





Annual Report 2022

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Welcome from the Secretaries

Agriculture is deeply woven into the fabric of Pennsylvania. The impact of this industry is felt in every zip code in the commonwealth, from economic benefits to the quality of daily life. Agriculture intersects with some of the most pressing issues of our time — food security, health and human development, environmental stewardship, commerce, and more. Despite all this responsibility, Pennsylvania has long faced an agricultural workforce shortage due to attrition, growing demand for certain products, and advancing technologies.

As we look to the needs of agriculture and the future, there can be no doubt that education is a vital foundation for this industry. From teaching children where their food comes from at a young age, to supporting our next generation of leaders — whether they will be farmers, scientists, accountants, mechanics, chefs, or any of the numerous careers that tie back to this industry — the teachers, mentors, and partners who share their knowledge, time, and passion are crucial to this effort.

In recognition of these workforce needs, the Wolf Administration, in coordination with the General Assembly, created a 15-member Commission for Agriculture Education Excellence, and proceeded to invest heavily in the future of the industry through initiatives like the Pennsylvania Farm Bill and record-levels of education funding across the K-12 and higher education systems.

Since its inception in 2017 this commission has operated under the concurrent authority of the Pennsylvania Departments of Agriculture and Education to develop a statewide plan for agricultural education, coordinate the implementation of related programming, and support the diverse needs of students, teachers, and organizations engaged in this work.

This year's report highlights many accomplishments, including the hiring of the first full-time Executive Director and Specialized Career and Technical Education Advisor 2 in Agriculture Education. This expanded capacity has driven great progress for the commission, increasing grant funding and resources, reinvigorating the ag ed network, increasing the number of FFA charters across the state, and expanding MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences) into four urban high schools and Delaware Valley University.

This year's work did not happen without the dedication of many, and a foundation of knowledge, effort, and passion that continues to drive this industry forward. Through thoughtful partnerships and strategic investments, as well as a commitment to agricultural education at all levels, Pennsylvanians will benefit from a robust agriculture industry for generations to come.

Russell C. Redding Secretary PA Department of Agriculture

Essur C. Celling

Eric Hagarty Acting Secretary PA Department of Education

Commission for Agriculture Education Excellence Act 55 of 2017

Commission for Agriculture Education Excellence Act of November 6, 2017 (P.L. 1142, No. 55)

The Act of November 6, 2017 (P.L. 1142, No. 55) revised the Public School Code of 1949 by (among other things) establishing the following new provision at 24 P.S. § 15-1549.1:

History:

Act 2017-55 (H.B. 178), § 10, approved November 6, 2017, eff. January 5, 2018; Act 2019-76 (H.B. 265), § 29, approved October 30, 2019, eff. December 30, 2019.

Amendment Notes

The 2019 amendment substituted "career and technical" for "vocational" in (f)(3)(v); added (I)(6); and in (p), substituted "career and technical" for "vocational-technical" in the definition of "School entity."

Section 1549.1. Commission for Agricultural Education Excellence.—

(a) There is established a Commission for Agricultural Education Excellence as a departmental administrative commission under the concurrent authority of the Department of Agriculture and the Department of Education with all the powers and duties generally vested in and imposed upon the commissions under the act of April 9, 1929 (P.L.177, No.175), known as "The Administrative Code of 1929."

(b) The commission shall assist in developing a Statewide plan for agricultural education and coordinate the implementation of related agricultural education programming with the Department of Agriculture and the Department of Education.

(c) The commission shall be administratively housed within the Department of Agriculture and shall be staffed and supported by the Department of Agriculture and the Department of Education, as provided under this section.

(d) In order for the commission to fulfill its duties and exercise its authority under this section, an agreement shall be executed between the Department of Agriculture, the Department of Education and the commission, which shall define and delineate the role and responsibility of each agency in assisting the commission in fulfilling its duties under this section.

(e) In order for the commission to fulfill its duties and exercise its authority under this section, the Department of Agriculture, the Department of Education and the commission shall cooperate with each other in the use of staff, land, buildings, guarters, facilities and equipment.

(f) The commission shall consist of the following members:

(1) The Secretary of Education, or a designee.

(2) The Secretary of Agriculture, or a designee.

(3) The following members jointly appointed by the Secretary of Education and the Secretary of Agriculture from lists submitted by the President pro tempore of the Senate and the Speaker of the House of Representatives, in consultation with the Majority Leader and Minority Leader of the Senate and the Majority Leader and Minority Leader of the House of Representatives:

(i) Two farmers.

(ii) A representative of the agricultural processing and agricultural marketing industries.

(iii) Two representatives of agricultural sciences, not more than one of whom shall be a faculty member of the College of Agricultural Sciences of The Pennsylvania State University.

(iv) A representative of the State System of Higher Education with a background in or knowledge of agricultural education.

(v) Two teachers of career and technical agriculture, one from a career and technical center and one from a school district.

(vi) A representative of a community college with a background in or knowledge of agricultural education.

(vii) An administrator of a school entity which conducts an agricultural education program.

(viii) A member of a school district occupational advisory committee.

(ix) Two members of the business community with knowledge of agricultural education.

(g) To the extent practicable, from members initially appointed, an equal number shall draw lots to serve for a term of three years, for a term of two years and for a term of one year. Thereafter, all members shall be appointed for a term of three years.

(h) The chairmanship of the commission shall rotate on an annual basis between the Secretary of Agriculture and the Secretary of Education, with the Secretary of Education chairing the first annual rotation.

(i) The commission shall keep a record of its official actions and may perform acts and promulgate policies, procedures and guidelines as may be necessary.

(j) A majority of members of the commission shall constitute a quorum.

(k) The members of the commission shall not receive compensation or reimbursement for services.

(I) The commission shall have all the following powers and duties:

(1) Develop a model for Statewide curriculum for agricultural education programs based on high priority occupations.

(2) Consult with the Transfer and Articulation Oversight Committee and school entities to facilitate articulation agreements with postsecondary institutions of higher education.

(3) Provide support and technical assistance to supervised agricultural experience programs based on student needs.

(4) Provide support and coordination for Statewide and local activities related to FFA programs.

(5) Investigate, review and issue an annual report on the status of agricultural education required under subsection

(6) In consultation with and with the approval of the Department of Education, develop guidelines to identify the circumstances when a student who

successfully completes an academic course, program or activity for credit may apply the credit toward the completion of an agricultural education program.

The guidelines developed under this paragraph shall be posted on the Department of Education's publicly accessible Internet website within fifteen (15) days of approval. The Department of Education shall review the guidelines at least every five (5) years. Any proposed update to the guidelines shall be developed in consultation with the commission.

(m) By May 1, 2018, and by May 1 of each year thereafter, the commission shall submit a report to the Governor and the General Assembly on the status of agricultural

education in this Commonwealth. The report shall:

- (1) Outline agricultural education programs and achievements.
- (2) Assess the trends and needs in secondary and both formal and informal postsecondary agricultural education and training.
- (3) Investigate and assess work force trends of the agriculture and food industry.
- (4) Assess and make programming recommendations for meeting the training needs for individuals not pursuing formal postsecondary education.
- (5) Consider the manner in which funds are used to support agricultural education activities.
- (6) Highlight new initiatives and recommend future program needs.
- (7) Make recommendations to the Governor and the General Assembly regarding legislative or regulatory changes to improve agricultural education.

(n) The Department of Agriculture and the Department of Education shall provide staff to assist the commission with the commission's duties. The Department of Agriculture and the Department of Education shall provide an executive director who shall oversee elementary, secondary, postsecondary and adult agricultural education activities in this Commonwealth and shall serve as the director of outreach for the commission and staff who may be employed on or after the effective date of this section and who shall be assigned within either agency as follows:

(1) A curriculum specialist to assist school entities in developing agricultural education curricula and integrating national agriculture, food and natural resource standards into elementary and secondary curricula.

(2) A program approval specialist to assist school entities with the program approval process for agricultural education established by the Department of Education and serve as a liaison between the Department of Education and school entities for data collection.

(3) An FFA program specialist to oversee State-related FFA activities and implement initiatives for local agricultural education program success.

(4) A work force development specialist to identify career pathways in the agricultural and food industries and promote agriculture and food careers among students and adult job seekers.

(5) An agricultural education support specialist to provide support to the staff of the commission.

(o) The implementation of this section shall be subject to funds appropriated by the General Assembly to the Department of Education or the Department of Agriculture, and the funds shall be used to carry out the purposes of this section. The Department of Education and the Department of Agriculture may accept grants and donations from all public and private sources, including the Federal Government, to pay for costs incurred for the implementation and continuance of the provisions of this section.

(p) The following words and phrases when used in this section shall have the meanings given to them in this subsection unless the context clearly indicates otherwise:

"Commission." The Commission for Agricultural Education Excellence established under this section.

"Farmer." A person who engages in activities, practices and procedures to produce and prepare for market poultry, livestock and their products or who engages in the production and harvesting of agricultural, agronomic, horticultural, silvicultural and aquacultural crops and commodities and whose operation is conducted on not less than ten contiguous acres in area or, if less than ten contiguous acres in area, has an anticipated yearly gross income of at least ten thousand dollars (\$10,000).

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"FFA." A career and technical student organization that encourages leadership, personal growth and career success through agricultural education.

"School entity." A public school district, intermediate unit or area career and technical school.

Message from the Agriculture Education Excellence Commission Executive Director

Conversations come in many different forms. They are powerful engines that can transform one thought or question into action and progressive change. The consistent dialogue for the Commission for Agriculture Education Excellence this year has been, "How can we do better at telling the story of Pennsylvania's agriculture education system?"

Two things that make our industry different than any other is that we thrive on sharing our stories, and we offer boundless experiential learning opportunities.

With more than 12 million residents in the commonwealth and more than 590,000 jobs across the agriculture industry, we must identify a way to connect not only with future generations, but our present generations. There are still so many today who do not know how diverse this industry and the opportunities it offers are. We have young students now who need to be inspired, and we have communities now that realized during the COVID-19 pandemic that we must invest more heavily in our agriculture and food system.

My motto since taking on this role has been and will continue to be, "Agriculture is a people business." You cannot wake up and go to sleep without touching agriculture. When we make agricultural literacy opportunities available to all, then and only then can we strive to continue to be the leaders not only in strengthening Pennsylvania's agriculture workforce but influencing the world.



Stephon Fitzpatrick

Executive Director

Commission for Agriculture Education Excellence

Stephon D. Fitzpatrick

Commission Members

2022 Commision Chair

Secretary Russell Redding PA Department of Agriculture (PDA)

Alternating Chair

Acting Secretary Eric Hagarty PA Department of Education (PDE)

Staff

Stephon Fitzpatrick Executive Director

Mike Brammer Executive Director, FFA

Dr. David Volkman Acting Deputy Secretary, Office of Elementary and Secondary Education

Dr. Lee Burket Bureau of Career and Technical Education, PDE

Dr. Gerald Huesken Consultant, PDE

Sara Gligora Special Assistant, PDA

Farmers

Clifford Wallace Crop farmer and Retired Ag. Ed. Teacher

Robert Hess Dairy Farmer, Bow Creek Farm and Cattle Co., Dauphin County

Ag Processing/Marketing

Raechal Sattazahn (Pending) Knowledge Center Director at Ag Farm Credit, Cumberland County

Community College Rep. W. Knowledge Of Ag. Ed.

Michelle Myers (Pending) Asst. Professor of Biological Sciences, Penn Highlands Community College

Agriculture Science Representatives

(PSU) Dr. Kevin Curry Jr. Penn State University, Centre County

(Non-PSU) Sarah Meiss (Pending) Associate Professor of Biology at California University *Vocational Agriculture Educators from Career And Technical Education*

Anthony Honeycutt Northwestern High School, Erie County

Dr. Tiffany Turrentine W.B. Saul Agricultural High School, Philadelphia County

PA State System of Higher Education

Senator Judy Schwank Pennsylvania Senate, Former Ag Sciences Educator, Berks County

School District Occupational Advisory Committee

Rep. Barbara Gleim Pennsylvania House of Representative, Cumberland County

School Administrator in Agriculture Education

Jeff Groshek Principal, Central Columbia High School, Columbia County

Business Community Member w. knowledge of Ag. Ed

Brian W. Smith Wayne County Commissioner, Wayne County

Gary Swan Retired Farm Bureau, Adams County

Commission Accomplishments

2021-2022 Ag Ed Commission Accomplishments

Staffing

- PDA hired Stephon Fitzpatrick, first full-time Executive Director for the Agriculture Education Excellence Commission
- PDE hired Chris Davis as the new Career and Technical Education Advisor 2 Agriculture Education

Agriculture Youth Development Initiatives

- Launched the Pennsylvania Junior MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences) Program Initiative.
- Launched one collegiate MANRRS Chapter at Delaware Valley University, and two Junior MANRRS Chapters at The U School & Lankenau Environmental Science Charter School.
- Strengthened the commission's support for Pennsylvania 4-H, and its more than 11,000 student members, by working with directors and PSU Extension to be more engaged with this key k-12 agriculture and STEM youth development organization.
- Attended the Pennsylvania Winter and Summer State FFA Conventions.
- Attended the National FFA Convention and Ag Ed Inservice Event in Indianapolis, IN.
- Developed an industry-college access pipeline program with the support of Corteva, MidAtlantic Farm Credit and FMC.

Coalition-Building

- Worked with the Community College of Philadelphia to develop an Indoor Farming degree and certification program for Fall 2022.
- Re-established the Team PA Ag Ed Network to focus specifically on school-based agriculture education.
- Successfully developed Diesel and Ag Teacher Workshop with Thaddeus Stevens College & Northeast Equipment Dealers.

2021-2022 Ag Ed Commission Accomplishments

- The Department of Agriculture partnered with Penn State, Department of Education and Department of Health to help coordinate the first ever Farm to Child Nutrition Summit. The purpose of this summit is to facilitate peer-to-peer learning and networking to establish connections between CNP operators and producers, showcase farm to child nutrition "best practices," and deliver educational opportunities regarding the environmental, economic, nutritional, and equitable value of growing foods.
- Engaged Rodale Institute in a variety of initiatives aimed at increasing organic farming education in urban communities.
- Connected with the Food Policy Advisory Council (FPAC) to discuss engaging with conservation districts to strengthen urban agriculture initiatives and land use measures.
- The commission has been diligent in supporting the PA Career Ready Coalition and Remake Learning Days across the state to help increase agriculture literacy on opportunities available within the agriculture industry. They have the capacity to reach almost 7,000 students across the state.
- Supported the Pennsylvania Association of Agriculture Educators (PAAE) summer conference and CASE AgXplore BriefCase.
- Moderated "Growing Green Collar Careers" panel at Longwood Gardens for Earth Day for an audience of over 300 students.
- Hosted several Farm City Day's across the commonwealth.
- Facilitated partnership with Senior Vice President of Franklin Institute on how to insert more agriculture literacy into their STEM initiatives.
- Initiated monthly check-in calls to maintain synergy between the Department of Agriculture and Department of Education.

2021-2022 Ag Ed Commission Accomplishments

Diversity Equity, Inclusion, and Accessibility

- Successfully completed the DEIA assessment of Pennsylvania's agriculture education system, developing an inclusion council and implementing a DEIA strategic plan.
- Connected with the Executive Director of the Governor's Latino Affairs Commission to discuss opportunities to support Latinx communities in the agriculture industry.
- Connected with the Associate Deputy Chief of the Forest Service, a Penn State alum, who is looking to work with the Department of Agriculture to connect urban, underrepresented people of color to conservation and natural resource opportunities. Looking to create funding opportunities to support workforce development programming initiatives to support the Hardwoods Development Council and logging industry.
- Collaborated with PDE on their efforts to develop the logic model <u>Building Equity-Inclusion-Belonging in the Neighborhood</u> <u>Roadmap</u>.
- Pennsylvania selected as a recipient of the FFA State Equity, Diversity, and Inclusion Grant.
- Collaborated with the Grant Equity Interagency Workgroup in Higher Education with the Department of Conservation and Natural Resources.
- Created the Agriculture Education Excellence Inclusion Council to address DEIA initiatives within the agriculture education system.

Agriculture Education in Pennsylvania

While Pennsylvania has adopted rigorous state academic standards establishing expectations for what students should know and be able to do at key points in their education, the commonwealth also has a strong tradition of local control guiding K-12 public education, including agriculture education programs. This means each local education agency (LEA) has the authority to tailor program offerings, aligned to standards and regulations, to the unique needs of their students and communities.

In 2021-22, there were 179 PDE-approved agriculture education programs offered in nine categories (Ag General, Ag Mechanics, Ag Production, Ag Food Products, Applied Horticulture, Animal Sciences, Ag Operations, Natural Resources, and Forest Technology) by 129 high schools and career and technology centers (CTCs) across the commonwealth. Approximately 30 additional programs are offered by public schools. There are five middle school agriculture programs and four offered in private secondary schools.

In 2020-2021, there were 216 secondary agriculture teachers employed in the commonwealth with agriculture education certification programs in place at Penn State University and Delaware Valley University. A total of 1,039 people hold an Instructional I certificate and 1,020 have Instructional II certificates in agriculture. During this school year, 20 individuals applied and received agriculture education instructional certifications.

The mission of agriculture education through **FFA** at the secondary level is to prepare and support individuals for careers, build awareness, and develop leadership for the food, fiber, and natural resource systems. Known as the "3 Circle Model" in FFA, agriculture education combines Classroom Instruction, Supervised Agricultural Experience, and the FFA organization through integral instruction -- a three-part process that includes classroom instruction (focus on knowledge and skill attainment), involvement in FFA (focus on soft skills and leadership development), and completion of supervised agriculture experiences (focus on independent learning through a project-centered approach).

Completion of components of this process can lead to recognition through four FFA degrees (Greenhand, local; Chapter, local; Keystone, state; and American, national).

In addition, there are other youth development organizations such as **4-H and MANRRS** (Minorities in Agriculture, Natural Resources and Related Sciences) that are critical to supporting agriculture education awareness throughout the commonwealth.





This chart provides a historical overview of trends in Pennsylvania's agriculture education system. This includes FFA chapters, agriculture education students, percentage of completers, students involved in Supervised Agriculture Experiences (SAEs), open and filled teacher positions and certifications.

Indicator	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Number of FFA chapters	146	143	144	146	147	152
Number of Agriculture Education students	6,898	7,197	7,096	6,948	7,417	Data Not Available until October 2022
% of completers among participants in secondary-level, approved ag programs	12.39%	11.68%	9.79%	6.82%	8.97%	Data Not Available until October 2022
Participants						
Completers	6,898	7,197	7,096	6,948	7,417	
	855	841	695	474	665	
% of students involved in SAEs	9,135	9,531	9,642	7,521	3,845	4,805
	63%	63%	63%	59%	69%	52%
Economic impact of SAEs	\$5,307,543	\$5,138,388	\$4,485,717	\$4,339,540	\$4,472,306	\$928,4254
Net unfilled teaching positions						
	4	3	4	3	4	14
Open positions						
Filled positions	17	12	8	10	14	14
	13	9	4	7	10	Pending
Number of ag and food industry certifications earned by students in the system	1,810	1,342	1,277	960	1,658	Pending

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Pennsylvania Agriculture Education Program Breakdown: Eastern Region

This report reflects an overview of the approved and non-approved agriculture programs in the eastern region of Pennsylvania and composition of their agriculture education programs in 2020-21.

10% 19% 71%

Eastern Region

- Approved Programs
 w/ FFA
- Non-Approved Programs w/ FFA
- Approved Programs No FFA

Career Cluster: Agriculture, Food and Natural Resources

CIP Code Titles

- 01.0000 Agriculture, General
- 01.0201 Agriculture Mechanization, General
- 01.0301 Agriculture Productions Operations, General
- 01.0401 Agriculture and Food Products
- 01.0601 Applied Horticulture/Horticulture Operations, General
- 01.8301 Veterinary/Animal Health Technology/Tech and Vet Asst.
- 01.0901 Animal Sciences, General
- 01.9999 Agriculture, Agriculture Operations and Related Sciences
- 03.0299 Natural Resources Management & Policy

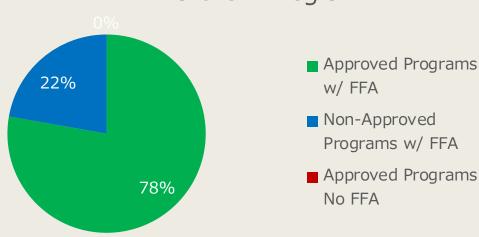


Eastern Region CIP Codes

Eastern Region CIP Codes

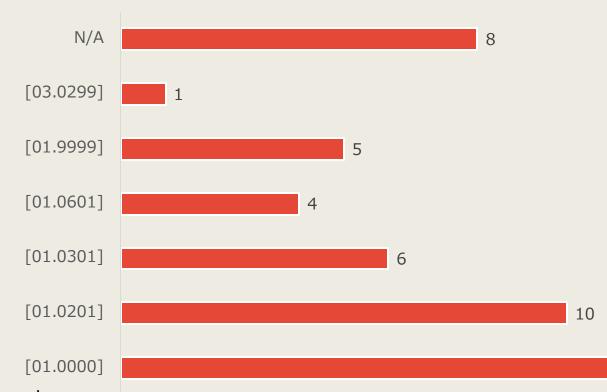
Pennsylvania Agriculture Education Program Breakdown: Northern Region

This report reflects an overview of the approved and non-approved agriculture programs in the northern region of Pennsylvania and composition of their agriculture education programs in 2020-21.



Northern Region

Northern Region CIP Codes



Northern Region CIP Codes

Career Cluster: Agriculture, Food and Natural Resources

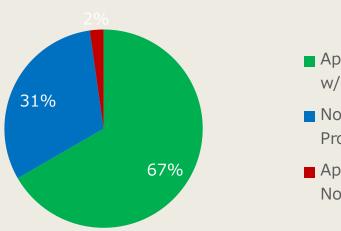
CIP Code Titles

- 01.0000 Agriculture, General
- 01.0201 Agriculture Mechanization, General
- 01.0301 Agriculture Productions Operations, General
- 01.0601 Applied Horticulture/Horticulture Operations, General
- 01.9999 Agriculture, Agriculture Operations and Related Sciences
- 03.0299 Natural Resources Management & Policy

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Pennsylvania Agriculture Education Program Breakdown: South Central Region

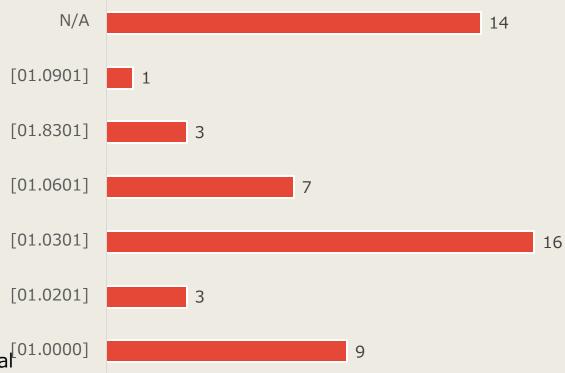
This report reflects an overview of the approved/non-approved agriculture programs in the south-central region of Pennsylvania and composition of their agriculture education programs in 2020-21.



South Central Region

- Approved Programs
 w/ FFA
- Non-Approved Programs w/ FFA
- Approved Programs
 No FFA

South Central Region CIP Codes



South Central Region CIP Codes

CIP Code Titles

- 01.0000 Agriculture, General
- 01.0201 Agriculture Mechanization, General
- 01.0301 Agriculture Productions Operations, General
- 01.0601 Applied Horticulture/Horticulture Operations, General
- 01.8301 Veterinary/Animal Health Technology/Tech and Vet Asst.

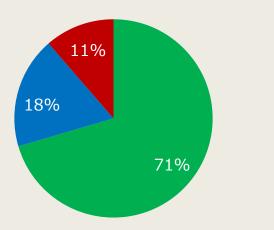
Career Cluster: Agriculture, Food and Natural Resources

01.0901 – Animal Sciences, General

Pennsylvania Agriculture Education Program Breakdown: Western Region

This report reflects an overview of the approved/non-approved agriculture programs in the western region of Pennsylvania and composition of their agriculture education programs in 2020-21.

Western Region



- Approved Programs w/ FFA
- Non-Approved Programs w/ FFA
- Approved Programs No FFA

Career Cluster: Agriculture, Food and Natural Resources

CIP Code Titles

- 01.0000 Agriculture, General
- 01.0201 Agriculture Mechanization, General
- 01.0301 Agriculture Productions Operations, General
- 01.0401 Agriculture and Food Products
- 01.0601 Applied Horticulture/Horticulture Operations, General
- 01.8301 Veterinary/Animal Health Technology/Tech and Vet Asst.
- 01.9999 Agriculture, Agriculture Operations and Related Sciences
- 03.0511 Forestry Technology/Technician



Western Region CIP Codes

Western Region CIP Codes







Agriculture Education Youth Development Programs

The commission is charged with identifying programs and organizations that engage students completely in agriculture literacy and education throughout their academic careers. These organizations are essential to enhancing classroom education in PA and provide endless opportunities for secondary and post-secondary students.

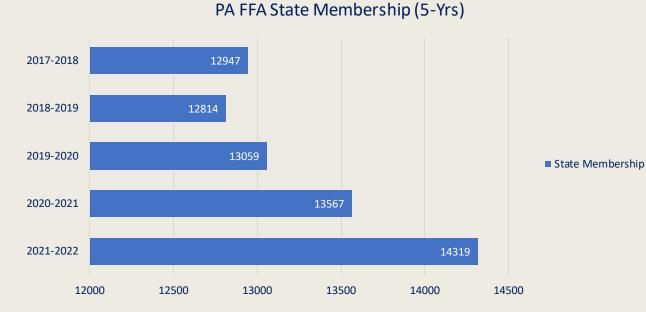
Pennsylvania FFA Association Data for 2021-2022

The Pennsylvania FFA Association is a student-led organization whose mission is to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education.

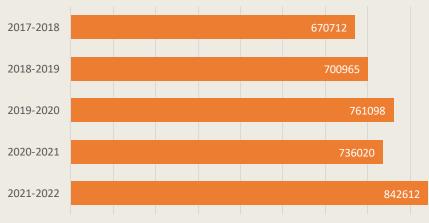
Thanks to the efforts and engagement of the 2021-2022 PA FFA Association State Officer Team and Executive Director Mike Brammer, there are 152 chapters of record across the state. This is an increase from 147 chapters in 2020-2021.



Pennsylvania FFA Association Student Membership



National FFA Membership



National Membership

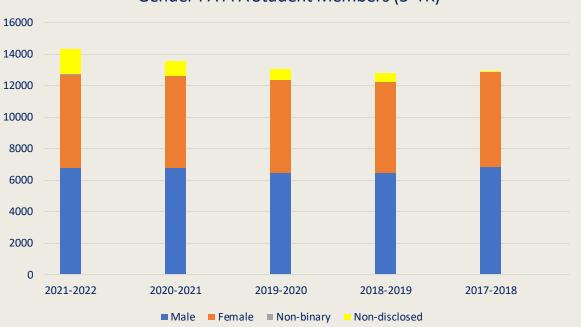


In 2021-2022, Pennsylvania added five new FFA charters:

- Athens Middle School
- Mon Valley CTC
- Moshannon Valley
- Millville
- Chambersburg Middle

0 100000 200000 300000 400000 500000 600000 700000 800000 900000

Pennsylvania FFA Association Student Membership



Gender PA FFA Student Members (5-YR)

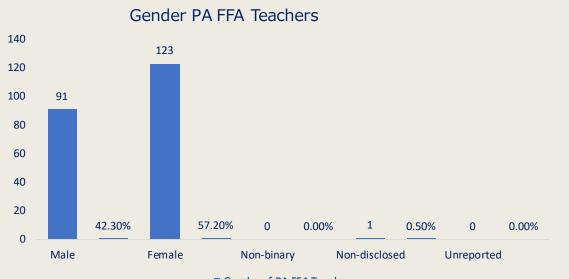
16000 14000 12000 10000 8000 6000 4000 2000 0 2021-2022 2020-2021 2019-2020 2018-2019 2017-2018 American Indian, Alaska Native Asian, Hawaiian, Pacific Islander Black, Non-Hispanic Hispanic or Latino, of any race White, Non-Hispanic Other, Two or More Races Non-disclosed

Race and Ethnicity of PA FFA Student Members (5-YR)

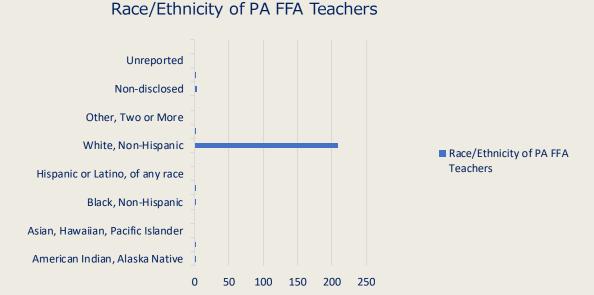
Please note that gender, race, and ethnicity data provided represents student membership from 7th to 12th grade across Pennsylvania of approved and non-approved agriculture programs with an FFA program.

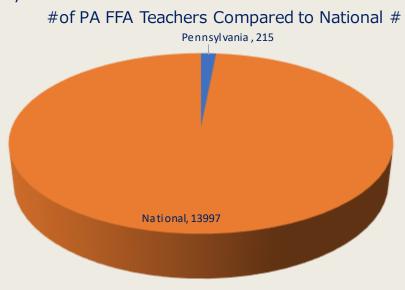
Pennsylvania FFA Association Teacher Statistics

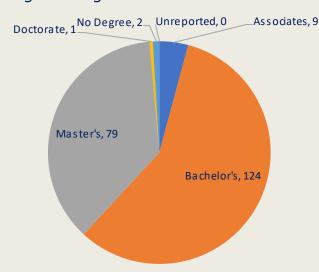
Please note the following data represents the 215 FFA Advisors/Teachers across Pennsylvania:



Gender of PA FFA Teachers

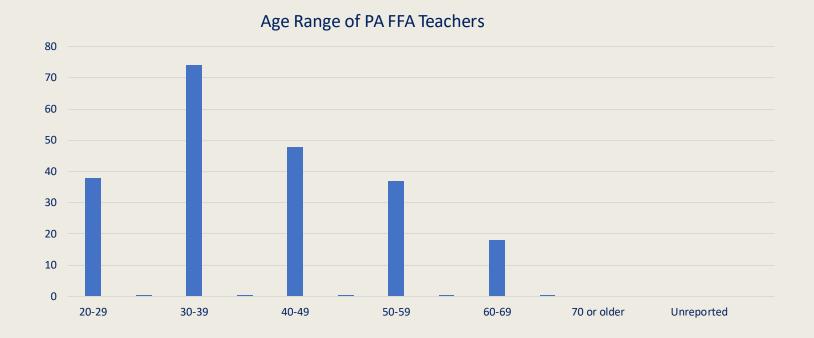




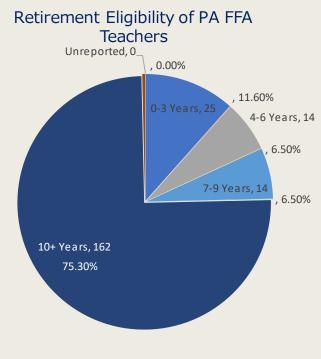


Highest Degree Earned of PA FFA Teachers

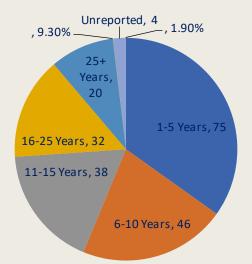
Pennsylvania FFA Association Teacher Statistics

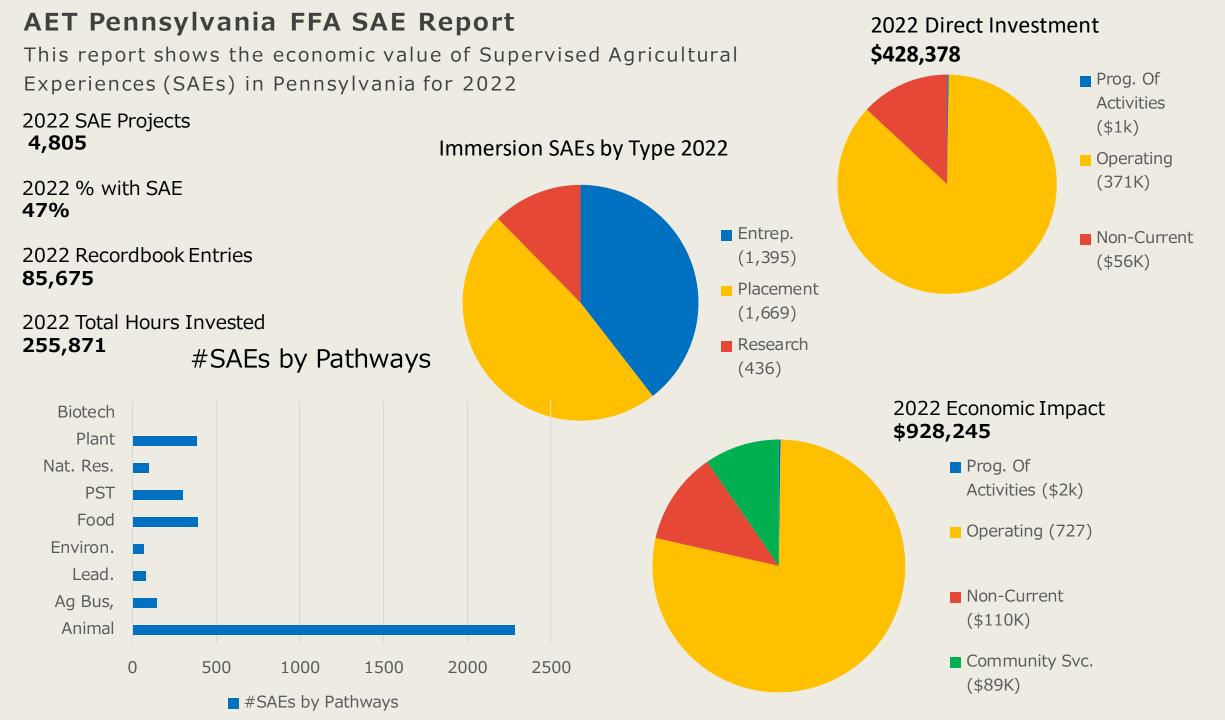


Please note the following data represents the age, teaching experience and retirement eligibility of Pennsylvania's FFA Teachers. This data was provided by the PA FFA Association.



Years Teaching, PA FFA Teachers





Pennsylvania 4-H (Head, Heart, Hands, and Health)

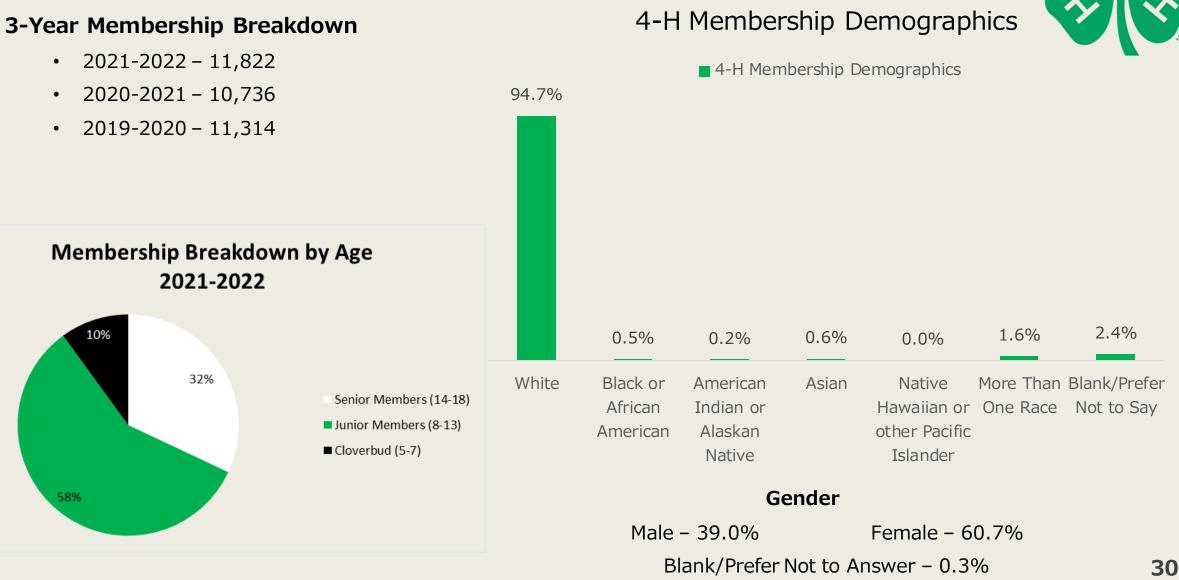
4-H is Pennsylvania's second largest youth development
organization. 4-H programs are delivered through Penn State
Extension in all 67 counties. These programs are in rural communities,
small towns, and big cities across Pennsylvania.

4-H members tackle projects that build life skills, explore careers, and help young people find their passion in life. Members get firsthand exposure to productive, rewarding career paths while making lifelong friends in a welcoming community. 4-H volunteers' mentor young people in activities like hands-on science projects, agriculture, civic involvement, community work, and so much more.





Pennsylvania 4-H Enrollment Statistics



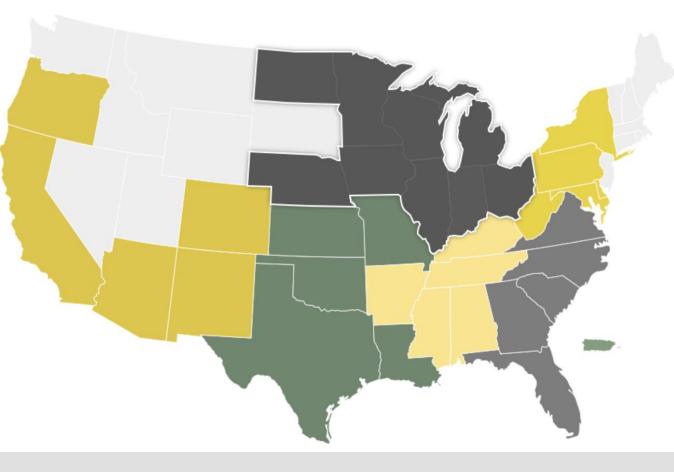
Pennsylvania MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences)

MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences) is a national society that welcomes membership of people of all racial and ethnic group participation in agricultural and related science careers. MANRRS members are encouraged to be full participants in other professional societies for their basic disciplinary and career interests. However, MANRRS attempts to provide networks to support professional development of minorities. It is a springboard for their entry into and advancement in careers where they otherwise could be lost in the sheer number and established connections of mainstream participants. For student members, MANRRS provides role models and networking opportunities.

MANRRS also offers students opportunities to enhance leadership, organizational and public speaking skills, and to experience professional critique of scholarly work in a "user-friendly" environment. MANRRS professional members are often the only, or one of few, minority participants in their basic disciplinary societies or at their career locations. MANRRS provides them a network of counterparts from similar backgrounds with related interests and goals. More experienced members serve as mentors for newer graduates. The historical roots of traditionally formed networks within professions will prevent their replacement by MANRRS or any other alliance. However, MANRRS provides its members a similar inner circle of relationships to circumvent some of the exclusionary impacts of established professional lines of communication. Finally, MANRRS also serves employers in the broader agricultural sector. It provides them a platform to identify prospective well-qualified employees who are members of ethnic groups, which, when combined, are projected to be the new majority in the workforce in the not too distant future.







Pennsylvania is located within Region I of MANRRS

MANRRS within the Commonwealth of PA prior to 2022 only existed within Penn State University holding an average of 10-15 members.

Since 2021-2022 MANRRS in PA has expanded to more than 60 members across two universities and three high schools

2,050 active members



- 85% Student
- 15% Professional
- Active database of over 10,000 Members, Students
 and Professionals
- Junior MANRRS (middle school high school)

65 chapters nationwide

- Located in 39 states & Puerto Rico
- 30% of institutions are Minority Serving Institutions including 1890s/HBCUs/Hispanic Serving Institutions
- More than 75 STEM related disciplines represented in membership

MANRRS Chapters in Pennsylvania

- Pennsylvania State University (Collegiate)
- Delaware Valley University (Collegiate)
- W.B. Saul Agriculture School (Jr. MANRRS)
- The U School (Jr. MANRRS)
- Lankenau Environmental Science Magnet High School (Jr. MANRRS)

MANRRS Membership Levels

	JUNIOR	COLLEGIATE	COLLEGIATE	PROFESSIONAL
BOYS & GIRLS CLUBS	HIGHSCHOOL	UNDERGRADUATE	GRADUATE	BEYOND COLLEGE
E Condary Partners	 Pre-college Assistance Career awareness & readiness Scholarships Priority Consideration Internships Mentorship with local University Contextual Learning Community Impact 	 Leadership Development Professional Development Social Skill Development Internship and Jobs Career awareness and readiness Networking Community Impact Cultural Competencies 	 Leadership Development Professional Development Career Coaching Internship and Jobs Career awareness and readiness Networking Community Impact 	 Leadership Development Professional Development Mentorship Jobs Opportunities Networking Community Impact Cultural Competencies
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Workforce Trends of the Agricultural and Food Industry

Workforce Trends

Workforce gaps and labor shortages have been a challenge within the agricultural industry for many years and have been intensified by the COVID pandemic. Addressing these needs and filling these gaps is crucial to ensuring the success of agriculture in the state.

The <u>2021 PA Economic Impact Study</u> conducted by Econsult, shows the major impact that the industry has on the state's economy. According to the study, Pennsylvania's agriculture industry has a \$132.5 billion annual economic impact and supports more than 590,000 jobs, paying nearly \$33 billion in wages annually.

As technology changes and older workers retire, there is a continued need to develop the next generation of agricultural workers and upskill current workers to prepare for changing technology. There is a need for workers across the various subsectors within agriculture, with the Department of Labor & Industry reporting openings in more than 30 different indemand ag occupations including Butchers, Loggers, Farmworkers, Heavy and Tractor-Trailer Truck Drivers, Veterinary Technicians and more.

The department has been working hard to address these needs and identify solutions to the growing labor shortages. The department has focused on workforce initiatives that focus on increasing collaboration with other state agencies and the workforce system, expanding and developing on-the-job training programs, increasing outreach and awareness of the various opportunities within agriculture and ensuring access to migrant labor.



Apprenticeships & Pre-Apprenticeships

Apprenticeship and Pre-Apprenticeship programs are key tools addressing the growing workforce shortages in the industry. The department has worked to help support new and existing programs in the industry. There are currently seven agricultural apprenticeships and two agricultural pre-apprenticeship programs registered with the State's Apprenticeship and Training office. There are three additional programs in development that should be registered by the end of 2022.

Agricultural and Related Apprenticeship and Pre-Apprenticeship by Programs

Below is a record of all approved agricultural related apprenticeship/pre-apprenticeship by programs in Pennsylvania

Diversified Vegetable Grower Apprenticeship

Sponsor: <u>Pennsylvania Association for Sustainable Agriculture</u>

- Number of Apprentices 2021-2022: 5
- Number of Current Apprentices: 5
- Number of Apprentices who completed the program: 8

Diversified Vegetable Grower Apprenticeship

Sponsor: <u>Pennsylvania Association for Sustainable Agriculture</u>

- Number of pre-apprentices in 2021: 36
- Number of pre-apprentices currently: 48
- Number of pre-apprentices who completed the program:
 2

Dairy Grazing Apprenticeship

Sponsor: Pennsylvania Association for Sustainable Agriculture

- Number of Apprentices 2021-2022: 6
- Number of Apprentices Currently: 8
- Number of Apprentices who completed the program: 1

Ag Equipment Technician Apprenticeship and Pre-Apprenticeships

Sponsor: Northeast Equipment Dealers

- No apprentices in 2021-2022
- No current Apprentices
- Number of Pre-apprentices currently: 3

Landscape Management Apprenticeship

Sponsor: National Association of Landscape Professionals

- No apprentices in 2021-2022
- No active apprentices
- Number of apprentices who completed the program:
 2

Butcher Apprenticeship

Sponsor: Penn State Butcher Program

- Number of Apprentices 21-22: 6 apprentices in 2021 (all 6 completed the program)
- Number of Apprentices Currently: 6 apprentices currently enrolled

2 Grounds Keeper Apprenticeships

Sponsor: Tyler Bloom Consulting

- Number of Apprentices Currently: 3 current apprentices
- Expect 3 more by the end of the year

Diversity, Equity, Inclusion and Accessibility Plan

In 2020, the commission determined there was a need to focus on the diversity, equity, inclusion, and accessibility (DEIA) of the state's agricultural education system.

The commission convened a DEIA Ad Hoc Committee, consisting of commissioners and commission staff, to focus on this work.

The committee's mission is to ensure Pennsylvania's agricultural education system creates diverse, inclusive, equitable, and accessible educational opportunities in the agriculture, food, and natural resource industries and includes historically disadvantaged and underrepresented individuals in the agricultural education system.

The commission and committee aim to achieve this work through the following objectives:

- Foster a culture that promotes opportunity and access to agricultural education and agricultural training opportunities for all diverse people across differences of race, age, color, ethnicity, gender, sexual orientation, gender identity, gender expression, religion, national origin, migratory status, disability/abilities, political affiliation, veteran status and socioeconomic background.
- Create an equitable and sustainable climate where, justice, fairness and mutual respect are intrinsic, success-oriented, cooperative and supportive of the ag ed industry in which we recruit and retain people and partners who feel comfortable contributing their unique wisdom, perspectives and experiences.
- Establish an inclusive agricultural education system that aims to ensure that every member of our ag education family feel valued, supported through education and outreach campaigns that reach more people.
- Provide continued education to agricultural teachers, employers and more on issues of diversity, equity, inclusion and accessibility.



Diversity, Equity, Inclusion and Accessibility Plan

To get baseline information and stakeholder feedback on the current status of DEIA within the system, the Ad Hoc Committee worked with Millennium Learning Concepts, an approved contractor, to conduct a DEIA assessment.

The assessment resulted in a final DEIA action plan that will guide further DEIA efforts going forward.

The goals of the DEIA plan will focus on the following strategies:

- 1. Branding, marketing and digital strategy;
- 2. Learning and training processes;
- 3. Recruitment, talent development and advancement procedures;
- 4. Establishing an inclusion council; and
- 5. DEIA infrastructure and system alignment.

The final DEIA action plan has been approved by the commission and work is underway to begin addressing the various action items within the plan. The commission will regularly assess the DEIA plan and efforts underway to ensure they are addressing the issues identified by the initial assessment and that their work aligns with the DEIA mission statement.



Trends and Needs in Secondary and Formal and Informal Post-Secondary Agricultural Education and Training

Trends and Needs in Secondary and Formal and Informal Post-Secondary Agricultural Education and Training

As the needs and practices of the agriculture industry have grown and evolved, so too has the workforce that supports those vital efforts. Commission members noted – and data and research reaffirm – the continued need for education and training that allows current and future workers to meet the demands of the agriculture and food industry.

Career pathways have become increasingly popular frameworks for talking about the variety of career options available to individuals preparing to enter the job market or looking for work after an employment dislocation. Career pathways are descriptions of the knowledge, skills, and abilities that workers need as they move through the occupations that exist in an industry. They typically have a parallel system of skill acquisition that describes the way the worker can learn what is required. They use occupations as a roadmap for jobseekers, and many have been organized in "ladders" or "lattices" showing occupational progression.

The PA Department of Agriculture has identified six career pathways in the agriculture and food industry as represented in the adjacent chart.

These pathways support the roughly 48 in-demand occupations that have been identified, prioritized, and documented by the PA Department of Labor and Industry.



Programming Recommendations for Meeting the Training Needs for Individuals Not Pursuing Formal Post-Secondary Education

Programming Recommendations for Meeting the Training Needs for Individuals Not Pursuing Formal Post-Secondary Education

- Continue to explore interfaces with the growing registered apprenticeship system in the United States, negotiating articulations where possible with a broad understanding of career pathways and how they work:
- Encourage every agriculture-related registered apprenticeship to develop a pre-apprenticeship that reaches into not only the K-12 system but also into other manpower pools (veterans, exoffenders, unemployed workers).
- Assist apprenticeship planners in understanding gaps in using agriculture educators as teachers in apprenticeship and plan together to acquire the needed knowledge and skills.
- Support all apprenticeship/pre-apprenticeship programs equally
- Work with industry (public/private) to identify career pipeline opportunities to help sustain the agriculture workforce



Objective 1: Use a set of benchmarked key variables to monitor progress in reaching commission goals

- Work with PDE to acquire and monitor progress on agriculture education approved and non-approved programs *Completed*
- Document percentage increases and decreases of FFA chapters, students and teachers Completed
- Monitor agriculture teacher recruitment, retention and turnover Completed
- Record industry certification earned by students in the ag education system *Completed*
- Maintain an accurate record of annual 4-H membership and programming impact Completed
- Document progress of MANRRS programs at the K-12 and collegiate levels across state Completed

Objective 2: Identify and explore opportunities to increase diversity of the Agriculture Education system and the various progams and opportunities within it

- Work with the Inclusion Council developed by the commission to identify groups or individuals not engaged in the agriculture education system *In progress*
- Establish opportunities for continued education focused on diversity and inclusion for commission members and agriculture teachers In progress
- Explore ways in which youth development organizations like 4-H, FFA, & MANRRS can continue reaching students typically underrepresented in agriculture programs *In Progress*
- Expand social media campaign to include stories and testimonials of Individuals from underrepresented groups *In progress*
- Explore urban agriculture opportunities and how these opportunities may allow the commission to reach a more diverse audience In progress
- Collaborate with Workforce, Labor & Industry and PDE programs that focus on underrepresented populations In progress



Objective 3: Identify and support strategies to align the agriculture education system with the agriculture and food industry

- Continue to engage Food Manufacturing, Forestry, Natural Resources, Farming, Agricultural Operations, Horticulture and Animal Health Veterinary Services industry professionals on marketing and providing literacy on career pathway for occupational advancement to map places for education and training interventions through formal and informal systems -*In progress*
- Work with industry professionals to identify gaps that may exist in curriculum, for traditional and non-traditional students and educators, particularly caused by technology advancement in agricultural related professions *In progress*
- Work with members of Occupational Advisory Committees regarding gaps in curriculum that they identify during their consultation with local programs *In progress*
- Work with PDE's agriculture education career and technical specialist to aid in curriculum development efforts to fill the gaps in training for agriculture equipment service technicians *In progress*
- Work with PDA's workforce development specialist to provide experiential learning and hands on training for teachers across diverse facets of Pennsylvania's agriculture industry *In progress*
- Work with the emerging broad coalition of education providers in horticulture and controlled environment agriculture to keep them attuned to the needs of the horticulture industry *In progress*
- Strengthen teacher and student support in approved apprenticeship and pre-apprenticeship efforts In progress
- Explore and advocate for changes that may need to be made in the Agriculture, Food, and Natural Resources standards that relate to the gaps that are being identified in school-based agriculture education programming *In progress*
- Hold youth agricultural townhalls across state, where youth are engaged about what modern agriculture looks like (sustainability, agri-technology, regenerative agriculture, climate-controlled agriculture etc.) *Not begun*



Objective 4: Engage students earlier and more completely in agriculture literacy and education during their academic careers

- Reach out to the parents of K-8 students as well as the students themselves with information about agriculture and food careers - In progress
- Leverage 4-H, FFA, Junior MANRRS to aid in providing agriculture literacy for families and communities In progress
- Utilize Remake Learning for distributing agriculture experiential learning opportunities across the state In progress
- Adopt Seed your Future's communication model for sharing educational and career resources In progress
- Strengthen the commissions marketing budget to support a consistent and sustainable social media marketing campaign *Not begun*
- Create an archive of curricula centered around ag literacy, careers, and practice and make it readily accessible to formal and informal educators as well as communities and industry *In progress*
- Work with the PA Department of Education to establish a place for ag and food curricula on the Standards Aligned System (SAS) portal that is integrated with PA academic standards *Completed*
- Maintain support for Supervised Agriculture Experience (SAE) as one of the three primary parts of agriculture education specifically for FFA *Completed*
- Strengthen engagement with Pennsylvania 4-H Completed
- Increase awareness for MANRRS (Minorities in Agriculture Natural Resources and Related Sciences) as a resource for agriculture stakeholders and industry to engage with underrepresented minorities in the agriculture space *In progress*
- Participate in the ongoing discussion related to boundary issues between agriculture and science, particularly related to certification *In progress*
- Continue to provide information on ag and food careers to high school and adult students (especially in districts without an FFA, CTC, or CTE program) - Completed





Objective 5: Empower local agriculture education teachers, administrators, and other leaders in providing agriculture education programs that meet the needs of the industry for workers, the community for future leaders, and citizens who understand the role of agriculture in the food systems

- Explore how local systems may be preventing participants in agriculture programs from becoming program completers In progress
- Explore the ways local school districts use the funding that comes from the state for agriculture education program, particularly how much is used directly for ag ed and how much goes into other programs *In progress*
- Follow-up on work conducted by the Bachelors of Career and Technical Education engaging CTE stakeholders for feedback on the Perkins grants process and criteria *In progress*
- Work with PDE as they finish developing an educator workforce strategy to address educator shortages In progress
- Explore ways to develop more teacher experiential training and developmental opportunities In progress
- Explore ways to get industry in the classrooms engaging with agriculture and non-traditional schools without agriculture programs *In progress*

Funding to Support Agricultural Education Activities

Strengthening Staffing Support for the Pennsylvania Agriculture Education System

Over the last 15 years, there has been a tremendous decrease in staffing support for agriculture education in Pennsylvania. With 14+ agriculture teacher vacancies, agriculture education program and classroom support needs to be addressed. After several discussions with our agriculture education stakeholders that include Pennsylvania Association for Agriculture Educators (PAAE), Pennsylvania FFA Board of Directors and members of the PA Agriculture Education Network, to continue to grow the industry, we need to grow the education components and that takes people to facilitate.

The Pennsylvania agriculture industry needs our learners to become the next generation of problemsolvers, innovators, and entrepreneurs. Increasing our staffing infrastructure allows more leaders to be developed and serve the industry that feeds us all.



Capacity Building

The following positions were recommended by Pennsylvania's agriculture education stakeholders to help increase, sustain and strengthen agriculture education program efforts throughout the state.

FFA EXECUTIVE SECRETARY

- Coordinate and foster relationships with Ag Ed Family (Teachers, Alumni, Industry Leaders, Foundation, etc.)
- Oversee the selection and development of the State FFA Officer team
- Manage the complete FFA Personnel
 Team
- Report to the State FFA Board of Directors (serve as an ex-officio, non-voting member of the board; serve as the recording secretary of the board)
- Provide monthly reports to the Secretary of Agriculture, Secretary of Education, Secretary of Labor & Industry, Ag Ed

ASSISTANT FFA EXECUTIVE SECRETARY

- Assist in the management of the association (duties as assigned by the Executive Secretary)
- Oversee the State Proficiency
 Evaluation
- Coordinate certification and submission of State Proficiencies to National FFA
- Oversee the State and American Degree Evaluation
- Coordinate the certification and submission of American Degrees to National FFA
- Manage Regional FFA Coordinators (employees of the State FFA Board of Directors)

CAREER AND LEADERSHIP

DEVELOPMENT EVENT COORDINATOR

- Oversee Career and Leadership Development Events at the State level
- Coordinate certification and registration of teams and individuals qualifying for the
- National FFA CDEs and LDEs
- Serve as chair of CDE/LDE Committee of the PA FFA Association

CURRICULUM SPECIALIST

- Assist school entities in developing agricultural education curricula and integrating national agriculture, food and natural resource standards into elementary and secondary curricula
- Work with appropriate stakeholders to develop at statewide agriculture curriculum

Funding for Program Support

Pre-Apprenticeship and Apprenticeships

An ongoing theme of the commission has been filling gaps in curriculum that have been identified as a result of its ongoing monitoring. The commission has a special interest in aligning high school programs to the diverse agricultural related pre-apprenticeship and apprenticeship programs offered throughout the commonwealth with a priority given to teacher training upgrades that support these career pathways. This addresses recommendations #3 and #4 in the Work Plan of the commission.

Learning by Doing Grants

This funding is critical to the commission, as we continue to grow support for the Ag Ed teachers, FFA chapters, and students. This funding would go to the FFA Foundation to replicate its Learning by Doing grants process that has been followed over the last two years; \$1,000 grants for teachers, \$1,000 grants for FFA chapters, and \$350-\$500 grants for student SAE project. This project addresses #4 and #5 of the Work Plan recommendations.

Ag Education Youth Professional Development Program Grant

Identifying, supporting and exploring opportunities to increase diversity of the Agriculture Education system and the various programs and opportunities within it is an essential charge of the ag education commission. Program support for MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences), FFA, and Young Farmers aims to assist agriculture educators in providing support in getting students to statewide agricultural events and opportunities (Farm Show, Ag Progress Days, Farm City Day, FFA Convention and MANRRS statewide and national events). This initiative increases access and equity for students to participate in professional development opportunities. This project addresses #2 and #4 of the Work Plan recommendations

Funding for Program Support

Statewide AET Subscription

This system is designed for students to track their experiences in agricultural education, including national and state educational content standards, teacher grading tools and students developing career portfolios. This annual subscription covers all FFA programs in the commonwealth. The commission is proposing to cover the AET costs for all of the commonwealth's agriculture educators This project addresses #4 and #5 of the Work Plan Recommendations.

Ag Educator Teacher Development Grant

To support our agriculture educators across the state in their professional development and continued education opportunities, we have created the Ag Educator Teacher Development Grant. Agriculture educators can apply for funds up to \$1,250 per year that can be used to attend conferences, seminars, and other educational training opportunities. However, funds can't be used toward classes that are part of obtaining a degree.

Ag Awareness Marketing Initiative

Early in 2020, PDA rolled out a social media campaign targeted to the parents of K-6 children and focused on agriculture and food careers. The development costs were paid by the commission in last year's budget. This initiative builds on previous initiatives of developing social media and creating marketing materials that provide literacy to students, teachers, and communities across the commonwealth on agricultural career opportunities to help support rebuilding our agriculture workforce. This item is consistent with Recommendation #4 of the Work Plan. This project addresses #2 of the Work Plan Recommendations. Recommendations to the Governor and General Assembly regarding Legislative or Regulatory Changes to Improve Agricultural Education

Recommendations to the Governor and General Assembly regarding Legislative or Regulatory Changes to Improve Agricultural Education

- Prioritize capacity-building directives included in the Commission for Agriculture Education Excellence Act of November 6, 2017 (P.L. 1142, No. 55).
- Expand and fund apprenticeship programs for agriculture students and create working partnerships with the industry. To sustain the agriculture workforce in Pennsylvania, this must be a priority for lawmakers. It's also crucial that current programs introduced during the Wolf Administration be made permanent.
- Utilize the commission findings and resulting conclusions of this Annual Report to implement statute changes and budgeted actions, as this work cannot be sustained without funding and support from the Governor and General Assembly.
- Extend the due date of the Agriculture Education Excellence Commission annual report to September 1st, as school reporting data on completers, increases in ag education teachers and programs are not ready until after July 15th.
- Support the increase of the commission's budget from \$250,000 to \$1 to \$2 million, as supporting the statewide
 agriculture education initiatives with the current budget is not reasonable to meet stated expectations and required
 support of agriculture education in Pennsylvania.