

Maryland Local Farm Bureau Ag Education Toolkit



Thank you for your interest in supporting agricultural education in Maryland! Your voices and active participation in your local communities are an incredibly important element in developing and maintaining high-quality agricultural education programs in your school systems.

What you need to know about Maryland schools:

In Maryland, the Maryland State Department of Education (MSDE) sets & maintains the standards for education, but in truth, the Local School Systems (LSS) have complete autonomy in what they offer students & how it's delivered.

The Maryland Agricultural Education Foundation works diligently to promote and support agricultural education in Maryland's school systems. This toolkit was designed to help local Farm Bureau members understand how to connect with their local school systems.



That's why developing & maintaining relationships with the LSS leaders on the local level is crucial. MAEF employees serve on the state Career Technical Education (CTE) Advisory Committee and on several county & city Program Advisory Committees (PAC), but the best representation for agricultural education is always going to come from local people advocating for their own students on the local level.

You're the taxpayers & the parents & the agricultural leaders who know your area the best. MAEF & Maryland Farm Bureau are here to support you. The elected leaders of the local Boards of Education and the school system employees may be your neighbors, your friends, or your peers on soccer sidelines. Many of them may be unfamiliar with agriculture. They appreciate support, participation, & input for their Agriculture Program Advisory Committees.



Our Students, Our Future



Elementary School

Getting young minds interested in agriculture is rewarding for the farm industry and for teachers! Agriculture provides a compelling real-world context from which students can learn core subjects.

- Participate in MAEF's Ag Literacy Week by volunteering to read a book to a class. MAEF chooses an ag-accurate book each year, develops an activity based on the book, and provides the supports for you to have a successful visit with a classroom.
- Distribute "Lab in a Box" kits to elementary teachers. These kits contain an ag-accurate book plus educator guide and supplies for teachers to lead lessons and experiments related to agriculture.
- Offer your time and resources to your local school for visits, career days, field trips, etc.
- Provide ag-accurate books to school libraries. MAEF can offer suggestions.
- Facilitate MAEF Mobile Lab bookings at schools. Schools may be unaware that labs are available or unfamiliar with the process of booking, and your persistence can help your local schools enjoy a great experience and learn more about agriculture. (More information on the Important Audiences page.)
- Promote the use of the MAEF YouTube Channel as a classroom resource.
- Promote MAEF's web-based matrix of lesson plans available via National Ag in the Classroom.
- Promote MAEF's professional development courses for elementary teachers, called "Infusing Ag in the Elementary Classroom."
- Participate in Farm-to-School activities coordinated by the school system's nutrition services department and/or Maryland Department of Agriculture.
- Partner with your local historical society to provide a program related to the history of agriculture in your county. (Every 4th & 5th grade student studies Maryland history.)
- Partner with the LSS Outdoor Education staff for programs related to agriculture, water quality and the Chesapeake Bay.
- Partner with the Extension service in your county to hold a "Growing with Grains" program.
- Provide a summer or weekend "day camp" experience focused on agriculture and safety with animals or equipment.



Middle School

Middle school years are an important time in a student's education, during which they make decisions about educational pathways that lead to their future careers.



Middle school agriculture curriculum will be piloted during the 2022-2023 school year in Maryland which *could* be offered as a general science credit, attracting more students to explore agricultural studies and careers.

- If you have agriculture programs at your local middle school, be sure to introduce yourself to the agriculture teacher and ask them how you may support them. If you farm, tell them what you grow. If you work in other sectors of agriculture, tell them what you do. The teacher's mind will automatically categorize you as a resource for their classroom and one day (which may lead to many days), you will get a call.
- Offer to support an afterschool agriculture club at the school if FFA is not an option due to limited coursework. Offer to support your middle school FFA program if you have one. Students, parents, and administrators who see an active and thriving program with widespread community support will be more likely to join, participate and fund that program. Note: National FFA policy dictates that FFA Chapters may only exist where the school offers a "program of study" in agriculture education (more than just one course).
- If you don't have an agriculture program at your local middle school, approach a teacher and propose an afterschool agriculture club, or propose agriculture projects within an existing science club. Promote Maryland 4-H as a way for students to learn about agriculture.
- Volunteer to serve on the school's parent or community advisory committee.
- Offer your time and resources to your local school for visits, career days, field trips, and more. Maryland agriculture is diverse and has many career opportunities, many of which are not familiar to students, teachers, or guidance counselors. Sharing your career path helps these groups visualize different careers in agriculture. Promote the importance of a combination of classroom instruction in agriculture, hands-on experience, and assembling a personal network as essential elements to building a career path.
- Provide ag-friendly books for school libraries, especially agriculture and natural resource career books.
- Visit with school leadership and guidance counselors to let them know that agriculture careers can and should be promoted as rewarding and meaningful careers supporting our state's largest industry.
- Promote MAEF's web-based matrix of lesson plans available via National Ag in the Classroom to middle school teachers you know.
- MAEF will be partnering with MPT's "Maryland Farm & Harvest" to create middle school lesson plans related to Maryland agriculture – stay tuned to the ThinkPort section of www.mpt.org
- Promote MAEF's professional development (PD) courses for teachers, called "Infusing Ag in the Secondary Classroom."
- Promote MAEF's "Maryland AgWorks" podcast on Maryland agricultural careers, available on Buzzsprout and other podcast platforms.
- Participate in Farm-to-School activities coordinated by the school system's nutrition services department and/or Maryland Department of Agriculture.

High School

High school agricultural education programs are typically part of the Career and Technical Education department at your school system. Each local school system should have a Program Advisory Committee (PAC) for Career Technical Education programs, coordinated by a director or specialist. Your service on this committee can help the school system know in advance what students may be rising up through the ranks to study agriculture and what their particular interest is (mechanics, environmental, animal science, etc.).

Your local connections also can help place students in internships and apprenticeships with local businesses, helping them gain experience and build their budding professional network. Google your school system's organization chart or staff list to find the person you need to meet, introduce yourself and volunteer to serve.

- If you have an agricultural education program at your local high school, be sure to introduce yourself to the agriculture teacher and ask them how you may support them. If you farm, tell them what you grow. If you work in other sectors of agriculture, tell them what you do. The teacher's mind will automatically categorize you as a resource for their classroom and one day (which may lead to many days), you will get a call. Stay in touch with them year after year and invite them to Farm Bureau activities so they can expand their network of farm resources within your community.
- Visit with school leadership and guidance counselors to let them know that agricultural careers can and should be promoted.
- Offer to support an afterschool agriculture club at the school if FFA is not an option due to limited coursework. Offer to support your high school FFA program if you have one. Students, parents and administrators who see an active and thriving program with widespread community support will be more likely to join, participate and fund that program. Promote Maryland 4-H as a way for students to learn about agriculture.
- Offer your time and resources to your local school for visits, career days, field trips, judging and coaching students as they prepare for career and leadership events and more. Maryland agriculture is diverse and has many career opportunities, many of which are not familiar to students, teachers, or guidance counselors. Sharing your career path helps these groups visualize different careers in ag. Promote the importance of a combination of classroom instruction in agriculture, hands-on experience, and assembling a personal network as essential elements to building a career path.
- Invite your local school board members, school administrators, CTE directors, principals, and guidance counselors to any legislative or social events your Farm Bureau sponsors which may provide an opportunity for them to become more comfortable reaching out to Farm Bureau and more knowledgeable about the local ag industry.
- Keep the dialogue open so that the PAC and school board members and staff understand what the demand is now and will be in the future from the industry and the need for students to side and can accommodate that demand with the courses offered.



High School Cont.

- Consider creating an internship for students at your farm or business during the school year and/or summer.
- Provide ag-friendly books for school libraries, especially agriculture and natural resource career books.
- Support the school's FFA chapter with your time and resources. Start a FFA Alumni and Supporters Affiliate to support the local FFA Chapter.
- Provide opportunities for students in agriculture education programs to work with local Farm Bureau members on community-based projects/programs. (the local fair, special programs)
- Invite high school seniors in the agriculture program to join the local Farm Bureau Young Farmers.
- Promote MAEF's web-based matrix of lesson plans available via National Ag in the Classroom.
- Promote MAEF's professional development courses for teachers, called "Infusing Ag in the Secondary Classroom." This course offers three PD credits to teachers and is held in partnership with Goucher College.
- Promote and support your local Agriculture teacher to attend the Maryland Agriculture Teachers Association Conference.
- Promote MAEF's "Maryland AgWorks" podcast on Maryland ag careers, available on Buzzsprout and other podcast platforms.
- Participate in Farm-to-School activities coordinated by the school system's nutrition services department or Maryland Department of Agriculture.



Are you promoting Ag Education or Ag Literacy?

At the Middle & High School levels, we tend to focus on agricultural education opportunities, but just as important are agricultural literacy opportunities.

Agriculturally literate citizens are those who understand and can communicate the source and value of agriculture as it affects our quality of life. They understand the relationship between agriculture and the environment; food, fiber and energy; animals; lifestyle; technology and the economy.

Agricultural education prepares the current and next generation of agriculturalists and those in careers that support agriculture.

Students who are not enrolled in agricultural science education programs still may have an interest in agriculture, food and food production and its relationship to the environment. By building a relationship with people in the school system, you'll be more likely to get a call when there are opportunities to promote agriculture on campus.



Environmental Literacy

Agriculture fits naturally into the state's Environmental Literacy Standards. As an industry, we need to exploit this opportunity by assisting schools in satisfying the standards annually. As of Fall 2022, MSDE is in the final stages of developing the framework supporting those standards. The five standards are:

1. Environmental Issue Investigation & Action. Environmentally literate students investigate environmental issues in order to develop and implement local actions that protect, sustain or restore the natural environment.
2. Human Dependence on Earth Systems and Natural Resources. Environmentally literate students construct and apply understanding of how Earth's systems and natural resources support human existence.
3. Environmental Impact of Human Activity. Environmentally literate students construct and apply understanding of the environmental impact of human activities on Earth's systems and resources.
4. Consequences of Environmental Change on Human Health and Well-Being. Environmentally literate students construct and apply understanding of the consequences of human-induced environmental change on individual and collective health and well-being.
5. Individual and Collective Responses to Environmental Change. Environmentally literate students construct and apply understanding of individual, collective, and societal responses to human-induced environmental change.

Ag Science Education Talking Points

Agriculture is the state's largest commercial industry, part of a resource-based economy with an economic impact of \$23.3 billion each year, supporting more than 94,500 Maryland jobs and generating nearly \$902 million in state and local taxes. (Source: BEACON, 2015)

What these sectors of agriculture need the most are graduates or certificate holders who are familiar with the field and able to understand the unique needs of the agriculture, natural resources, and food industries. With such a small number of people being "born and raised" into the farming tradition, we need increased emphasis on agricultural career exploration and agricultural education to prepare the students of today to lead and serve the agricultural industry today and tomorrow.

Farming is an economic powerhouse that fuels our rural communities and the state's economy. In 2019, agriculture and its related industries provided almost 11 percent of U.S. employment, representing some 22.2 million full- and part-time jobs, according to the USDA Economic Research Service. The industry is hiring: A recent study by Purdue University forecasts that in the United States between 2020 and 2025, employment opportunities will remain strong for new college graduates with interest and expertise in food, agriculture, renewable natural resources and the environment, with an average of approximately 59,400 openings annually.



On Maryland's Eastern Shore, the broiler industry alone accounts for more than 6,100 jobs with companies which produce and process chicken, and an additional 3,108 jobs in supplier and ancillary industries. These jobs pay an average of \$48,900 in wages and benefits. (National Chicken Council.)

Actual farmers make up less than 2 percent of the American population today. Jobs in agriculture include education; research; biotechnology; food and beverage production; environmental services; energy; crop protection; animal care; finance; marketing and communications; sales; national and international trade; management; food services and eating and drinking places; textiles, apparel, and leather products; and forestry and fishing. (USDA ERS)

Agriculture education is recognized for its value in Maryland Code:

Maryland Code - Education
Division II - Elementary and Secondary Education
Title 4 - Local School Administration
Subtitle 1 - County Boards of Education
§ 4-111.3. Agriculture science.
Universal Citation: MD Educ Code § 4-111.3 (2018)



(a) Implementation of curriculum. -- Beginning in the 2018-2019 school year, each county board is encouraged to implement an agriculture science curriculum specified in subsection (b) of this section in:

- (1) At least one public high school in the county; or
- (2) At least one career and technology education center in the county.

(b) Development of curriculum. -- The agriculture science curriculum implemented under subsection (a) of this section shall be:

- (1) Selected from existing curricula that have been developed by the Department; or
- (2) Developed by a county board and approved by the Department.

Support & Scholarships



Support and Scholarships for Students Pursuing Ag Post-High School:

- Maryland Farm Bureau offers scholarships and, through networking with others in the agricultural industry, opportunities to identify internships and employment. MFB's Ambassador Program offers scholarships and leadership development.
- MAEF maintains a list of scholarships which support students pursuing degrees or certificates in agriculture or agriculture education at www.maefonline.com
- MAEF Scholarship- Supports the supports college juniors and seniors or postgraduate students pursuing a degree in Agricultural Education or Extension
- Ronald Seibel Scholarship - Supports students pursuing a degree in agriculture.
- USDA/1890 Program - The USDA/1890 National Scholars Program is a partnership between of the United States Department of Agriculture (USDA) and 1890 Historically Black Land-Grant Universities. The program awards scholarships to students to attend one of 1890 Historically Black Land-Grant Universities. A scholarship under the USDA/1890 National Scholars Program provides full tuition; employment with the USDA during the summer and after graduation; employee benefits while employed with USDA; fees; books; use of a laptop computer, printer, and software while on scholarship; and room and board for each of the 4 academic years.
- Maryland FFA Foundation and National FFA offer scholarship programs for student members.
- Earn While You Learn – The American Landscape Institute is a unique training and development horticulture scholarship program for individuals interested in entering the Horticulture Industry. The program combines hands-on field experience, mentoring from industry leaders, and scholarships for a quality education from the Sustainable Horticulture Program at the Community College of Baltimore County (CCBC). The combination of practical experience and academic studies, over two years, prepares the participants for promotions on the job and career advancement.
- Articulated credits – Some students may earn college credits while in high school if they successfully complete certain CASE courses prior to enrollment in certain college majors. The Community College of Baltimore County (CCBC), Delaware Valley, Rutgers University, the Institute of Applied Agriculture (College Park) and St. Mary's College of Maryland all have signed articulation agreements. **Keep in mind: Agriculture courses are for both career- and college-bound students.**



Important Audiences:

Coordinate a plan for your county Farm Bureau members to reach out to these audiences on at least an annual basis and maintain an ongoing relationship with them by inviting them to Farm Bureau activities.

- Guidance counselors
- Classroom Teachers
- School Principals
- Board of Education
- Content Coordinators
- CTE Program Specialists
- Nutrition/Farm to School Coordinators



Thank you for supporting agricultural literacy and agricultural education through your personal and collective efforts in our school systems! The Maryland Agricultural Education Foundation appreciates your efforts and is here to support your work.

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SPECIAL NOTE ON MOBILE LABS:

MAEF's Mobile Labs offer an enriching agricultural experience for elementary students. When the lab pulls up to a school, students get excited about what's inside. The lab spends a week at each school, during which time each class in the school visits the lab one by one. Inside, students pair up at their own lab stations to conduct



scientific experiments related to agriculture taught by MAEF instructors. Pre- and post-lab lessons and take-homes extend student learning. We can always use your help letting schools know about MAEF's Mobile Labs and encouraging schools to book a lab. If elementary teachers or administrators are in your personal network, please talk to them about the labs!

More information can be found at www.maefonline.com or by emailing Diana Tyler at dtyler@maefonline.com.



Task	Person	Timeline