

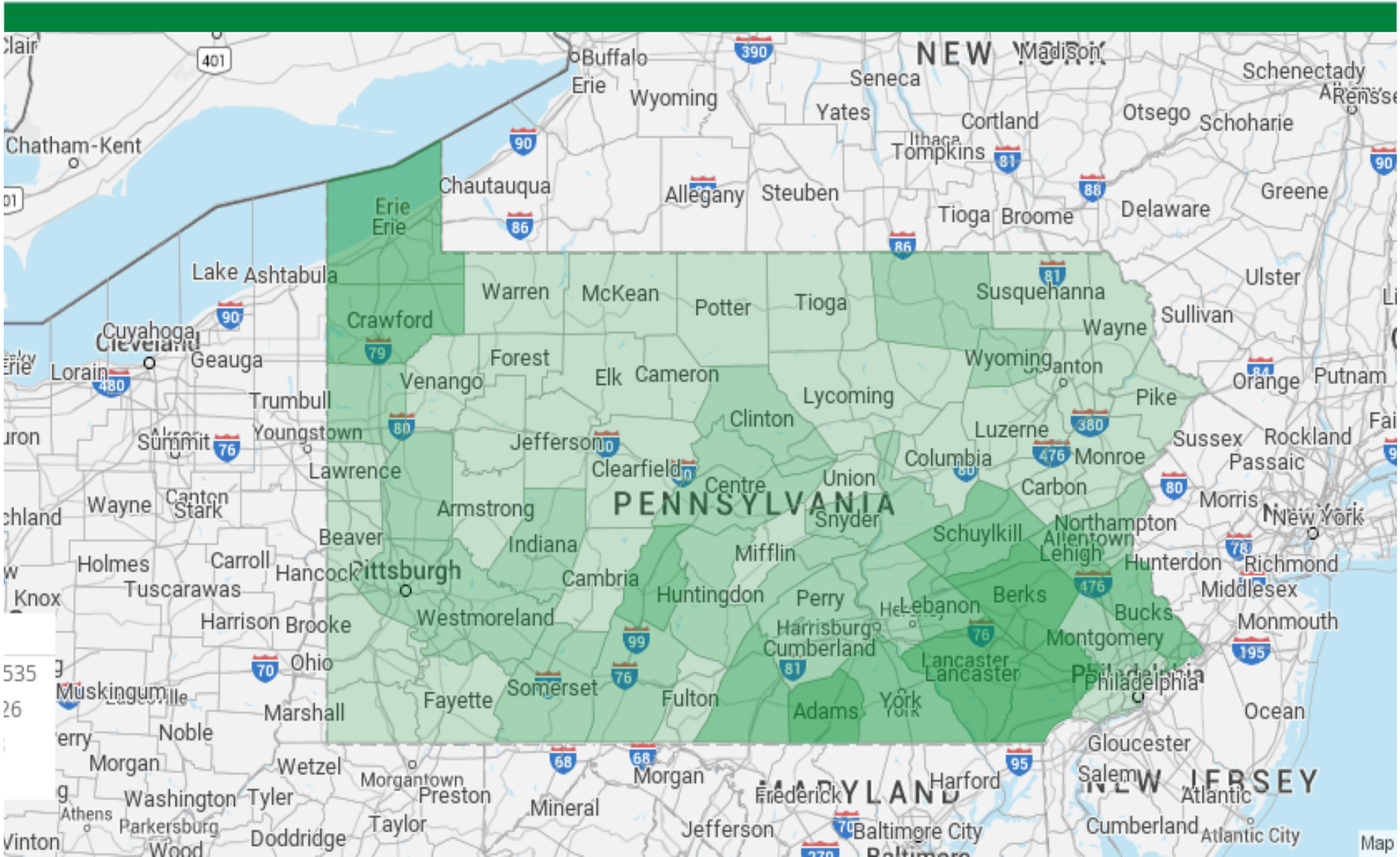


Understanding the Agriculture and Food Workforce in Pennsylvania

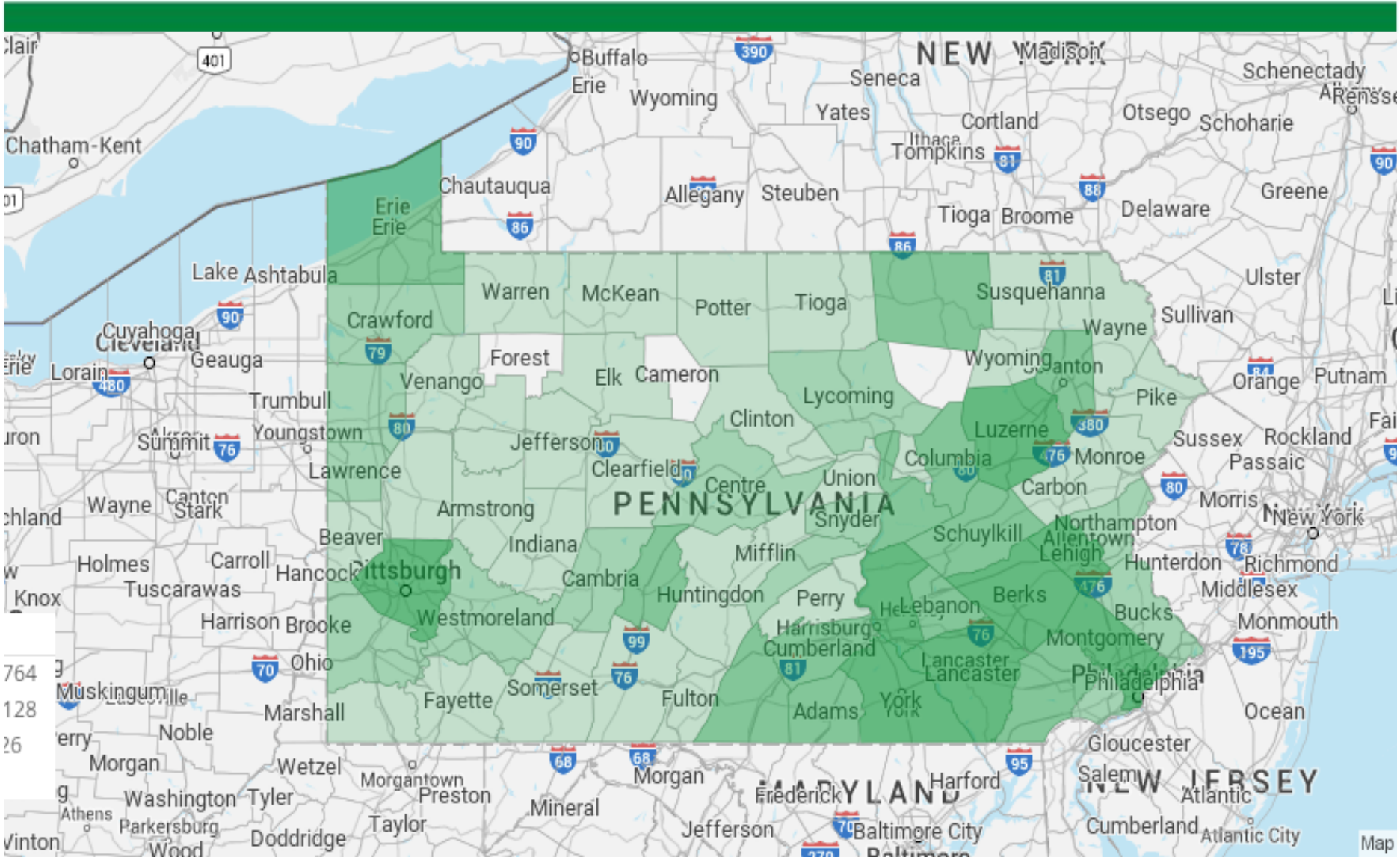
The Agriculture and Food Industry

- Normally, when we think of the agriculture and food industry, we think of production agriculture;
- However, production agriculture is part of a supply and distribution chain that extends to food processing, food distribution, and consumer consumption of food;
- Agriculture and food also includes the horticulture, forestry and wood products industry as well as service industries such as landscaping and veterinary services.
- The geographical footprint of the industry varies with the industry segment.

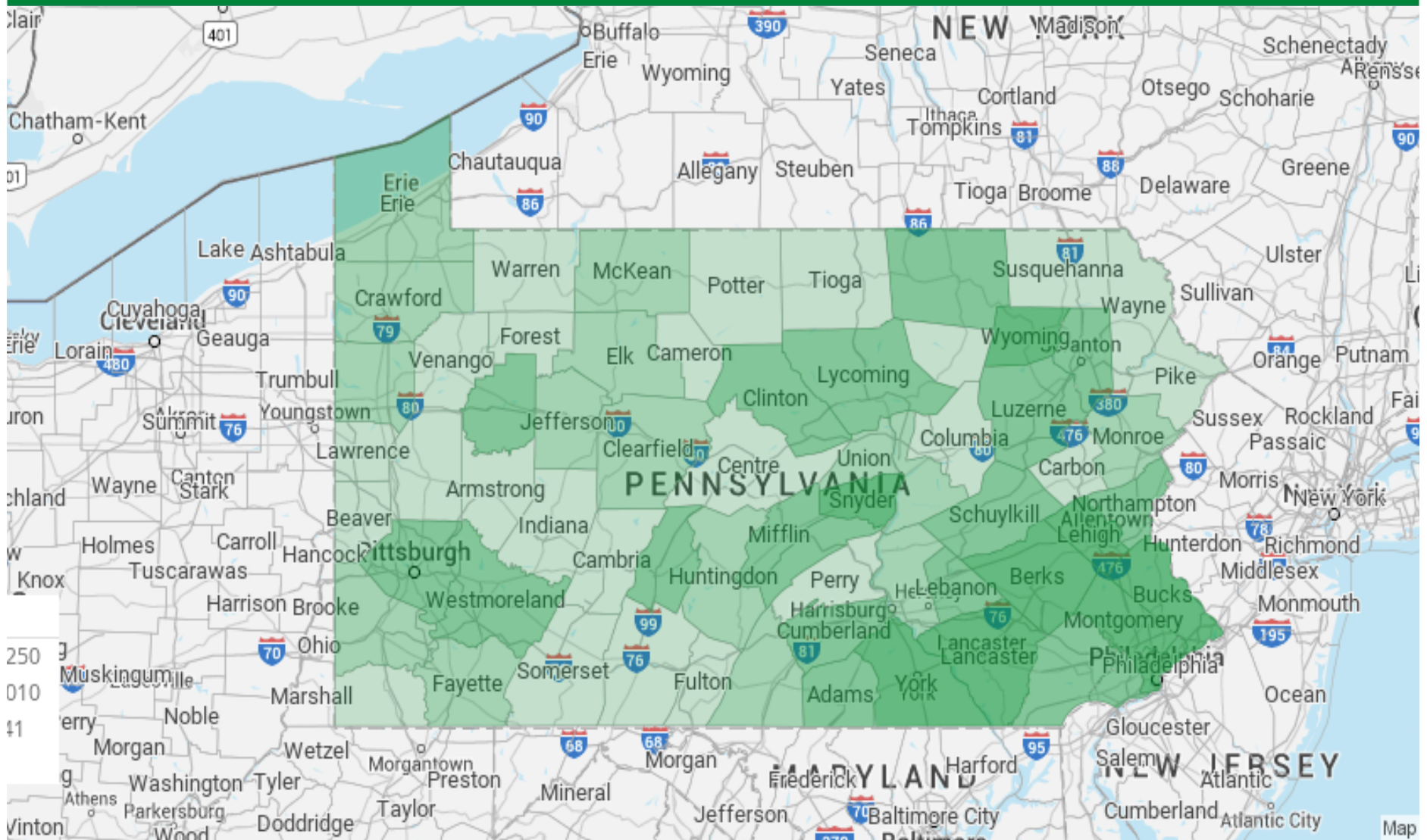
Production Agriculture



Food Processing



Lumber and Wood Products



Value of Ag Products

- In the production of agriculture products alone, Pennsylvania is a powerhouse in the nation;
- Total cash receipts for agricultural commodities was \$7.50 billion in 2015 with \$74.5 billion in total sales of agriculture and food products^{3,4};
- Pennsylvania ranks 1st in the US in mushrooms; 2nd in butter; 3rd in Swiss cheese; 4th in layers, eggs corn for silage, apples, and Christmas trees; and 5th in dairy cows, maple syrup, grapes, and peaches, and milk production².

Competitive Position

- Pennsylvania also leads the United States in two important parts of the agriculture distribution chain...
 - Food processing which includes industries which process and package eggs, milk, iced tea, ice cream, hot dogs, cookies and crackers, candy, and many food products employs over 76,600 workers which is more than 16% times more concentrated than the national average
 - Forest and wood products with a high concentration of cabinetmakers employs more than 47,400 workers which is more than 31% times the national average

Jobs, Sales, and Exports

- As an industry cluster, the agriculture and food industry is a major contributor to the regional economy...
 - 337,897 jobs which is 4.49% of the total workforce in the State (2016);
 - Sales of \$1,257,366,830,770 or 6.38% of all sales in the State (2016);
 - \$2.04 billion in international sales of agriculture products (2016) (hardwoods, mushrooms, dairy, feed and grain, soybeans)
- High productivity

Annual Economic Impact

- \$135.7 billion in annual economic impact (18% of total gross state product)
- Nearly 580,000 jobs (280,508 direct)
- Wages of nearly \$27 billion
- For the full report, click bit.ly/2mQaxPD
- Report by Econsult Solutions and Fox School of Business, Temple University

The Agriculture and Food Workforce

- More than 337,897 people work in the Agriculture and Food Industry in Pennsylvania and its supply and distribution chains
- With an additional 579,318 people in jobs related to the Industry retail food and food services distribution chains
- Between now and 2027, the PA Department of Agriculture predicts that the Industry will need more than 75,042 people because of growth and the replacement of workers because of retirements

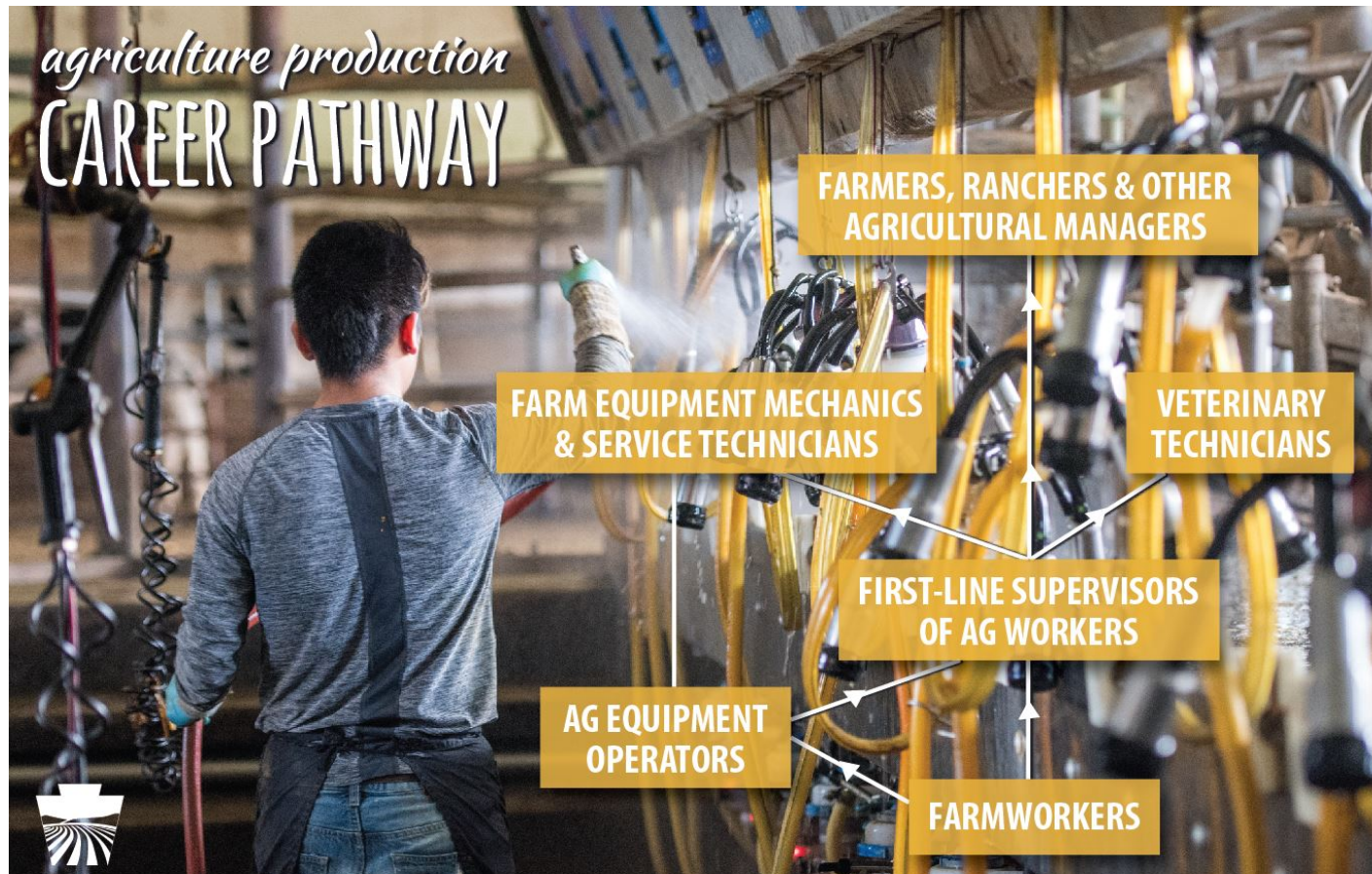
In-Demand Occupations

- Farming and Agricultural Operations
 - Farmers and Farm Managers
 - Dairy Herdsmen, Flock Managers
 - Farm Equipment Service Technicians
 - Farmworkers
- Landscaping
 - Landscaping and Groundskeeping Workers
- Food Manufacturing
 - Food Batchmakers
 - Packaging Machine Operators
 - Bakers and Meat Cutters
 - Maintenance Mechanics
 - Forklift Drivers
 - Truck Drivers

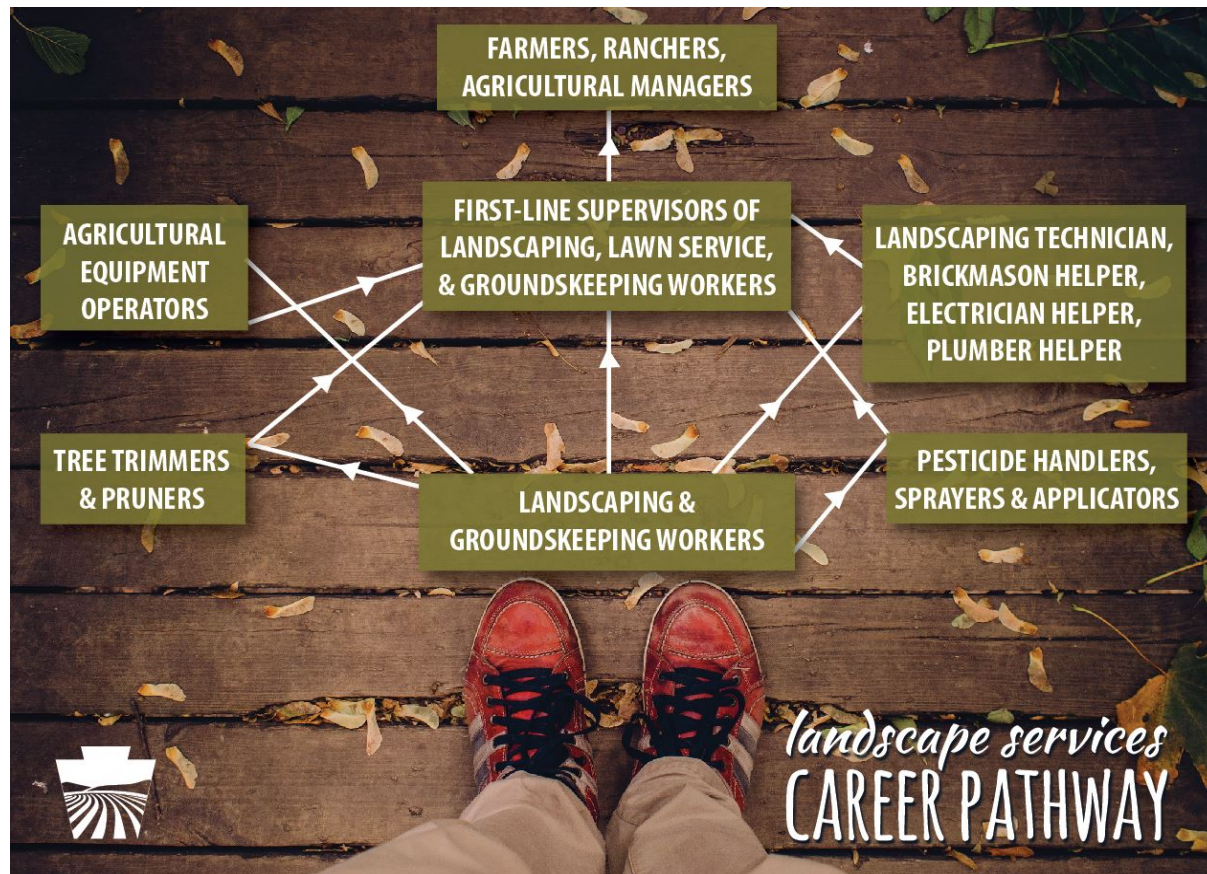
In-Demand Occupations

- Forestry, Lumber, and Wood Products
 - Fallers and Equipment Operators
 - Sawing Machine Operators
 - Team Assemblers
 - Machine Operators
 - Sales Representatives
- Conservation and Natural Resources
 - Soil and Water Conservationists
 - Agriculture Technician
- Animal Health and Veterinary Services
 - Veterinarians
 - Veterinary Technicians and Assistants

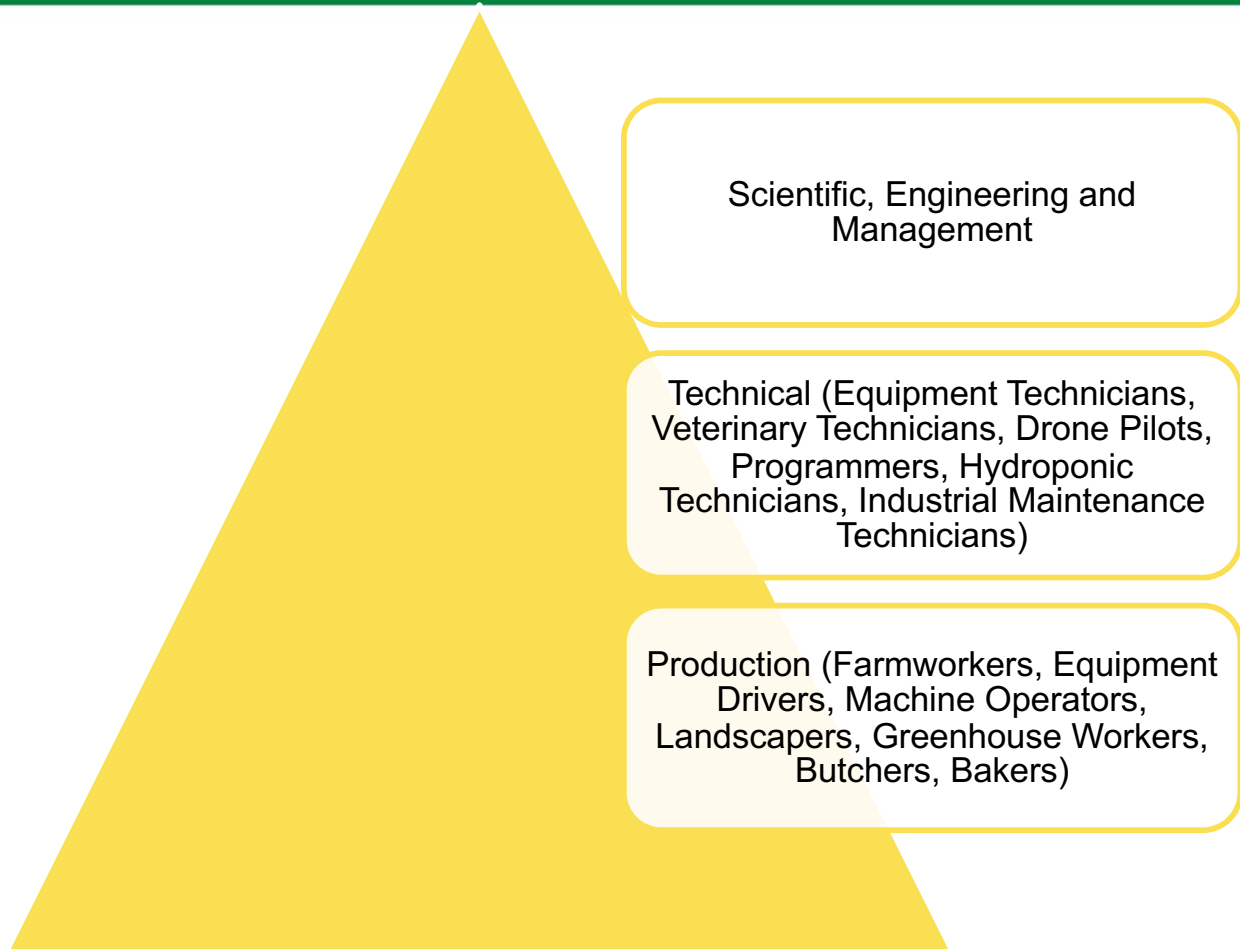
Production Agriculture



Landscaping



The Ag and Food Workforce



Preparing for Agriculture and Food Occupations

- A few of them required advance training and a bachelor's (or higher) degree
- Many of them require additional technical skills which can be obtained at a community college or local career and technology center
- Nearly all of these jobs require STEM (science, technology, engineering, and math) knowledge and skills

Supply

- More than 150 high school agriculture programs around PA with 16,000 agriculture students
- More than 12,000 young people involved in FFA
- Two institutions of higher education – Delaware Valley University and Penn State University – provide nearly 900 graduates in ag and food careers yearly
- Six of the 26 In-Demand Occupations have substantial numbers of Latino workers

Our Foreign-Born Workforce

- There is a large foreign-born component of the agriculture and food workforce at least 70% of the total
- Some are citizens. Some are here with green cards, as a part of guest worker programs (H-2A and B) or illegally
- They not only pick most of our apples, grapes, and mushrooms but they also milk most of our cows, process our chickens, and slaughter our pigs

Our Foreign-Born Workforce

- They do the work that most Americans no longer wish to do in the agriculture and food industry
- They are indispensable to the industry
- This is our production ag and food workforce for the future but recently we have been putting them in jail instead of providing them with training and putting them on career pathways

Gaps

- Only eight of the In-Demand Occupations have formal education and training programs connected with them
- There is training available after high school for practitioners through Cooperative Extension and other providers
- No community colleges in PA are involved in any meaningful way with agriculture skills
- There are many emerging occupations for which no training exists

Registered Apprenticeship

- Program sponsored by the NE Equipment Dealers Associations with four equipment dealers currently in the employer consortium;
- Competency-based with four levels requiring on-the-job training and classroom work;
- Employer directed curriculum;
- Employers hire apprentice; not an internship.
- First class enrolling for May 2018.

From Here

- Offer the Workforce Development System the tools that are available around career development for the agriculture and food industry
 - <https://www.agexplorer.com/>
 - Posters and handouts for In-Demand Occupations in the Agriculture and Food Industry
 - Career pathway work
- Explore new and emerging occupations

From Here

- Evaluation of the K-Adult Agriculture Education System in PA
- Development of more registered apprenticeship programs
- Exploration of the utility of micro-credentials
- Wherever possible, do training in English and Spanish

From Here

- In area of high concentration of the industry, work with local workforce development boards to be involved in PA CareerLink activities, Youth Council linkages, requests related to High Priority Occupations, and apprenticeship opportunities.

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