoming Counties, created an Agriculture Industry Partnership (Agriculture IP) to bring together businesses in the local agriculture sector and address workforce and operational needs. NTRPDC engaged Fourth Economy to conduct a comprehensive needs assessment to inform future strategic planning, partnership development, and funding initiatives. At its core, the assessment found that the agriculture industry needed support with marketing existing programs that support the sector, financing to help small operations remain viable, and strengthening connections within the industry to stabilize and grow food and agricultural businesses.



Industry Landscape

The Northern Tier's agriculture industry supported approximately 13,600 workers in 2025. While on-farm production is the backbone of the industry—with 85% of agricultural workers employed on farms—off-farm roles, particularly in the Food Processing sector, were also critical components of the industry.

- **On-Farm:** Following state and national trends, the number of farms in the Northern Tier declined by 14% from 2002 to 2022. Although consolidations may have contributed to some of this decline, most of it was likely attributable to farm closures because over 93% of the region's 3,538 farms still qualified as small as of 2022. Dairy farming, which holds cultural significance in the region, experienced the most drastic contraction, dropping by 73% over that same period. As the number of cattle farming operations declined, poultry operations grew.
- **Off-Farm:** Off-farm agriculture jobs grew by 7% from 2015 to 2025, though this growth lagged national and state trends. Food Processing was the dominant off-farm sector, but it was highly concentrated; 96% of Food Processing jobs were in Bradford County, with a heavy reliance on a single major facility.

Key Needs & Challenges

Based on input from stakeholder engagement and data analysis, the Northern Tier's agriculture industry faces challenges related to:

- **Aging Workforce and Succession:** In 2022, 43% of producers were 65 or older. Younger farmers have not replaced them at a sustainable rate, and succession remains difficult due to inheritance tax burdens and land affordability.
- **Economic Pressures and Small Farm Viability:** Small farms struggle to compete amid rising input costs and consolidation trends. They have also lost local support infrastructure, such as mechanics, veterinarians, and equipment suppliers.
- **Financial Support for Existing, Expanding, and New Businesses:** Access to working capital for food and agriculture businesses, funding for innovation and diversification, and financing for land purchase and improvements is limited, and many small operators report limited capacity to compete for and manage complex grants or opportunities compared to larger entities.
- **Infrastructure Gaps and Limited Processing Capacity:** Stakeholders interviewed for this study cited inadequate essential infrastructure, including internet/cell coverage, three-phase power for advanced machinery and anaerobic digesters, and reliable transportation routes, as the primary barrier to modernizing or expanding agricultural operations. Limited in-region meat and dairy processing facilities constrain farmers' options for producing value-added products and accessing open markets.

- **Awareness and Workforce Development:** While workforce programs exist in the region, many potential learners are unaware of the resources available. This awareness gap limits the number of young people pursuing careers in the agriculture industry.

Strategic Priorities

To address these needs, the assessment identified five immediate priority areas for the Agriculture IP to take collaborative action:

1. **Connecting People to Hands-On Learning:** Enhance workforce development by better connecting students to existing programs and increasing awareness of the full breadth of agriculture careers through partnerships with local schools and the Workforce Development Board.
2. **Supporting Small Farms & New Producers:** Pivot from group-based programming to individualized support and outreach, and increase efforts to promote local purchasing through "Buy Local" challenges and aggregation services that reduce the time burden on producers.
3. **Providing Grant and Funding Guidance:** Streamline access to capital by creating straightforward funding information and providing targeted one-on-one outreach to help small operations navigate complex application processes.
4. **Exploring Advocacy for Infrastructure:** Explore opportunities to advocate for improvements in power-grid capacity, road quality, and broadband access.
5. **Elevating Industry Participation:** Strengthen key partnerships while assigning dedicated points of contact to improve communication with industry partners.

Moving Forward

The success of the Agriculture IP hinges on moving from assessment to implementation. By focusing on these priority areas, the Agriculture IP and its partners can foster a more resilient, connected, and economically viable agricultural industry that preserves the region's heritage while adapting to the demands of the modern economy.

Introduction

In 2025, the Northern Tier Regional Planning & Development Commission (NTRPDC), which serves as the Local Development District for Bradford, Sullivan, Susquehanna, Tioga, and Wyoming Counties, launched an Agriculture Industry Partnership (Agriculture IP) to convene agricultural stakeholders and begin identifying the sector's workforce and operational needs. To build off the initial convening work, NTRPDC engaged Fourth Economy to conduct a needs assessment for the Northern Tier's agriculture industry. The assessment analyzed industry and workforce data and engaged stakeholders in the food and agriculture sector in the Northern Tier to identify workforce, economic, and operational needs that should inform the Agriculture IP's ongoing strategic planning, partnership development, and allocation of resources.



Overview of the Northern Tier Agriculture Industry

The Agriculture IP serves a broad range of on-farm and off-farm industries that currently exist or could emerge in the Northern Tier. Appendix IV has the full list of industries. Most industries align with one of the following sectors:¹

- On-farm
 - Animal production
 - Crop production
 - Agriculture support activities
- Off-farm²
 - Food processing
 - Food and beverage manufacturing
 - Alcohol processing and manufacturing

Based on the most recent data available, nearly 13,600 people work in the Northern Tier's agriculture industry. The majority of the region's agriculture workers (85%) are employed on farms, and the remaining 15% are employed in off-farm jobs. As of 2025, Food Processing was the region's most significant off-farm agriculture sector, employing 9% of all agriculture industry workers and 62% of off-farm workers. Other sectors each employ less than 3% of the Northern Tier's agricultural workforce (Appendix V.1).

Farm Trends

With such a large share of employment concentrated in on-farm jobs, farms are the foundation of the region's agriculture industry. As of 2022, the region had 3,538 farming operations. More than 93% of these operations were small, meaning the total market value of agricultural products sold by these ventures was less than \$350,000.³ As of 2022, the Northern Tier had a larger share of small farms than Pennsylvania and the United States, where 86% of farms are considered small. From 2017 to 2022, the share of small farms in the Northern Tier also remained steady, while they declined statewide and nationally (Appendix V.2).

However, the region's farms have struggled in recent years. Overall, the number of farms in the Northern Tier declined by 14% from 2002 to 2022 (Appendix V.3). This rate of decline was slightly

¹ The Appendix includes the specific industries within each of these sectors.

² Forestry Processing and Forest Product Manufacturing are considered part of the Northern Tier's agriculture industry, but they are not included in this report. To learn about needs for these sectors and strategies to grow them, see [Advancing Pennsylvania's Forest & Wood Products Industry Strategy](#), a statewide report for Pennsylvania.

³ The share of small farms exceeds 93% because the way the USDA disaggregates Census of Agriculture data does not align with its cutoff for small farms. While the cutoff for small farms is less than \$350,000 in total market value of agriculture products sold, the Census of Agriculture groups this cutoff in a bucket of farms with \$250,000 to \$499,999 of total market value of agriculture products sold. Therefore, this analysis uses the previous cutoff, \$250,000, to conservatively measure the share of small farms in the region.

below the rate for Pennsylvania of 16%, but above the national trend of 11% (Appendix V.5). Notably, the rate of change in farm operations varied significantly by county. From 2002-2022, Susquehanna lost 34% of its farming operations, the largest share of any Northern Tier county, while the number of farms in Tioga increased by 3% (Appendix V.3). Tioga's net increase in farms was driven by significant growth from 2002-2012. The number of farms then declined in the following decade but not enough to fully eliminate the previous growth.

These closures have not impacted all farming operations equally, resulting in shifts in the composition of the region's farms. While the area has a rich history of dairy farming, dairy operations have closed much more rapidly than farms as a whole. From 2002 to 2022, the number of dairy farms in the region dropped by 73%, from 898 to 242 (Appendix V.6 & V.7). According to recent news and stakeholder engagement, rising input costs without equivalent increases in milk costs have led to this steep decline. The number of operations with other livestock production, including beef cattle and hogs, also declined between 2002 and 2022, though less drastically than dairy. In contrast, the number of poultry operations grew, led by a 60% increase in farm operations with egg-laying chickens (layers) (Appendix V.7). With the growth in layers and the decline in dairy farming, the region had more than twice as many operations with layer chickens than dairy farms in 2022 (Appendix V.8).

Though related, the number of farms in the Northern Tier is not directly tied to the number of people employed on farms. From 2017 to 2022, the number of producers (i.e., the people involved in making day-to-day decisions for farm operations) remained stable even as the number of farming operations decreased by 12% (Appendix V.3 & V.9). During the same period, the number of hired farm laborers increased for the first time since before 2002, growing by 19%, even as the number of farms with hired labor decreased by 6% (Appendix V.10 & V.11).

Off-Farm Trends

The number of off-farm agriculture industry jobs in the Northern Tier grew by 7% from 2015-2025, and most sectors within the agriculture industry saw job growth. Still, the agriculture industry in the Northern Tier lagged national growth of 25%. The number of Alcohol Processing and Manufacturing jobs grew at the fastest rate, 52%, but provided only 5% of the Northern Tier's off-farm agriculture industry jobs in 2025 (Appendix V.12 & V.13). Food and Beverage Manufacturing was the only sector in the Northern Tier that lost jobs from 2015 - 2025, shrinking by 6%. Tioga County was the most impacted by losses in the Food and Beverage Manufacturing sector, leading the county to experience a net loss in off-farm jobs from 2015-2025 (Appendix V.14).

Food Processing remained the Northern Tier's largest off-farm agriculture sector from 2015 to 2025. Within this industry, almost all jobs were in Animal (except Poultry) Slaughtering, with 875 jobs, and Meat Processed from Carcasses, with 367 jobs (Appendix V.15). All slaughtering and processing jobs were at just six facilities in Bradford, Tioga, and Susquehanna counties. 96% of these jobs were in Bradford County, with the vast majority at the Cargill Meat Solutions

Corporation (Appendix V.15). The remaining five processing facilities employed far fewer workers, with four employing fewer than ten.

Northern Tier Processing Facilities

Processing Facility Size

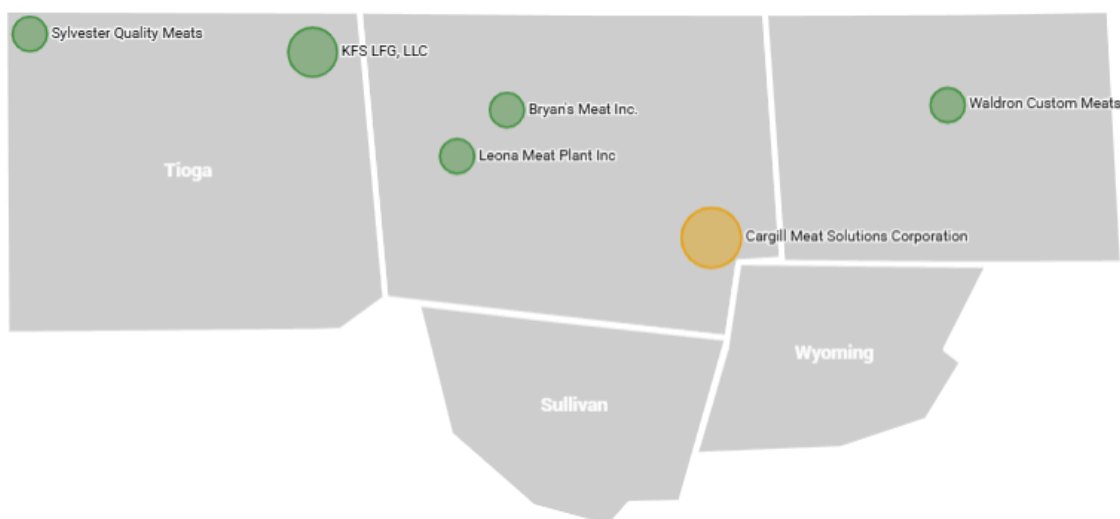
1 = Fewer than 10 employees

2 = 10 - 500 employees

3 = More than 500 employees

Facility Size 1 3

Type of Facility ■ Meat & Poultry ■ Meat



Sources: USDA, MPI Directory: Alphabetically by Establishment Name, USDA, Establishment Demographic Data • Establishment data updated July 7, 2026



Workforce Trends

The Northern Tier agriculture industry must prepare for retirements, particularly among producers (i.e., the people involved in making day-to-day decisions for farm operations). Producers are aging, and few new farmers are replacing them. In 2017, 36% of producers were 65 or older. By 2022, the share rose to 43%. In contrast, only 17% of producers in the region were younger than 44 (Appendix V.16).

Among off-farm workers, 1 in 5 were 55 years or older in 2025, suggesting these workers will reach retirement age in the next 10 years. While the region should confirm the industry has the talent to replace these future retirees, the share of off-farm workers at risk of retirement is considered fairly average, making replacement less urgent than with producers. As it is, the off-farm agriculture industry workforce already trends younger than the Northern Tier's population as a whole (Appendix V.17).

New workers in the agriculture industry may need hands-on training to acquire specific job skills, but they do not typically need formal higher education credentials (Appendix V.18 lists the top specialized job skills for off-farm agriculture jobs). Jobs in the agriculture industry typically require a high school diploma or no formal education credential, a trend projected to continue over the next decade (Appendix V.19 & V.20). In 2025, seven in ten Northern Tier off-farm agriculture workers were employed in the top 15 agriculture occupations requiring a high school degree or less (Appendix V.21). For on-farm agriculture jobs, 91% of the jobs were in the top 10 occupations that require a high school degree or less (Appendix V.22).

Needs Assessment Findings

Regional data and local stakeholder engagement revealed that the Northern Tier agriculture industry has the following needs.



1. The Northern Tier needs mechanisms to bring new people into the food and agriculture industry to keep it viable and sustain it into the future.

- **Northern Tier producers are aging and not enough new farmers are replacing them.** In 2017, 36% of producers were 65 or older. By 2022, the share rose to 43%. In contrast, only 17% of producers in the region were younger than 44 (Appendix V.16).
- **In recent years, farm closures have exceeded farm openings, suggesting that Northern Tier farmers need more support.** Between 2002 and 2022, the number of farms in the Northern Tier declined by 14% (Appendix V.3).
- **The number of on-farm jobs declined over 20 years, likely as the result of increased productivity and farm closures.** The number of farms with hired labor decreased by 29% from 2002 to 2022, and the number of people working as hired farm laborers decreased by 35% during the same period (Appendix V.10 & V.11).
- **Local students are not aware of the diversity of jobs available to them.** Although the Northern Tier agriculture industry employs many people in Food Processing and other off-farm businesses, local students are not aware of the range of available jobs (e.g., food science, inspectors, mechanics, manufacturing, technology, and business management).

2. The region needs ways to help retain existing farm operations, as well as to preserve agricultural land for the next generation of producers.

- **Farmers face challenges with farm succession and generational transition.** From a workforce perspective, agricultural producers have expressed that they struggle to pass on operations or mentor new entrants. From a financial perspective, family farms have found that inheritance taxes on land sales have made it financially prohibitive to keep farms across generations.
- **The region is losing farms and land access.** Between 2002 and 2022, the Northern Tier lost 32% of its agricultural land (Appendix V.4). Agricultural land is facing increased competition from non-farming developments, including natural gas operations and data centers. Young and beginning farmers face particularly significant barriers to entry because they cannot afford to purchase land even when available.
- **Dairy farms are closing faster than other farming operations in the Northern Tier, suggesting dairy farmers need targeted support.** From 2002 to 2022, the number of dairy farms in the Northern Tier declined by 73%, whereas the number of regional farms overall decreased by 14% (Appendix V.5 & V.6).

3. **Small and mid-sized Northern Tier farms and agricultural businesses, including those that provide critical inputs within the agriculture supply chain, need additional financial support to remain economically competitive in the midst of changing market dynamics.**

- **Specifically supporting small farms is essential for maintaining the Northern Tier's agriculture industry, where small farms account for a larger share of farms than the national average.** As of 2022, more than 93% of farms in the Northern Tier were small, meaning the total market value of agricultural products sold was less than \$350,000.⁴ Small farms played a bigger role in the Northern Tier than they did nationally, where about 86% of farms were classified as small (Appendix V.2).
- **There is strong economic pressure to scale or close.** With industry consolidation, smaller family farms struggle to compete and survive financially.
- **Local supply chains have become constrained.** Longtime, small local shops providing parts, equipment, mechanical repairs, fertilizer, veterinary care, agronomy, and inputs like packaging are disappearing. This has resulted in less reliable support for small farms and producers.
- **Access to working capital is difficult, particularly for small farming operations.** Many small operations have said they lack capacity to compete for and manage complex grants or opportunities compared to larger entities.

4. **The region needs investment in infrastructure that supports the food and agriculture industry, including meat and dairy processing, high speed broadband coverage, and increased electricity capacity.**

- **Food Processing is the largest off-farm agriculture sector in the Northern Tier, and farmers desire more processing companies to open the market.** While Food Processing is a major industry in the Northern Tier, most jobs appear to be concentrated at one company, limiting farmers' opportunities to sell their products in an open market.
- **Stakeholders shared that local meat and dairy processing providers are at capacity.** Without additional capacity, the region's current and future farmers will struggle to access value-added production.

⁴ The share of small farms exceeds 93% because the way the USDA disaggregates Census of Agriculture data does not align with its cutoff for small farms. While the cutoff for small farms is less than \$350,000 in total market value of agriculture products sold, the Census of Agriculture groups this cutoff in a bucket of farms with \$250,000 to \$499,999 of total market value of agriculture products sold. Therefore, this analysis uses the previous cutoff, \$250,000, to conservatively measure the share of small farms in the region.

- **Stakeholders expressed that infrastructure like sewage, rural transportation routes, internet and cell coverage, and 3-phase power are limited.** These kinds of infrastructure are needed for processing and technology advancements, such as adding methane digesters.

Immediate Priority Areas

After the needs assessment, Northern Tier agricultural stakeholders collaboratively identified five priority areas for the Agriculture IP. These include:

1. Connecting People to Hands-On Learning for Workforce Development
2. Supporting Small Farms and New Producers
3. Increasing Access to Grants and Funding
4. Elevating Industry Participation and Strategic Partnerships
5. Exploring Advocacy for Infrastructure Improvements

For each priority area, stakeholders identified short- and/or medium-term tactics to further these priorities. Short-term tactics are action items the Agriculture IP can implement in the next year, while medium-term tactics would be implemented in the next 1-3 years.





Photo: Unsplash/Zoe Richardson

1. Connecting People to Hands-on Learning for Workforce Development

Problem Statement

The Northern Tier offers several high school workforce development and learning opportunities related to the agriculture industry (Appendix V.23 and V.24), but learners are not universally exposed to these opportunities, leading to a sense that on-farm production is the only career path within the industry. Learners need more hands-on exposure to the breadth of careers available within the industry (e.g., veterinary medicine, food science, food safety inspection, mechanical maintenance, manufacturing, technology, banking, business management and other specialized roles). Increased awareness of these careers can ensure the region has a robust workforce that is eager and prepared to pursue employment within the industry, particularly with the increasing use of technology (e.g., automation tools and artificial intelligence) and sustainability-oriented business practices.

Current State

Hands-on learning for workforce development helps prepare local workers for available jobs and introduces new workers to the agriculture industry. Although agriculture industry jobs typically require a high school diploma or no formal education credential, many jobs in the industry require

specialized skills not associated with a formal degree. Producers, who make day-to-day decisions on a farm, must know about farm productivity and efficiency, financial management, business management, and personnel. For hired jobs, online job postings show that the skills needed vary by industry (listed in Appendix V.18).

Current Efforts

Hands-on learning is already a valued part of the workforce development approach in the NTRPDC region, especially through Future Farmers of America (FFA), 4-H, and school-based programs. Local agriculture and education organizations are also hosting an agriculture Career Camp for the first time this summer, organizing a Mobile Agriculture Lab at elementary schools in conjunction with Agriculture Literacy Week, and hosting agriculture-focused career days that include Virtual Reality headsets and agriculture-related programming. In addition, the region offers several opportunities for hands-on learning at local events, such as the Maple Festival and the Troy Fair. Finally, NTRPDC has a program to assist businesses in setting up apprenticeship programs to expand hands-on learning opportunities and make them available to local learners and potential employees.

Recommendation

Increase awareness of, and connectivity to, existing hands-on learning opportunities through resource gathering, documentation, and outreach.

Short-Term Tactics

The following tactics are generally short-term, though some have medium-term actions. Medium-term actions are noted.

- **Leverage Career Connect for agriculture industry needs.**
 - Generate a list of farmers who are willing to host students for shadowing or hands-on learning, and add the list to the [Northern Tier Career Connect](#) website, which was described as an asset, but currently has no agriculture-specific listings.
 - Connect with teachers who are interested in offering their students opportunities to work in the agriculture industry.
- **Create high impact tabling opportunities at key events.**
 - Collect collateral (e.g., class schedules, informational brochures) from partners offering hands-on learning opportunities.
 - Develop Agriculture IP collateral to share (e.g., information about the Agriculture IP and its priorities, key partners, and hands-on learning resources).
 - Identify big events to leverage for tabling and sharing information about hands-on learning opportunities with participants.
 - *Medium Term:* Work with partners to develop hands-on learning activities that can be hosted while tabling at events.
- **Seek out student input.**

- Include a student representative from FFA in the Agriculture IP.
- Use FFA Roundtables, or other youth-oriented events, to get input from youth about how they want to connect to hands-on learning.
- Collaborate with FFA to intentionally build student chapters in schools that do not have them.
- **Leverage partnership between the Agriculture IP and the Workforce Development Board (WDB).**
 - Collaborate to promote hands-on learning specific to the WDB's high-priority occupations.
 - Work with the WDB to identify and expand promising practices from previous work, such as the WDB's agriculture camp.
 - *Medium Term:* Develop and launch an online campaign with industry info and videos highlighting different positions throughout the industry.

Lead and Support/Primary Partners

- Agriculture IP (Lead)
- Northern Tier Regional Planning and Development Commission
- Northern Tier Workforce Development Board
- Future Farmers of America
- Agricultural educators



Photo: iStock/Portra

2. Supporting Small Farms & New Producers

Problem Statement

Many small farmers and food and agriculture startups in the Northern Tier want help building their markets, and could use support to identify additional buyers and advertise their products. They have benefitted from formal networks like the Agriculture IP, but find it difficult to participate in the standard organizing activities of an industry partnership, such as designated group meeting times.

Current State

As of 2022, more than 93% of farms in the Northern Tier were small, meaning the total market value of agricultural products sold was less than \$350,000 (Appendix V.2). Small farms play a bigger role in the Northern Tier than they do nationally, where about 86% of farms were classified as small as of 2022 (Appendix V.2). Like all farms, small farms in the Northern Tier have been closing. From 2002 to 2022, the overall number of farms declined by 14% in the Northern Tier (Appendix V.3). What's more, longtime local shops that provided parts, equipment, mechanical repairs, fertilizer, veterinary care, agronomy, and inputs like packaging are disappearing, leading to less reliable support for local agriculture businesses. Local producers face economic pressure to

"go big or go home" with industry consolidation, and smaller family farms struggle to compete and survive financially.

Current Efforts

Stakeholders consider the Agriculture IP a good resource for farmers, saying it is present to discuss services and introduce people to available resources. The Ag Industry Partnership is also reaching out to farmers and people in the agriculture industry to hear from them about their needs and connect them to resources such as the [NEPIRC](#), which assists with improving manufacturing processes. There are also existing programs and supports such as the Taste of the Region event, the Agritourism Interactive Map, the Buy Local Purchasing Campaign, and the robust farmers market system, that are all about collaboration and cross-promotion among small farms. In addition to these formal efforts, farmers are creating farm-to-farm synergies and collaborations independently.

Recommendation

Help farms grow their markets by building connections, fostering a collaborative culture among small farmers, attracting buyers to the region (e.g., processing businesses), and promoting existing local agriculture businesses.

Short-Term Tactics

The following tactics are generally short-term, though some have medium-term actions. Medium-term actions are noted.

- **Continue to build the connective tissue among small farms and producers.**
 - Help small farms meet and build relationships with each other through existing events, round tables, or technical assistance provision.
 - Systematically introduce the Agriculture IP to small farms.
- **Pivot engagement strategy from group programming to individual support.**
 - Reduce Agriculture IP group events that are not well attended.
 - Develop strategy and capacity for one-on-one outreach and support by NTRPDC staff.
- **Promote local purchasing (advocacy, championing resources).**
 - Create a "Did You Know" series with snippets of information about local agriculture businesses, including listings of vendors, producers, and products available to purchase.
 - *Medium-term:* Promote the agritourism and agriculture in the region through existing resources, such as through the [Buy Fresh, Buy Local PA Program](#) and [Pennsylvania Veteran Farms](#).

Medium-Term Tactics

- **Encourage aggregation to reduce time burden on small producers.**
 - Local aggregators like Delivered Fresh, which buys products from farmers to deliver directly to homes in the region, and local stores that carry local farm and agriculture products, are good avenues for small producers to get their products in front of customers without the time investment of selling to individuals (e.g., at farmers' markets). This could be effective for institutional purchasing as well.
- **Launch a region-wide "buy local challenge."**
 - Encourage local businesses, employers, and government organizations to replace commonly purchased items with local products. Make the campaign time-bound (e.g., an August Challenge) and gamified (with awards going to the employers that purchase the most local products, for example).

Lead and Support/Primary Partners

- Agriculture IP (Lead)
- Northern Tier Regional Planning and Development Commission
- Pennsylvania Department of Agriculture
- Local stores, businesses, and employers



Photo: iStock/stevanovicigor

3. Providing Grant and Funding Guidance

Problem Statement

Finding access to working capital is a barrier to the continued success, growth, and diversification of food and agriculture businesses within the region. Farmers and producers need more support identifying and navigating grant and funding opportunities.

Current State

There are many grant opportunities available for different facets of the food and agriculture industry. However, there are sometimes an overwhelming amount of opportunities with unclear eligibility guidance and complicated application requirements. What's more, USDA and other funder guidelines feel everchanging, and just because someone knows about a grant does not mean they are a good fit for it. In particular, smaller operations cite that they often lack capacity to compete for and manage complex grants or funding opportunities compared to larger entities.

Current Efforts

There are many long-term loan partners, economic development entities, and private institutions that have been working in the region to help advance financing for agriculture. The Ag Center and the Cohort Business Development System exist as supports for the agriculture industry in sharing

information on funding and grants. Horizon Farm Credit, while not in the region, also offers core support. NTRPDC has a grant writer on staff, and it hosts roughly 15 loans that food and agriculture companies are eligible to apply for.

Recommendation

Increase support for producers and agriculture businesses to help them navigate and apply for grant opportunities.

Short-Term Tactics

- **Streamline grant and funding opportunity information.**
 - Develop half-pagers documenting various opportunities, to support the user in quickly determining eligibility.
 - Create a regional database of funding or grant opportunities that producers and agribusinesses can use to determine what available grants they qualify for.
- **Increase one-on-one outreach to food and agriculture businesses in the region.**

Because these business owners often work 12-15 hours per day (especially during the busy season), one-on-one outreach has been cited as a more effective approach than bringing groups together.

Medium-Term Tactics

- **Work with financial institutions and grantors to increase or introduce agriculture business lending.** Traditional lenders and grantors in the region may not fully understand agricultural businesses and therefore may be less willing to work with them on funding. Network with these financial institutions to share local business profiles and common financing needs to encourage more crossover into the food and agriculture industry.

Lead and Support/Primary Partners

- Agriculture IP (Lead)
- Northern Tier Regional Planning and Development Commission
- Center for Agricultural Excellence at the Small Business Development Center
- Penn State Extension



Photo: Unsplash/LEGENDERRY

4. Exploring Advocacy for Infrastructure Improvements

Problem Statement

Aging and incomplete infrastructure poses challenges for the agriculture industry, which requires high quality roads for transporting products to market, upgraded electrical capacity for effective and expanded production, and broadband connectivity for advancing machinery and general business operations.

Current State

Farmers and producers in the region have shared that limited sewage infrastructure, the nature of rural transportation routes, spotty internet and cell coverage, and inadequate electrical capacity all restrict the amount they can expand operations, introduce new and diversified business practices, increase value-added production, and reach markets. For example, three-phase power is needed for farms to install and use anaerobic digesters, and for food producers to add additional processing capacity. The electrical grid is aging and improvements require collaboration with additional agencies and legislators. Improving broadband infrastructure has been a priority in the region for the last several years.

Current Efforts

NTRPDC's transportation planning team develops the region's 5-, 10-, and 25-year transportation improvement plans. The group also works with local communities to address road infrastructure, though road maintenance processes vary significantly and can be very local, state-level, or regional. The Progress Authority was recently awarded \$74.5 M for broadband expansion, which is expected to get fiber to within less than 1 mile of every resident over the next 4-5 years.

Recommendation

Explore Agriculture IP's role in advocacy for power grid and other infrastructure improvements on behalf of the agriculture industry.

Medium-Term Tactics

- **Build an advocacy portfolio on behalf of the agriculture industry.**
 - Collect stories about where infrastructure is falling short and impacting agricultural production and economy.
 - Connect with legislators to advocate for improvements to the power grid and roads.
 - Keep agencies like PennDOT aware of road conditions and needed improvements.

Lead and Support/Primary Partners

- Agriculture IP (Lead)
- Northern Tier Regional Planning and Development Commission
- Pennsylvania Department of Transportation
- Local legislators and municipalities



Photo: iStock/TW Farlow

5. Elevating Industry Participation and Strategic Partnerships

Problem Statement

For the Agriculture IP to be impactful, it must have increased participation from farmers, producers, and business owners within the industry. Additionally, the benefits the Agriculture IP offers, including connections to partners that can help local food and agriculture businesses, must be clearly articulated and understood.

Current State

There is broad recognition in the Northern Tier region that food and agriculture provides benefits to local communities, and leaders value the industry's presence and economic impact. Locally, there is a strong sense of mutual support and collaboration, where farmers and food businesses share equipment and provide guidance to one another. This is enhanced by a tight-knit community of leaders, mentors, and organizations committed to helping people succeed in the region. At the same time, farmers and food producers have been less likely to show up at Agriculture IP gatherings and events, possibly due to lack of time or awareness of the inherent benefits of participation.

Current Efforts

The [PA CareerLink AgWorks Program](#), which is grant funded from 2025-2027, is “focused on strengthening the agricultural workforce by offering support to employers, expanding opportunities for workers, and enhancing employment conditions throughout the agricultural sector.” This program is an important resource for encouraging industry participation and strategic partnerships.

Recommendation

Streamline resources to support the NTRPDC staff in building relationships with key partners across the industry.

Short-Term Tactics

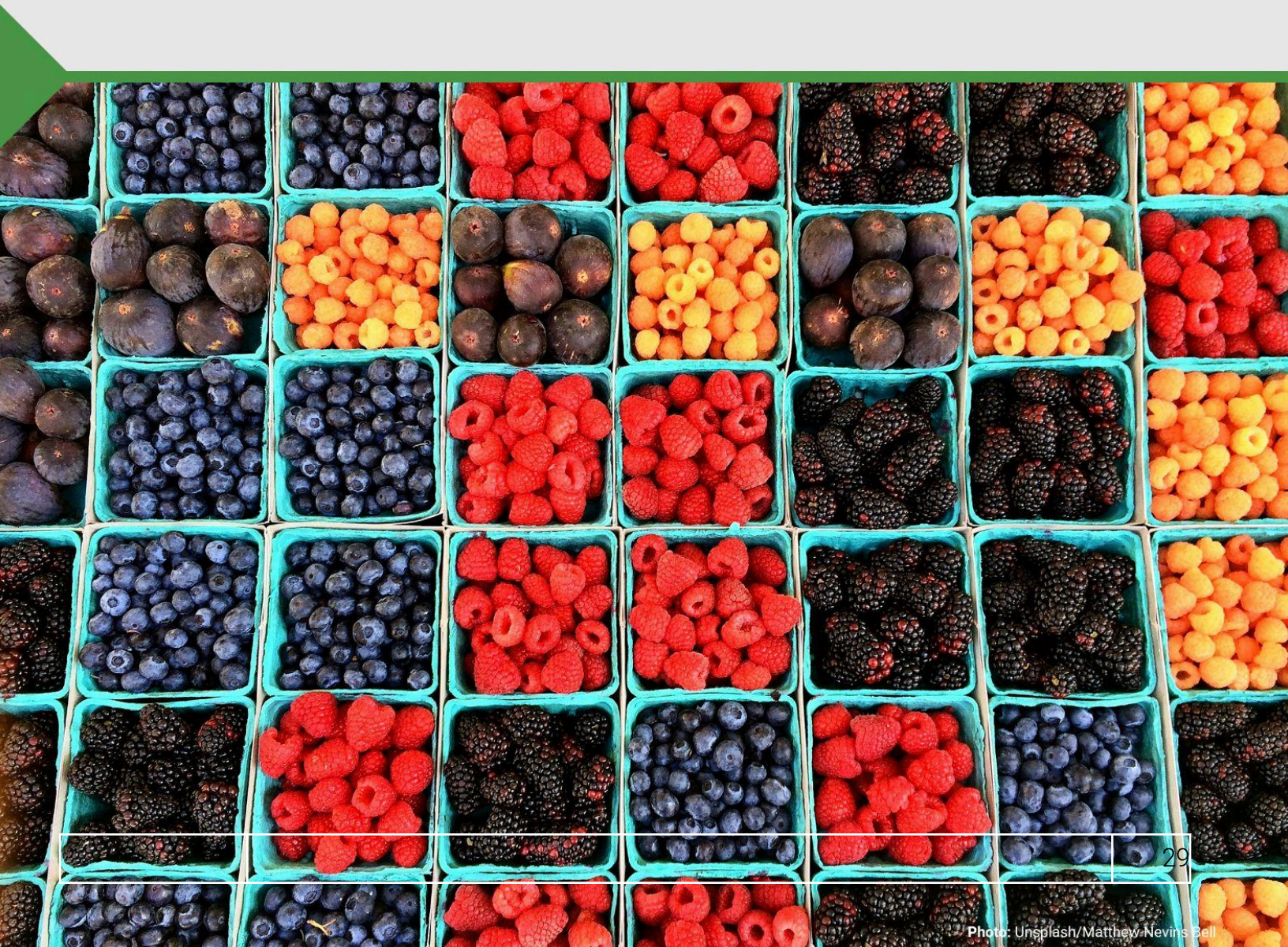
- **Streamline resources of participating industry businesses.**
 - Promote the [NTRPDC Resource Sheet for Agriculture](#).
 - Assign an employee of NTRPDC to be a dedicated point of contact for each partner.
- **Strengthen key partnerships with agriculture players.**
 - Continue to invite Penn State Extension to Agriculture IP events, and work to build that relationship.
 - Learn more about the roles that local Chambers of Commerce play in agriculture and explore opportunities to partner with them to support the industry.
 - Explore opportunities to collaborate with county conservation districts in their partnerships with farmers.

Lead and Support/Primary Partners

- Agriculture IP (Lead)
- Northern Tier Regional Planning and Development Commission
- Penn State Extension
- Pennsylvania Department of Agriculture
- County Conservation Districts
- Local Chambers of Commerce

Implementation Matrix

The following matrix summarizes the priority areas and tactics and lists the expected timeline, owner, and partners for each. **Short-term** tactics can be accomplished in the next year, while **medium-term** tactics are expected to take 1-3 years.



Priority Area	Tactic	Timeline	Owner	Partners
Connecting People to Hands-On Learning for Workforce Development	Leverage career connect for agriculture industry needs.	Short-term	Agriculture IP	● NTRPDC ● Northern Tier Workforce Development Board
	Create high impact tabling opportunities at key events.	Short- to medium-term	Agriculture IP	● NTRPDC ● Penn State Extension ● Future Farmers of America
	Seek out student input.	Short-term	Agriculture IP	● NTRPDC ● Northern Tier Workforce Development Board ● Future Farmers of America ● School districts
	Leverage partnership between the Agriculture IP and the Workforce Development Board.	Short- to medium-term	Agriculture IP	● NTRPDC ● Northern Tier Workforce Development Board
Supporting Small Farms & New Producers	Continue to build the connective tissue among small farms and producers.	Short-term	Agriculture IP	● Small farms ● Penn State Extension
	Pivot engagement strategy from group programming to individual support.	Short-term	Agriculture IP	● NTRPDC
	Promote local purchasing (advocacy, championing resources).	Short- to medium-term	Agriculture IP	● NTRPDC ● Buy Fresh Buy Local ● Pennsylvania Veteran Farms

Priority Area	Tactic	Timeline	Owner	Partners
	Encourage aggregation to reduce time Burden on Small Producers.	Medium-term	Agriculture IP	- Delivered Fresh - Small farms
	Launch a region-wide “buy local challenge.”	Medium-term	Agriculture IP	- Local businesses - Small farms - School districts
Providing Grant and Funding Guidance	Streamline grant and funding opportunity information.	Short-term	Agriculture IP	NTRPDC
	Increase one-on-one outreach to food and agriculture businesses in the region.	Short-term	Agriculture IP	NTRPDC
	Work with financial institutions and grantors to increase or introduce agriculture business lending.	Medium-term	Agriculture IP	- Local lending institutions - Horizon Farm Credit
Exploring Advocacy for Infrastructure Improvements	Build an advocacy portfolio on behalf of the agriculture industry.	Medium-term	Agriculture IP	- Local farms - Regional legislators - PennDOT
Elevating Industry Participation and Strategic Partnerships	Streamline resources for participating industry businesses.	Short-term	Agriculture IP	- NTRPDC - Northern Tier Workforce Development Board

Priority Area	Tactic	Timeline	Owner	Partners
	Strengthen Key Partnerships with Agriculture Players.	Short-term	Agriculture IP	● Penn State Extension ● Local Chambers of Commerce ● County Conservation Districts

Appendix



I - Other Long-Term Priorities for the Agriculture IP to Consider

The immediate priority areas covered in this report rose to the top from a comprehensive list of key needs within the industry generated by stakeholders. These immediate priorities should be the Agriculture IP's focus in the short and mid-term, acknowledging capacity and resource constraints in the region.

Stakeholders also identified the following priorities, which the Agriculture IP should consider during future, longer-term planning, as additional resources and capacity become available.

- 1. Advocate for added in-region meat and dairy processing capacity to open the market for local producers.** Champion the development of additional local processing capacity to help make economics viable for small-to-medium-sized operations.
- 2. Help with succession planning & land access.** Provide more tailored support to farmers navigating the complexities of succession planning, including advocacy for favorable legislation regarding inheritance taxes and policy to help young farmers access land.
- 3. Provide technology support/exposure.** As technology use increases its impact on the agricultural industry, monitor the technology-related needs and challenges of local food and agriculture producers, and source education, training, and workshops to help these businesses stay current and competitive.
- 4. Assist with logistics, local supply chain, and distribution connections.** Help farmers lower costs and reach wider markets at sustainable price points by referring them to regional resources that assist with input sourcing and product distribution solutions.
- 5. Increase awareness of business planning and operations assistance.** Offer additional one-on-one support for managing the business side of farming, such as finance, tax reporting, and employee management structures. This can help with business attraction, retention, and expansion.
- 6. Expand fundamental skills training and continuing education.** Expand successful fundamental 101 programs to help new entrants gain essential skills, such as animal care and basic equipment operation. Connect producers with opportunities to hone their skills, such as best management practices and succession planning.

II - Glossary

Definitions

- **Aggregator:** A business, cooperative, or digital platform that consolidates agricultural products from multiple smallholder or regional farms.
- **Industry:** In this report, industry describes the types of agriculture operations served by the Agriculture Industry Partnership, as defined by the NAICS codes listed under [IV - Agriculture Industry Definition](#).

- **Off-Farm Jobs:** Agriculture industry employment that primarily occurs off of farming operations. These jobs are in one of three sectors: Food Processing, Food and Beverage Manufacturing, and Alcohol Processing and Manufacturing.
- **On-Farm Jobs:** Agriculture industry employment that primarily occurs at farming operations. These jobs are in one of three sectors: Animal Production, Crop Production, and Agriculture Support Activities.
- **Producer:** A person who is involved in making decisions for the farm operation ([USDA](#), B - 16 Appendix B).
- **Sector:** In this report, sector refers to one of six categories of agriculture operations and jobs: Animal Production, Crop Production, Agriculture Support Activities, Food Processing, Food and Beverage Manufacturing, and Alcohol Processing and Manufacturing.
- **Small Farms:** Farm operations where the total annual market value of agricultural products sold was less than \$350,000. This report only counts farms with a total market value of agricultural products sold of less than \$250,000 to align with data from the National Agricultural Statistics Service.
- **Succession Planning:** The process of planning for the future ownership (and sometimes operation) of a farm operation and its land.
- **Value-Added Production:** Business operations that alter a raw agricultural material or commodity through processing, packaging, or marketing to increase its market value.

Acronyms

- **Agriculture IP:** Agriculture Industry Partnership
- **CIP Code:** Classification of Instructional Programs
- **NTRPDC:** Northern Tier Regional Planning & Development Commission

III - Data Sources

- [Lightcast](#). Lightcast provides proprietary modeling of employment and job postings data based on federal sources and online scraping. Lightcast is the source of all off-farm employment data in this report. It is also the source for skills and job postings data.
- [U.S. Department of Agriculture, Food Safety and Inspection Service](#). The Food Safety and Inspection Service manages the Meat, Poultry, and Egg Product Inspection Directory, which includes information on facility location, employment levels, and processing and slaughtering capacity.
- [U.S. Department of Agriculture, National Agricultural Statistics Service | Census of Agriculture](#). The Census of Agriculture is a nationwide count of U.S. farms, ranches, and their operators, conducted every five years by the U.S. Department of Agriculture's National Agricultural Statistics Service. The Census of Agriculture captures all the on-farm data used in this report, including farm, producer, and laborer trends.

IV - Agriculture Industry Definition

The Agriculture IP is designed to serve a wide range of agriculture industries that currently exist or could emerge in the Northern Tier. Each industry is associated with a 6-digit NAICS (North American Industry Classification System) code to enable NTRPDC and the Agriculture IP to pull data on employment, wages, and establishments to monitor their evolution and growth.

The Agriculture IP serves the following industries with a presence in the Northern Tier. Industries are defined by 4- to 6-digit NAICS codes.⁵

Agriculture Industry Category	NAICS ⁶	Description
Animal Production	11211	Beef Cattle Ranching and Farming
	11212	Dairy Cattle and Milk Production
	11221	Hog and Pig Farming
	1123	Poultry and Egg Production
	1124	Sheep and Goat Farming
	1125	Aquaculture
	11291	Apiculture
	11292	Horses and Other Equine Production
	11293	Fur-bearing Animal and Rabbit Production
	11299	All Other Animal Production
Crop Production	1111	Oilseed and Grain Farming
	1112	Vegetable and Melon Farming
	1113	Fruit and Tree Nut Farming
	1114	Greenhouse, Nursery, and Floriculture Production
	1119	Other Crop Farming
Agricultural Support Activities	115112	Soil Preparation, Planting, and Cultivating
	115113	Crop Harvesting, Primarily by Machine
	115114	Postharvest Crop Activities (except Cotton Ginning)
	115115	Farm Labor Contractors and Crew Leaders

⁵ The Agriculture IP also works with industries in Forestry Processing and Forest Products Manufacturing, but they are not included in this report.

⁶ For Crop and Animal Production, the NAICS is the most specific code (i.e., the code with the most digits) with data available through the Bureau of Labor Statistics (BLS). For example, within the Poultry and Egg Production industries (NAICS 1123), the BLS only releases data on Chicken Egg Production (NAICS 112310), omitting other industries like Turkey Production (NAICS 112330). Without data on these more specific industries, this report cannot confirm their presence in the Northern Tier. Therefore, the report uses 1123 for Poultry and Egg Production to encompass the more specific industries.

Agriculture Industry Category	NAICS ⁶	Description
	115116	Farm Management Services
	115210	Support Activities for Animal Production
Food Processing	311611	Animal (except Poultry) Slaughtering
	311612	Meat Processed from Carcasses
	311613	Rendering and Meat Byproduct Processing
	311615	Poultry Processing
Food and Beverage Manufacturing	311119	Other Animal Food Manufacturing
	311351	Confectionery Manufacturing from Purchased Chocolate
	311511	Fluid Milk Manufacturing
	311513	Cheese Manufacturing
	311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
	311811	Retail Bakeries
	311812	Commercial Bakeries
	311999	All Other Miscellaneous Food Manufacturing
	312112	Bottled Water Manufacturing
Alcohol Processing and Manufacturing	312113	Ice Manufacturing
	312120	Breweries
	312130	Wineries
	312140	Distilleries
Other and Related Agricultural Industries	541940	Veterinary Services

Source: Bureau of Labor Statistics and Lightcast

The following industries do not currently have a presence in the Northern Tier, but will fall under the Agriculture IP if they establish a local presence.

Agriculture Industry Category	NAICS	Description
Agricultural Support Activities	115111	Cotton Ginning
Food Processing	311211	Flour Milling
	311212	Rice Milling
	311221	Wet Corn Milling
	311224	Soybean and Other Oilseed Processing
	311225	Fats and Oils Refining and Blending
	311314	Cane Sugar Manufacturing

Food and Beverage Manufacturing	311213	Malt Manufacturing
	311230	Breakfast Cereal Manufacturing
	311520	Ice Cream and Frozen Dessert Manufacturing
	311111	Dog and Cat Food Manufacturing
	311512	Creamery Butter Manufacturing
	311313	Beet Sugar Manufacturing
	311340	Nonchocolate Confectionery Manufacturing
	311351	Chocolate and Confectionery Manufacturing from Cacao Beans
	311411	Frozen Fruit, Juice, and Vegetable Manufacturing
	311412	Frozen Specialty Food Manufacturing
	311421	Fruit and Vegetable Canning
	311422	Specialty Canning
	311423	Dried and Dehydrated Food Manufacturing
	311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
	311821	Cookie and Cracker Manufacturing
	311824	Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour
	311830	Tortilla Manufacturing
	311911	Roasted Nuts and Peanut Butter Manufacturing
	311919	Other Snack Food Manufacturing
	311920	Coffee and Tea Manufacturing
	311930	Flavoring Syrup and Concentrate Manufacturing
	311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
	311942	Spice and Extract Manufacturing
	311991	Perishable Prepared Food Manufacturing
	312111	Soft Drink Manufacturing
	312230	Tobacco Manufacturing
Other and Related Agricultural Industries	313110	Fiber, Yarn, and Thread Mills
	325311	Nitrogenous Fertilizer Manufacturing
	325312	Phosphatic Fertilizer Manufacturing
	325314	Fertilizer (Mixing Only) Manufacturing

Source: Bureau of Labor Statistics and Lightcast

V - Charts and Tables

Overall Trends

V.1 - Northern Tier Employment by Agriculture Sector and County

On-farm jobs are from 2022, the most recent data available for the Census of Agriculture, which provides more accurate on-farm labor numbers than the Bureau of Labor Statistics. The Bureau of Labor Statistics relies on unemployment insurance, which most farms do not pay into. All other sectors have job counts from 2025.

Sector	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier	Jobs Share
On-Farm	4,135	658	2,692	3,172	918	11,575	86%
Food Processing	1,200	0	16	2	6	1,224	9%
Food and Beverage Manufacturing	251	3	22	6	50	332	2%
Other Agriculture-Related Manufacturing	135	0	35	83	30	283	2%
Alcohol Processing and Manufacturing	77	0	11	1	15	104	1%
Total	5,798	661	2,767	3,264	1,019	13,518	

Source: Fourth Economy analysis of Census of Agriculture: Labor, Hired - Number of Workers; Producers - Number of Producers, 2022, and Lightcast, data accessed July 2026.

On-Farm Trends

V.2 - Share of Small Farms by County, Region, State, and Nation, 2017 to 2022

Small Farms	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier	PA	U.S.
2017	91%	92%	95%	92%	97%	93%	88%	88%
2022	91%	96%	95%	92%	96%	93%	86%	86%

Source: Fourth Economy analysis of United States Department of Agriculture, National Agricultural Statistics Service. 2022 Census of Agriculture: Volume 1, chapter 2: County level data, Pennsylvania.

https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1_Chapter_2_County_Level/Pennsylvania/st42_2_002_002.pdf

V.3 - Farm Operations by County and Year, 2002 to 2022

Year	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
2002	1,495	170	1,116	973	358	4,112
2007	1,457	165	1,008	1,011	649	4,290
2012	1,629	179	1,005	1,125	508	4,446
2017	1,449	190	909	1,056	410	4,014
2022	1,315	151	740	998	334	3,538
Change 2002-2022	-12%	-11%	-34%	3%	-7%	-14%

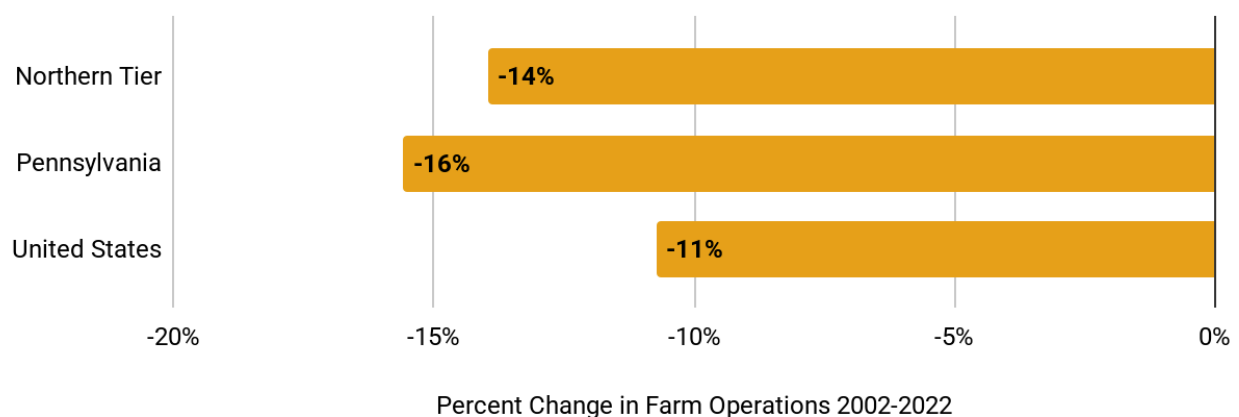
Source: Fourth Economy analysis of Census of Agriculture: Farm Operations - Number of Farm Operations, 2002-2022, data accessed July 2026.

V.4 - Change in Farm Acres by County, 2015 to 2025

Year	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
2002	4,724	-	1,517	4,829	3,413	14,483
2007	2,554	-	2,194	3,046	2,418	10,212
2012	4,504	424	1,929	5,190	2,697	14,744
2017	3,037	-	2,784	4,151	2,037	12,009
2022	4,248	64	1,732	2,666	1,082	9,792
Percent Change 2002-2022	-10%	-	14%	-45%	-68%	-32%

Source: Fourth Economy analysis of Census of Agriculture: AG Land - Acres, 2002-2022, data accessed July 2026.

V.5 - Change in Farm Operations in Northern Tier, PA, and U.S., 2002 to 2022



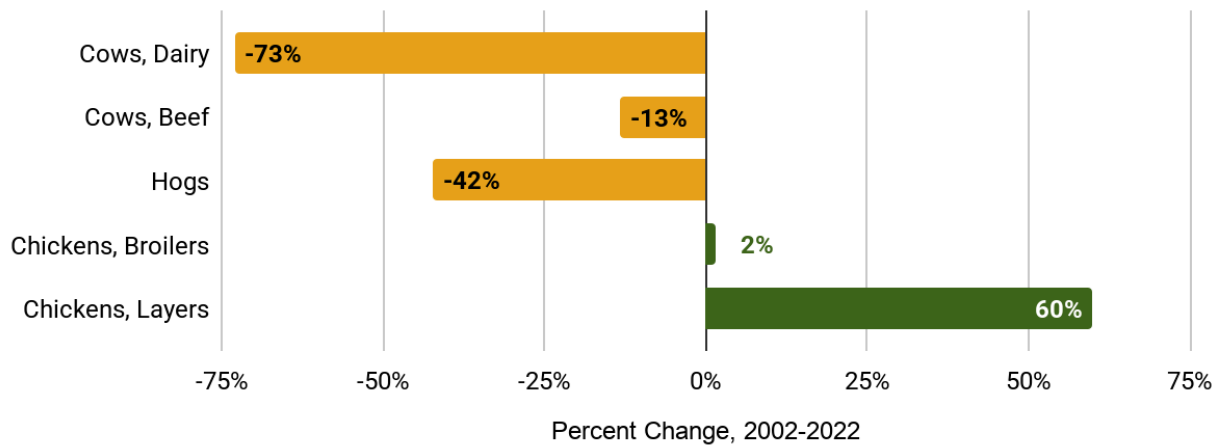
Source: Fourth Economy analysis of Census of Agriculture: Farm Operations - Number of Farm Operations, 2002-2022, data accessed July 2026.

V.6 - Dairy Farms by County, 2002 to 2022

Year	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
2002	393	26	213	207	59	898
2007	292	20	126	146	41	625
2012	262	14	135	133	34	578
2017	201	23	95	144	32	495
2022	112	8	50	62	10	242
Percent Change, 2002-2022	-72%	-69%	-77%	-70%	-83%	-73%

Source: Fourth Economy analysis of Census of Agriculture: Cattle, Cows, Milk - Operations with Inventory, 2002-2022, data accessed July 2026.

V.7 - Northern Tier Change in Animal Production Types



Source: Fourth Economy analysis of Census of Agriculture: Cattle, Cows, Milk - Operations with Inventory; Cattle, Cows, Beef - Operations with Inventory; Hogs - Operations with Inventory; Chickens, Broilers - Operations with Inventory; Chickens, Layers - Operations with Inventory, 2002-2022, data accessed July 2026.

V.8 - Farm Operations by Animal Production Types by County, 2022

Type	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
Cows, Dairy	112	8	50	62	10	242
Cows, Beef	448	38	227	311	110	1,134
Hogs	54	5	21	40	14	134
Chickens, Broilers	35	3	9	15	3	65
Chickens, Layers	183	15	100	146	68	512

Source: Fourth Economy analysis of Census of Agriculture: Cattle, Cows, Milk - Operations with Inventory; Cattle, Cows, Beef - Operations with Inventory; Hogs - Operations with Inventory; Chickens, Broilers - Operations with Inventory; Chickens, Layers - Operations with Inventory, 2002-2022, data accessed July 2026.

V.9 - Producers by County, 2017 to 2022

Year	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
2017	2,535	321	1,488	1,807	677	6,828
2022	2,427	398	1,394	2,008	602	6,829
Percent Change, 2017-2022	-4%	24%	-6%	11%	-11%	0%

Source: Fourth Economy analysis of Census of Agriculture: Producers - Number of Producers, 2017-2022, data accessed July 2026.

V.10 - Hired Farm Labor by County, 2002 to 2022

Year	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
2002	3,268	158	1,138	1,962	796	7,322
2007	1,998	94	1,074	1,548	384	5,098
2012	2,006	142	1,032	1,130	678	4,988
2017	1,618	115	740	1,072	444	3,989
2022	1,708	260	1,298	1,164	316	4,746
Percent Change, 2002-2022	-48%	65%	14%	-41%	-60%	-35%
Percent Change, 2017-2022	5%	126%	75%	9%	-28%	19%

Source: Fourth Economy analysis of Census of Agriculture: Labor, Hired - Number of Workers, 2002-2022, data accessed July 2026.

V.11 - Operations with Hired Farm Labor by County, 2002 to 2022

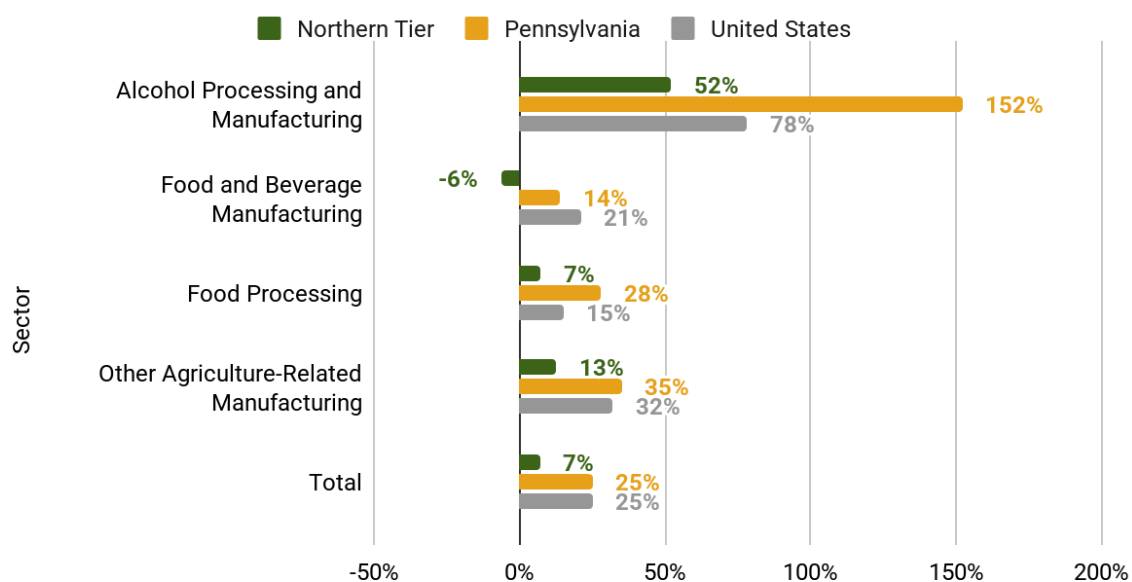
Year	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
2002	881	94	533	436	164	2,108
2007	654	55	348	426	136	1,619
2012	704	67	379	445	223	1,818
2017	609	47	366	412	146	1,580
2022	532	70	392	388	108	1,490
Percent Change, 2002-2022	-40%	-26%	-26%	-11%	-34%	-29%
Percent Change, 2017-2022	13%	49%	7%	-6%	-26%	-6%

Source: Fourth Economy analysis of Census of Agriculture: Labor, Hired - Operations with Workers, 2002-2022, data accessed July 2026.

Off-Farm Trends

V.12 - Change in Off-Farm Jobs in Northern Tier, Pennsylvania, and U.S., 2015 to 2025

Percent Change in Off-Farm Agriculture Industry Jobs in Northern Tier, PA, and US, 2015 to 2025



Source: Fourth Economy analysis of Lightcast, data accessed July 2026.

V.13 - Change in Off-Farm Jobs in Northern Tier, 2015 to 2025

Northern Tier	2015	2025	Raw Change	Percent Change	2025 Share of Off-Farm Jobs
Alcohol Processing and Manufacturing	69	104	35	52%	5%
Food and Beverage Manufacturing	392	368	-24	-6%	18%
Food Processing	1,167	1,252	85	7%	62%
Other Agriculture-Related Manufacturing	252	283	31	13%	14%
Off-Farm Total	1,880	2,007	127	7%	

Source: Fourth Economy analysis of Lightcast, data accessed July 2026.

V.14 - Change in Off-Farm Jobs by County, 2015 to 2025

Sector	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
Alcohol Processing and Manufacturing	46	0	11	-19	-2	36
Food and Beverage Manufacturing	-25	3	7	-36	27	-24
Food Processing	53	0	2	24	6	85
Other Agriculture-Related Manufacturing	10	-2	6	14	3	31
Total Change, 2015-2025	84	1	26	-17	34	128

Source: Fourth Economy analysis of Lightcast, data accessed July 2026.

V.15 - Breakdown of Northern Tier Food Processing Jobs, 2025

	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
Animal (except Poultry) Slaughtering	863	0	9	2	0	874
Meat Processed from Carcasses	336	0	3	28	0	367
Other	1	0	4	0	6	11
Total Food Processing	1,200	0	16	30	6	1,252
Share of Total Food Processing Jobs	96%	0%	1%	2%	0%	

Source: Fourth Economy analysis of Lightcast, 2025, data accessed July 2026.

Workforce Trends

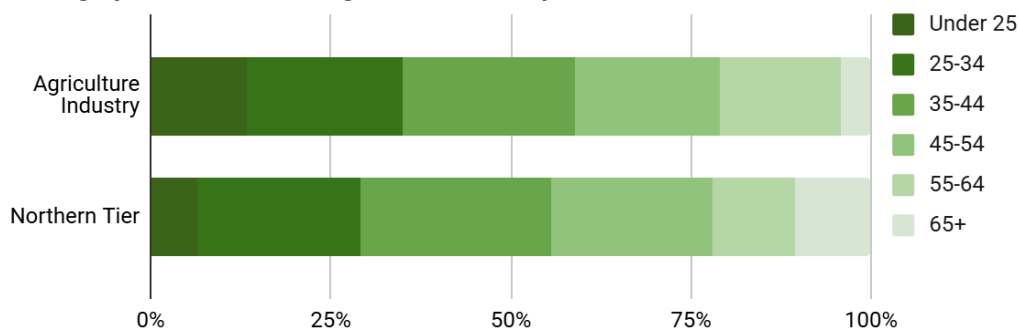
V.16 - Share of Producers by Age Group, 2017 to 2022

Age Group	2017	2022
25 - 34	6%	6%
35 - 44	10%	11%
45 - 54	20%	14%
55 - 64	28%	26%
65 - 74	24%	28%
Over 75	12%	15%

Source: Fourth Economy analysis of Census of Agriculture: Producers - Number of Producers, 2017-2022, data accessed July 2026.

V.17 - Share of Off-Farm Agriculture Industry Workers by Age Group, 2025

Age Demographics of Off-Farm Agriculture Industry Jobs versus Northern Tier



Source: Fourth Economy analysis of Lightcast, data accessed July 2026.

V.18 - Top Skills Sought for Off-Farm Agriculture Jobs from Job Postings, May 2024 to June 2026

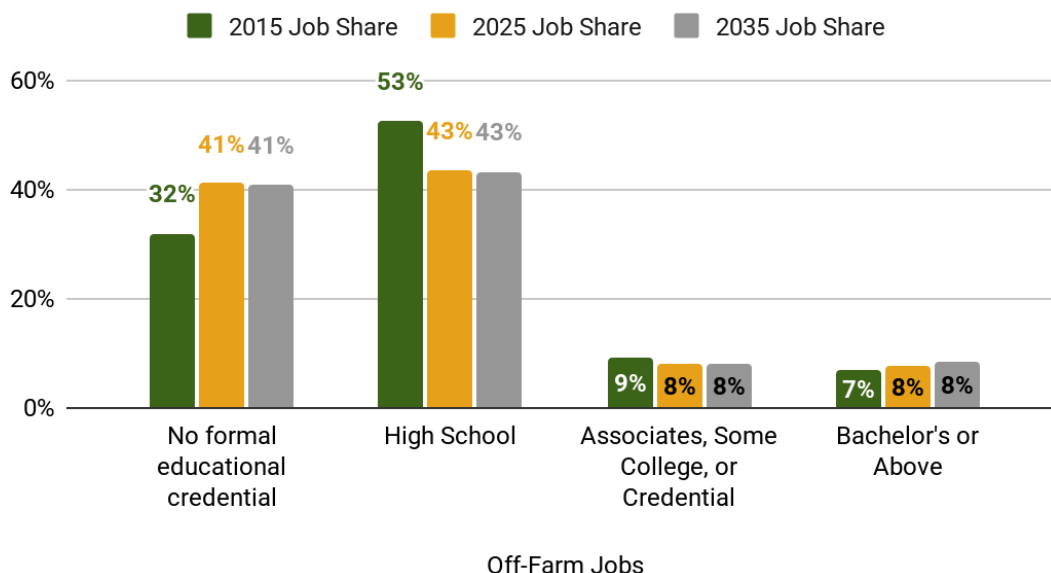
Skills	Job Postings Jul. 2024 - Jun. 2026	% of Total Postings	Skill Growth Relative to Market
Industrial Repair And Maintenance	167	37%	Growing
Employee Assistance Programs	165	37%	Rapidly Growing
Technical Training	152	34%	Growing
Medical Prescription	134	30%	Growing
Food Services	116	26%	Growing
General Mathematics	99	22%	Growing
Forklift Truck	97	22%	Stable
Hydraulics	95	21%	Growing
Medical Ultrasonography	89	20%	Growing
Pneumatics	88	20%	Growing

Source: Fourth Economy analysis of Lightcast Job Postings Analytics, May 2024 - June 2026, data accessed July 2026.

Note: There are not enough on-farm agriculture jobs posted in the region to analyze in-demand skills.

V.19 - Off-Farm Jobs by Typical Entry Level Education, 2015 to 2035 (projected)

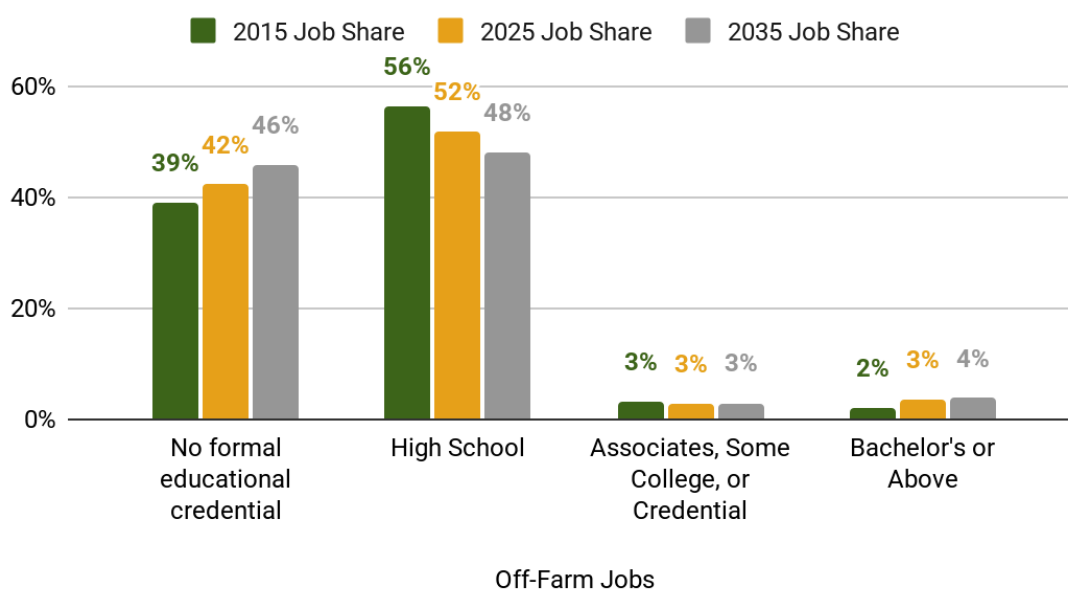
Share of Off-Farm Jobs By Typical Entry-Level Education Requirement



Source: Fourth Economy analysis of Lightcast, data accessed July 2026.

V.20. - On-Farm Jobs by Typical Entry Level Education, 2015 to 2035 (projected)

Share of On-Farm Jobs By Typical Entry-Level Education Requirement



Source: Fourth Economy analysis of Lightcast, data accessed July 2026.

V.21 - Top 15 Off-Farm Agriculture Occupations Requiring High School Degree or Less, 2025

Description	Jobs, 2025	Share of Off-Farm Agriculture Employment, 2025	Cumulative Share of Off-Farm Agriculture Jobs
Meat, Poultry, and Fish Cutters and Trimmers	227	14%	14%
Packaging and Filling Machine Operators and Tenders	122	8%	22%
Laborers and Freight, Stock, and Material Movers, Hand	108	7%	29%
Industrial Truck and Tractor Operators	80	5%	34%
First-Line Supervisors of Production and Operating Workers	73	5%	38%
Slaughterers and Meat Packers	63	4%	42%
Maintenance and Repair Workers, General	60	4%	46%
Veterinary Assistants and Laboratory Animal Caretakers	56	4%	50%
Inspectors, Testers, Sorters, Samplers, and Weighers	55	3%	53%
Industrial Machinery Mechanics	53	3%	56%
Food Processing Workers, All Other	52	3%	60%

Description	Jobs, 2025	Share of Off-Farm Agriculture Employment, 2025	Cumulative Share of Off-Farm Agriculture Jobs
Helpers--Production Workers	48	3%	63%
Food Batchmakers	40	3%	65%
Packers and Packagers, Hand	40	2%	68%
Receptionists and Information Clerks	34	2%	70%

Source: Fourth Economy analysis of Lightcast, data accessed July 2026.

V.22 - Top 10 On-Farm Agriculture Occupations Requiring High School Degree or Less, 2025

Occupation Description	Share of Off-Farm Agriculture Jobs, 2025	Cumulative Share of Off-Farm Agriculture Jobs
Farmers, Ranchers, and Other Agricultural Managers	40%	40%
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	22%	63%
Farmworkers, Farm, Ranch, and Aquacultural Animals	11%	74%
Agricultural Workers, All Other	4%	78%
Animal Caretakers	4%	81%
Agricultural Equipment Operators	3%	84%
Animal Trainers	2%	87%
First-Line Supervisors of Farming, Fishing, and Forestry Workers	2%	89%
Packers and Packagers, Hand	1%	90%
Office Clerks, General	1%	91%

Source: Fourth Economy analysis of Lightcast, data accessed July 2026.

Note: This table excludes the total jobs for 2025 because Lightcast models employment based on data from the Bureau of Labor Statistics, which bases job numbers on unemployment insurance, from which many farming operations are exempt. This report uses on-farm job numbers from the Census of Agriculture to circumvent this undercounting.

V.23 - In-Person Northern Tier Agriculture Workforce Development Programs

Organization	County	Program Category/CIP Code	Education Level
Athens ASD	Bradford	Agricultural Production Operations	High School/Technical School
Canton JSHS	Bradford	Agriculture, General	High School/Technical School
Northeast Bradford JSHS	Bradford	Agricultural Mechanization	High School/Technical School

Organization	County	Program Category/CIP Code	Education Level
Northeast Bradford JSHS	Bradford	Agriculture, General	High School/Technical School
Troy Area JSHS	Bradford	Agricultural Production Operations	High School/Technical School
Cowanesque Valley JSHS	Tioga	Agricultural Mechanization	High School/Technical School
Cowanesque Valley JSHS	Tioga	Agriculture, General	High School/Technical School
North Penn-Liberty JSHS	Tioga	Agricultural Production Operations	High School/Technical School
Wellsboro Area HS	Tioga	Agricultural Mechanization	High School/Technical School
Wellsboro Area HS	Tioga	Agriculture, General	High School/Technical School
Wellsboro Area HS	Tioga	Applied Horticulture/Horticultural Operations	High School/Technical School

Source: Pennsylvania Department of Agriculture, 2025.

V.24 - Statewide Agriculture Workforce Development Programs

Organization	Program Category/CIP Code	Education Level
Center for Dairy Excellence	Dairy Herd Manager Apprenticeship	Apprenticeships/Pre-Apprenticeships
Center for Dairy Excellence	Dairy Laborer Pre-Apprenticeship	Higher Education, Apprenticeships/Pre-Apprenticeships
PASA Sustainable Agriculture	Agroforestry Training Program	Apprenticeships/Pre-Apprenticeships
PASA Sustainable Agriculture	Dairy Grazing Apprenticeship	Apprenticeships/Pre-Apprenticeships
PASA Sustainable Agriculture	Diversified Vegetable Apprenticeship	Apprenticeships/Pre-Apprenticeships
PASA Sustainable Agriculture	Diversified Vegetable Pre-Apprenticeship	Apprenticeships/Pre-Apprenticeships
PASA Sustainable Agriculture	Farmer Outreach	Workforce Development

Source: Fourth Economy desktop research, 2026.