



TEAM PENNSYLVANIA

The Case for Technology-Enabled Efficiency in Agriculture

Advanced Agriculture Collaborative

November 18, 2025

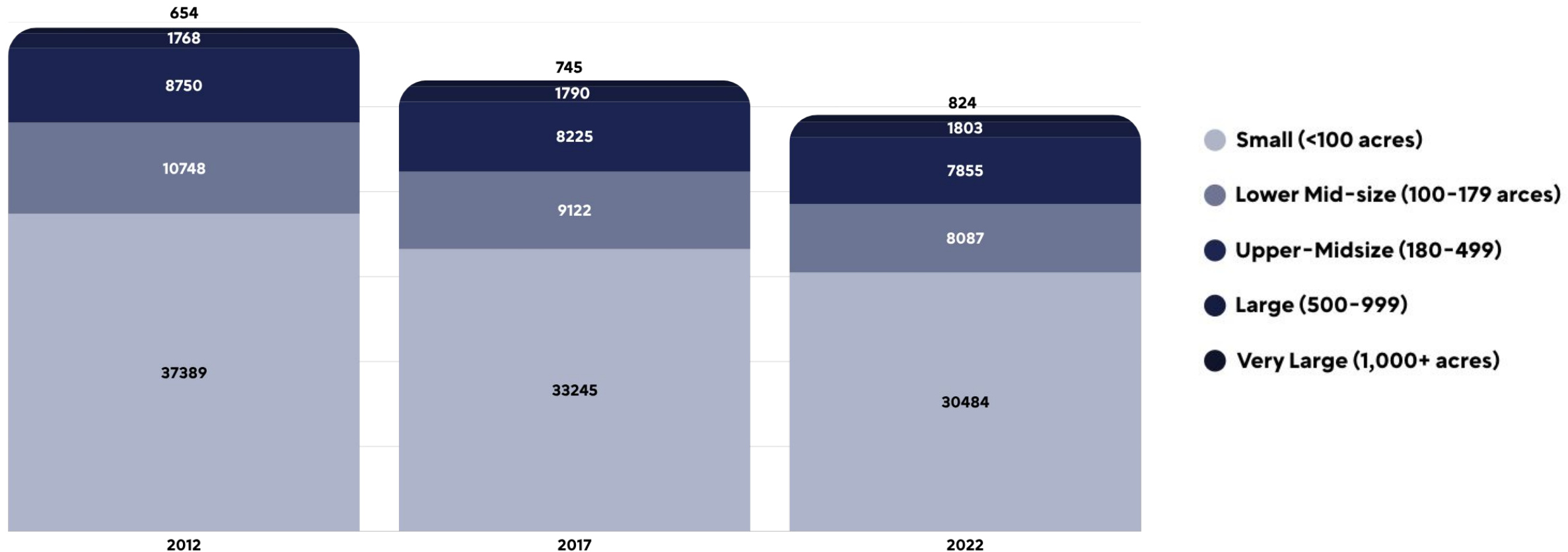
The Profitability Crisis: Most small and midsize farms in Pennsylvania are losing money, profitability improves at large scale

Category	Total Farms	% Profitable	% Losing Money
Small (<100 acres)	30,484	31.4%	68.6%
Lower-Midsize (100–179 acres)	8,087	48.6%	51.4%
Upper-Midsize (180–499 acres)	7,855	64.4%	35.6%
Large (500–999 acres)	1,803	76.5%	23.5%
Very Large (1,000+ acres)	824	81.0%	19.0%

Data: 2022 Census of Agriculture, Table 71. Summary by Size of Farm

Consolidation is Reshaping the Landscape: Loss of midsize farms, shift to small and large operations, fewer overall acres

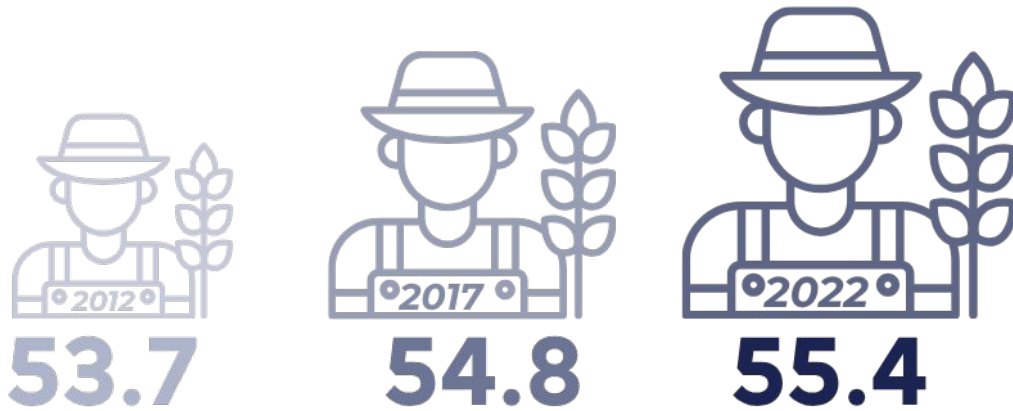
Count of Pennsylvania Farms by Size in Acres



Data: USDA Census of Agriculture, 2012, 2017, 2022

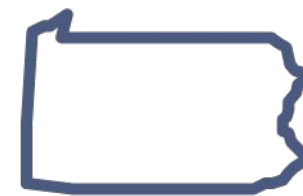
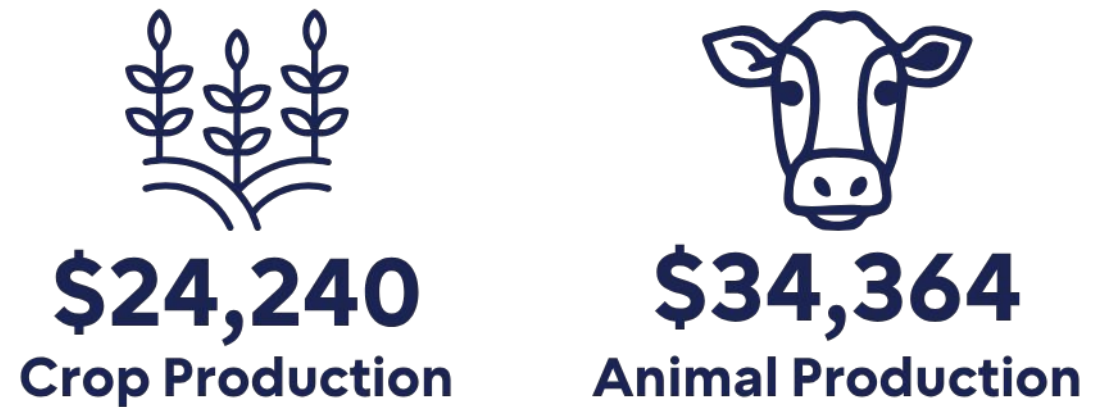
Labor challenges intensifying, including increasing average age and less competitive than statewide average wage

Average Age of Pennsylvania Farmers



U.S. Average Age of
Farmers:
58.1

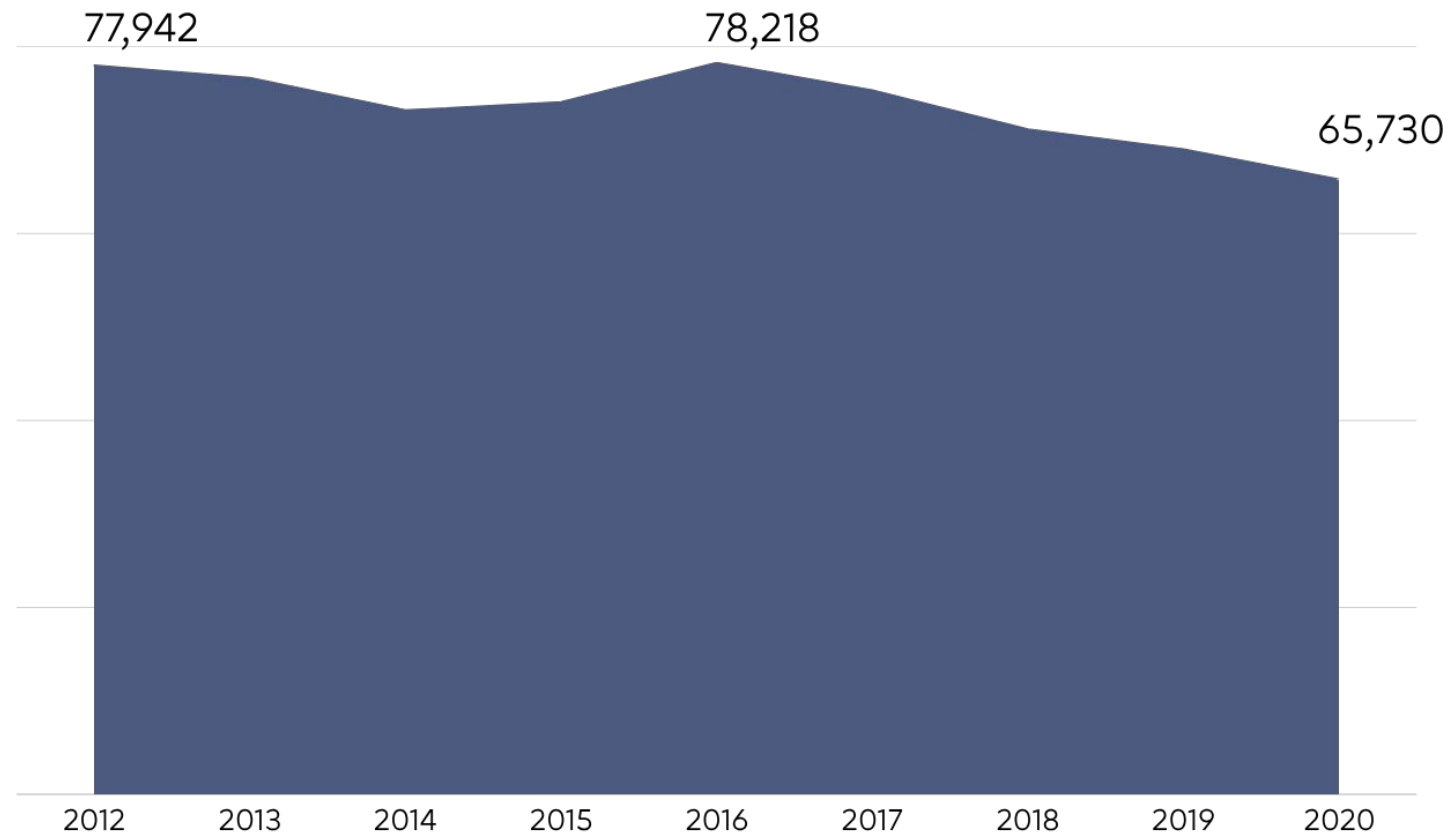
Average Earnings Per Job in 2022



Statewide Average Earnings
Per Job:
\$73,785

Trends indicate a declining number of total workers engaged in direct production of agricultural commodities

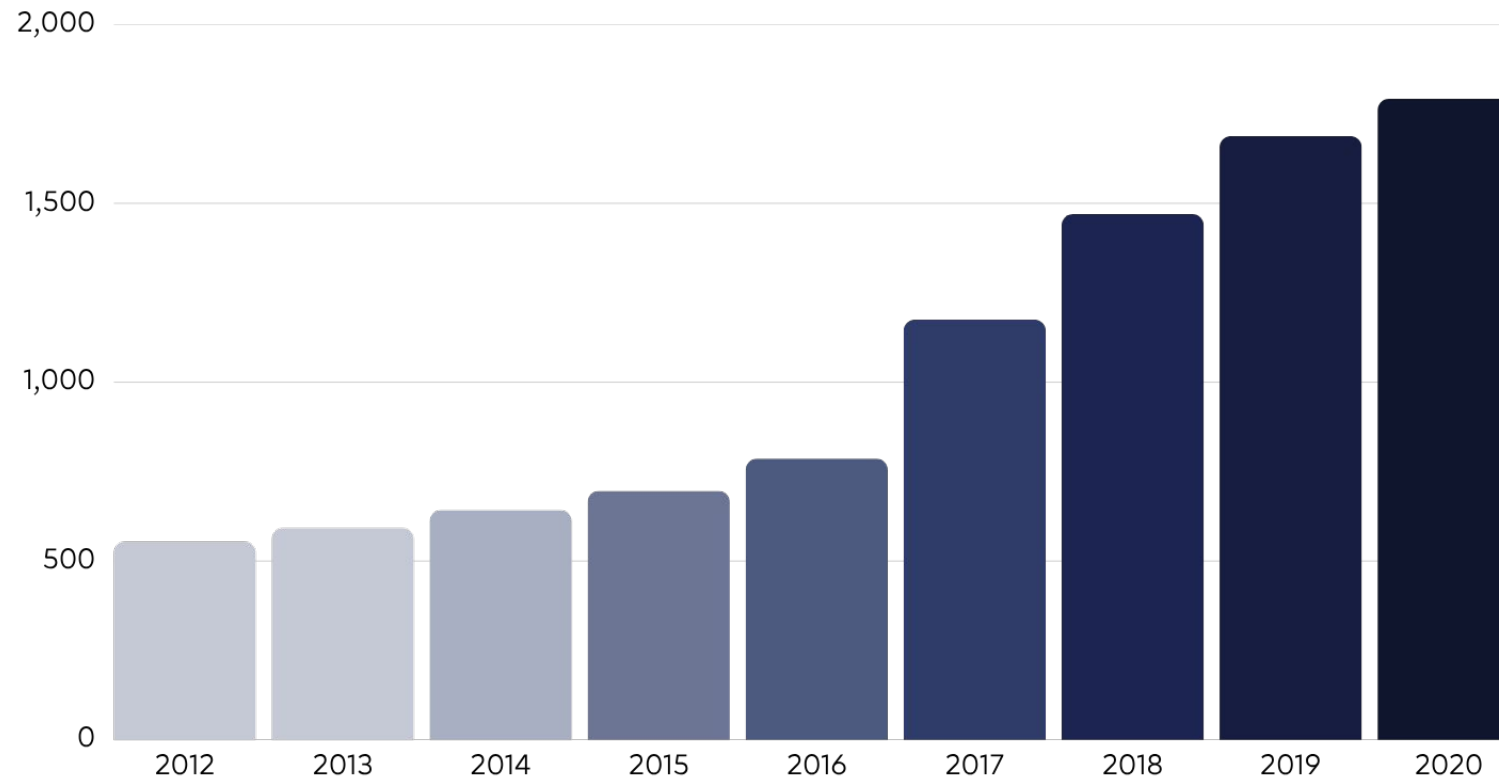
Total Farm Employment in Pennsylvania (2012-2020)



Data: US Bureau of Economic Analysis

At the same time, an increasing reliance on H2-A Visa Program needed to fill seasonal agricultural jobs

H-2A Employment in Pennsylvania



Data: US Department of Labor

Profitability, consolidation, and labor pressures reinforce each other, compounding sector-level inefficiency

Low Profitability

Farm Consolidation

Labor Pressures



***Reduced sector-level productivity
and long-term resilience***

Could agtech be a pathway to profitability, operational sustainability, and resilience?



Reduce overall labor needs and demanding tasks



Improve yield and quality



Lower input costs and impact via precision tools



Improve timeliness of critical operations (harvest, spraying, weeding)

Technologies exist, including a growing number of tools for sectors relevant to Pennsylvania's sector



Agtonomy



Bloomfield



Burro



Four Growers



Lely



Smart Apply

And many more...

Agriculture in Pennsylvania is at a crossroads of tradition and transformation

- The pain points are real (and growing)
- Agtech shows promise of a path to increasing efficiency
- Pennsylvania has strategic assets across agriculture and tech
- Successes and models exist, demonstrating paths forward

Panel Discussion: *AgTech in Pennsylvania: What's Next?*



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Accelerating Economic Growth **Through** Public-Private Partnership