RMC
Rural Maryland Council

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Josh Hastings, Chair
Charlotte Davis, Executive Director

September 20, 2018

Ms. Sarah T. Albert
Department of Legislative Services
90 State Circle
Annapolis, MD 21401

Re: Maryland Agricultural Education and Rural Development Assistance Fund (MAERDAF) and Agriculture Education in Maryland Joint Chairman's Report to the Maryland General Assembly

Dear Ms. Albert:

In Fiscal Year 2018, the Budget Committees were concerned about the opportunities to expand agricultural education in Maryland and directed the Maryland Department of Agriculture and the Maryland State Department of Education to submit a report on the MAERDAF program, and specific ways to enhance 12-month teacher contracts, to provide for national affiliate dues, and to promote professional development of K-12 teachers in agriculture education. We are pleased to submit the following report to the Maryland General Assembly.

Pursuant to Ch. 149 2017 Laws of Maryland, on or before December 1, 2017, the State Board, in consultation with the Department of Labor, Licensing, and Regulation and the Governor's Workforce Development Board, shall establish, for each year for 2018 through 2024, inclusive, statewide goals that reach the goal identified in subsection (c) of this section 45% by January 1, 2025, for the percentages of high school graduates to students who, prior to graduation: (1) complete each a career and technical education (CTE) program; and Ch. 149 2017 Laws of Maryland – 16 – (2) earn industry – recognized occupational or skill credentials; or (3) complete a registered youth or other apprenticeship.

According to the United States Department of Agriculture, there has been a 30% increase of farmers over the age of 75 and a 20% decrease of farmers under the age of 25 (USDA; https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/Farm_Demographics/#average_age). The aging farmer population, coupled with a growing demand to fill agriculture positions, has led to a need for agriculture education curriculum in public schools.

While the demand to fill agriculture positions is high, there is a shortage of skilled workers to fill roles. The USDA cites, of an estimated 57,900 high-skilled job openings annually in the food, agriculture, renewable natural resources, and environment fields in the United States, there is only an average of 35,400 new U.S. graduates with a bachelor's degree or higher in agriculture related fields - 22,500 short of the jobs available annually (USDA Employment Opportunities; https://www.purdue.edu/usda/employment/).

This report offers three policy recommendations for consideration: 1). Amendment of the State Finance and Procurement Article, Section 2-206 MAERDAF statute to allow for local governments and public school systems to apply for agriculture education program funding; 2). Encourage agricultural education consortia to apply for the Career and Technology Education (CTE) Innovation grant program; and 3). Encourage the inclusion of agriculture education programming in the policy recommendations offered by the Commission on Innovation and Excellence in Education.

If you have any questions, or need any additional information, please contact Charlotte Davis, charlotte.davis@maryland.gov or 410.841.5772.

Sincerely,

Josh Hastings,
Board Chair
Rural Maryland Council

Charlotte Davis,
Executive Director
Rural Maryland Council

September 2018
Maryland Agricultural Education and Rural Development Assistance Fund
and Agriculture Education in Maryland
Report to the Maryland General Assembly
Joint Chairmen's Report

Photo Courtesy: Evergreen Heritage Center Foundation, Elementary Edibles Program

Executive Summary

The Maryland Agricultural Education and Rural Development Assistance Fund (MAERDAF) was established in 2000 and funded in Fiscal Year 2001 to offer financial support to rural-serving nonprofit organizations that promote statewide and regional planning, economic and community development, and agricultural and forestry education efforts. The Fund also provides targeted financial assistance to community colleges that support small and agricultural businesses through enhanced training and technical assistance offerings. The MAERDAF program is administered by the Rural Maryland Council, an independent state agency located in the Maryland Department of Agriculture.

In Fiscal Year 2018, the Budget Committees were concerned about the opportunities to expand agricultural education in Maryland and directed the Maryland Department of Agriculture and the Maryland State Department of Education to submit a report on the MAERDAF program and specific ways to enhance 12-month teacher contracts, to provide for National FFA affiliate dues, and to promote professional development of K-12 teachers in agriculture education.

Over the lifetime of the program, MAERDAF has received $4,480,810 in state funding. Specifically to agriculture education, MAERDAF has supported a total of 112 agriculture education focused programs, for a total amount of $1,753,050.79 (LEAD Maryland Foundation received two grants in FY 2009 and FY 2010 for a total award of 114 grants to 112 organizations). Of the total amount in grant funds awarded in all categories, agriculture education represents 39% of the total of MAERDAF funds awarded, and 40% of the number of grants awarded between Fiscal Year 2001 and Fiscal Year 2018.

Under the program's establishing statute, only non-profit organizations and community colleges are eligible to receive funds. Local units of government, including local school systems, cannot apply for funding. This limitation prevents the program from supporting efforts to expand to 12-month teacher contracts. Further, both the Rural Maryland Council and the Maryland State Department of Education are unable to convey a benefit to an individual which limits the program's ability to cover costs for students to become members of the National FFA (formerly Future Farmers of America). In order to accommodate these activities under the MAERDAF program, the Maryland General Assembly would need to amend the State Finance and Procurement Article, Section 2-206. The Rural Maryland Council would be willing to explore ways to amend the MAERDAF statute to assist in these areas of agriculture education.

As building capacity and meeting training needs in rural areas is a major focus of the MAERDAF program, the Council believes that on the last item of consideration, teacher professional development, there is an opportunity for a rural-serving nonprofit to successfully apply for funding. As of the date of this report, the Maryland Agricultural Education Foundation has applied for Fiscal Year 2019 funds to support a five day elementary teacher workshop open to all teachers across the state. Grant decisions are expected to be made by September 4, 2018.

As part of this report, an examination of surrounding states' agricultural education programs was conducted. Rural school districts will greatly benefit by working more closely with the agriculture

industry and college teacher preparation programs to ensure that the agriculture education needs of rural communities, local agriculture industry and school districts are met. Despite agriculture serving as a top economic driver for rural communities, there are significant challenges in making sure students are prepared to enter the workforce. Agriculture teacher preparation programs must be brought into better alignment with regional classroom vacancy demands through improved student recruitment, cohesive theory and practical training platforms and university-to-school district communications for best placement of new teachers.

As the State begins to consider significant investments in K-12 education under recommendations by the Commission on Innovation and Excellence in Education (otherwise known as the Kirwan Commission), opportunities to include enhancements to middle-school agriculture career development and career and technical education should be included. Under House Bill 1415 passed during the 2018 Legislative Session, the Maryland State Department of Education (MSDE) must administer the Career and Technology Education (CTE) Innovation Grant Program to fund partnerships between at least one local board of education, community college, and industry partner to develop and implement an innovative CTE curriculum framework and pathway that includes best practices in the United States and other countries. Efforts to ensure that agricultural education programs are included in this grant should be made in order to ensure that Maryland agriculture continues to thrive within the State.

Background and History

The Budgeting Committee adopted the following budget narrative that was included in the 2018 Joint Chairmen's Report. (http://mgaleg.maryland.gov/Pubs/BudgetFiscal/2018rs-budget-docs-jcr.pdf)

Opportunities to Expand Agricultural Education: The budget committees are concerned that there are opportunities to expand agricultural education in Maryland that have not been pursued. Therefore, the budget committee requests that the Maryland Department of Agriculture (MDA) and the Maryland State Department of Education (MSDE) submit a report on the opportunities to expand agricultural education by doing the following:

- Encourage local school systems to provide Teacher Extended Duty Contract availability;

- Create equal opportunity for every student enrolled in an agricultural education class to participate in all three components of an agricultural education program by establishing Maryland as a FFA affiliated state and funding this affiliation; and

- Promote proper teacher development and training through annual and periodic agricultural teacher conferences, staff development, and update.

The report should be submitted to the budget committees by September 1, 2018.

In May 2015, the Task Force to Explore Incorporating the Subject of Agriculture in Existing Curricular Areas issued a report to the Maryland General Assembly. The Task Force, established under the 2012 Maryland General Assembly, Chapter 672, examined existing agricultural projects and made recommendations including establishing a free online interactive venue for students, providing a curriculum and professional learning resource system on the integrated teaching of agriculture, expanding the pipeline to agricultural careers and education through elementary and middle school programs and expanding the state's rigorous high school agricultural programs of study which lead to postsecondary credit and industry certification. The report also noted that employment opportunities for those with expertise in food, agriculture, renewable natural resources and environmental industries are expected to outpace those with the qualifications to fill these positions. "Careers in agriculture are essential in addressing food security, renewable energy resources, sustainable food systems, ensuring environmental quality and clean water resources, in order to feed over nine billion people by 2050."

According to the report, *The Impact of Resource Based Industries on the Maryland Economy, Business Economic and Community Outreach Network at Salisbury University, January 2018* the total economic impact of resource based industries in Maryland in 2015 equaled $23.3 billion, supported over 94,500 jobs, and generated nearly $902 million in state and local tax revenue. The agriculture sector contributed $3.3 billion to the state economy (14.3% of

Resource-Based Industries total), supported 23,878 jobs (25.26% of RBI total), and added nearly $110 million in combined state and local tax revenue (12.18% of RBI total).

Agriculture remains a dominant sector of the Maryland economy. Moreover, Marylanders are looking to support and purchase local sustainably grown or raised food products. However, in order to ensure that Maryland can continue to promote local agriculture, strong agriculture education programs will be necessary.

Working definitions

***Agriculture Education*:** Agriculture education is a broad field of teaching and learning that can span grade levels from pre-K through adult, including formal and non-formal venues.

For the purposes of this report, the National Association of Agricultural Educators (NAAE) defines agricultural education more formally, at the secondary level (grades 6 - 12) as a practice that "... teaches students about agriculture, food and natural resources. Through these subjects, agricultural educators teach students a wide variety of skills, including science, math, communication, leadership, management and technology skills. Agricultural education is delivered through three interconnected components:

- Classroom or laboratory instruction.
- Experiential learning — Learning experiences that usually take place outside of the classroom, supervised by the agriculture instructor.
- Leadership education — delivered through student organizations such as the National FFA Organization, the National Young Farmer Education Association, National Postsecondary Agricultural Student Organization and others."

Extended Teacher Duty (Agriculture): Academic-year teacher contracts usually span nine months, September through June. Year-round demands made upon agriculture teachers include but are not limited to: weekend and summer student FFA events, maintaining and managing on-campus facilities (livestock/garden/apiary greenhouse/ etc.) and classroom/mechanical lab needs, attending professional development conferences and workshops, facilitating summer agriculture and natural resources camps, meeting with advisory committees/community partners, etc.

Extended Teacher Duty Contract (Agriculture): Extended teaching contracts are vital to an agriculture education program that extends a ten-month teacher's contract to a full 12 month term through the addition of teaching days from 180 to 240. Contracts are negotiated between agriculture teachers and their school administrators or districts and the actual hours/days given to extend a contract may vary from district to district.

Three Circle Model of Agriculture Education: The three circle model describes (formal) agriculture education as standing equally on three components: classroom/lab instruction; experiential learning as a supervised agricultural experience (SAE); and leadership education.

An FFA Affiliated State: At the current time (2018) Maryland is not an FFA affiliated state. State affiliation is described as an agreement between the state and National FFA that ensures any student taking an agriculture class in high school automatically becomes an FFA member with costs to do so covered by chapters.

Maryland Agricultural Education and Rural Development Assistance Fund (MAERDAF)

MAERDAF was established in 2000, and offers important financial support to rural-serving nonprofit organizations that promote statewide and regional planning, economic and community development, and agricultural and forestry education efforts. The Fund also provides targeted financial assistance to community colleges that support small and agricultural businesses through enhanced training and technical assistance offerings. MAERDAF is funded through the State of Maryland's Annual Operating Budget.

Many rural-serving organizations have been able to establish or continue programs and projects that have had a significant and positive impact on Rural Maryland because of the MAERDAF program. Moreover, the Fund has helped many nonprofits develop institutional capacity, improve grant-writing skills, and enhance the internal development of volunteer boards and staff. Nonprofit organizations and community colleges in our State's rural regions often lack the access to public and private sector philanthropic opportunities they need to obtain important programmatic and special project funding. Local governments, especially those in economically distressed rural regions do not have the financial means to fully address these important developmental needs; consequently, a serious resource deficit exists where the need has often been the greatest.

The Rural Maryland Council administers MAERDAF in partnership with the Maryland Departments of Agriculture, Health, Commerce, Housing and Community Development, and Natural Resources.

Between Fiscal Year 2001 and Fiscal Year 2018, MAERDAF awarded a total of $4,480,810.00 for 283 grants in the categories of regional planning, economic and community development, health care, and agriculture and forestry education. During FY 2018, a total of 119 applications were submitted with a total of $1,642,296.00 requested. A total of 34 grants equaling $680,515.00 were distributed to 32 organizations. In FY 2018, the average grant amount awarded was $20,015.15.

Figure 1. MAERDAF Grant Awards Distribution by Categories

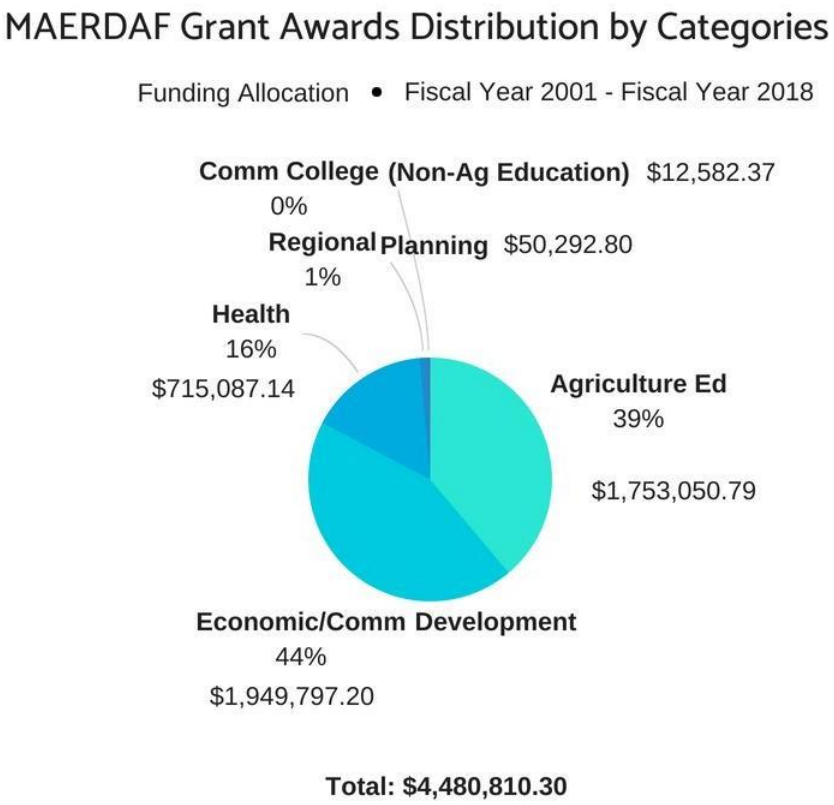
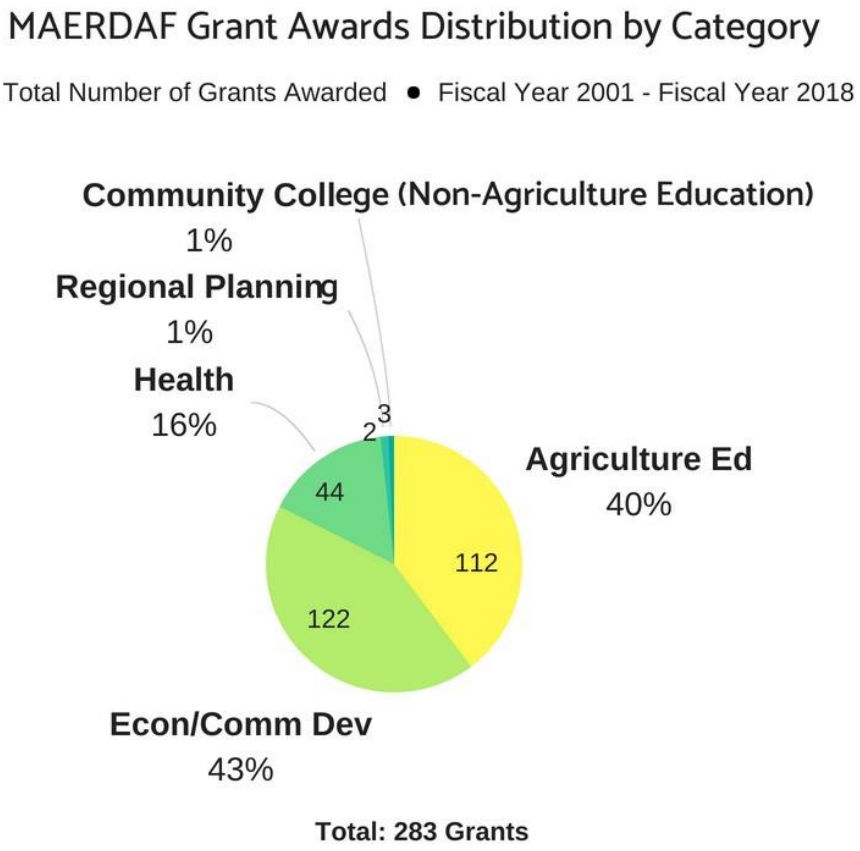
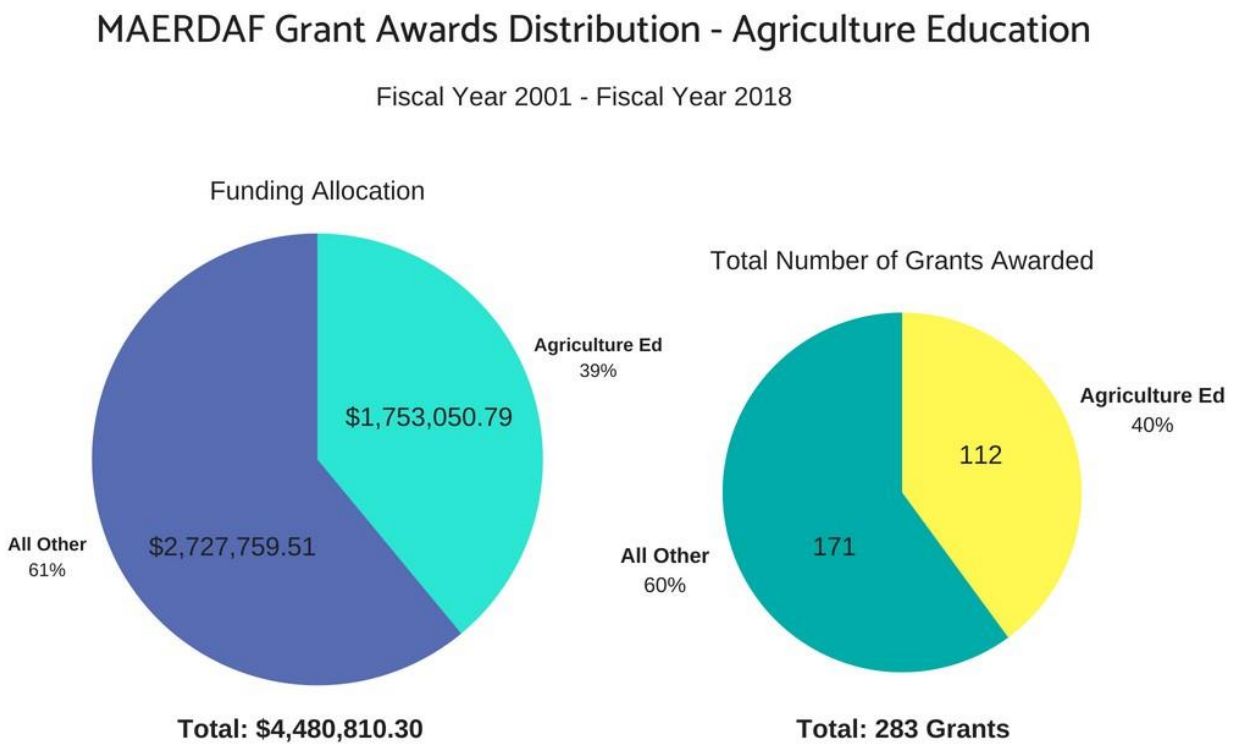


Figure 2. Grant Awards Distribution by Category - Number of Grants Awarded



Over the life of the program, MAERDAF has specifically supported a total of 112 agriculture education focused programs, for a total amount of $1,753,050.79 (LEAD Maryland Foundation received two grants in FY 2009 and FY 2010 for a total award of 114 to 112 organizations). Of the total amount in grant funds awarded in all categories, agriculture education represents 39% of the total of MAERDAF funds awarded, and 40% of the number of grants awarded between Fiscal Year 2001 and Fiscal Year 2018. The agriculture education programs focused in three main areas: off-premises programs for elementary school-aged children, community college agricultural programs, and post-college leadership development programs. MAERDAF also supports miscellaneous agricultural projects that emphasize economic and community development.

Figure 3. MAERDAF Grant Awards Distribution - Agriculture Education



Off Premises Agricultural Programs for Elementary Children

Between Fiscal Year 2001 and Fiscal Year 2018, MAERDAF has supported 48 agriculture education focused projects with a total amount of $652,976.76. Funds supported nonprofit organizations, including the Evergreen Heritage Foundation, Inc., Maryland Agricultural Education Foundation, Maryland Association of Soil Conservation Districts, Maryland Forestry Foundation, Southern Maryland Resource Conservation and Development Board, Inc., among many others. Funded projects have included the “Ag in the Classroom” mobile units, support for the Maryland Envirothon Competition program and construction of outdoor learning pavilions.


Photos courtesy: Evergreen Heritage Center Foundation, Elementary Edibles Program

An example of an Off Premise Agricultural education program is the *Elementary Edibles* created by the Evergreen Heritage Center Foundation (EHC) in Alleghany County. In Fiscal Year 2018, Evergreen Heritage Foundation Inc. received a grant of $9,625.00 for the pilot program that would extend their agriculture literacy program to grades 1-5, called Elementary Edibles. This component builds upon and integrates with the proven EHC pre-K and Kindergarten modules. Each participating grade grew and harvested a different vegetable, culminating in student/parent salad bar events (one per grade level) in May 2018. Kindergarten students planted radishes as part of its established EHC module. In addition, 1st grade planted green onions, 2nd grade lettuce, 3rd grade spinach, 4th grade snap peas, and 5th grade herbs. This plan followed vegetables we eat from underground to above ground: roots to shoots to leaves to seeds/pods to fruit. All vegetables and herbs were grown in window box gardens in classrooms facilitated by inexpensive, easy to use grow lights.

The pilot began with an introductory TASTING experience. During this session, each grade level learned about the vegetable it would grow and had the opportunity to taste the vegetable. Other grade level appropriate lessons were also included:

- Kindergarten children reviewed the parts of a plant and that the RADISH is the root of a plant. They then tasted radishes, described the experience, and voted on whether they didn't like it, liked it, or loved it. Students then created three dimensional radishes from construction and tissue paper and had a story-telling session with the book *Eat the Rainbow*.
- First graders learned about GREEN ONIONS, that we eat the root of the plant, and their health benefits. They then tasted green onion dip on a cracker and voted on the taste. Students then helped to make "dirt babies" (similar to Chia pets), which they would watch grow in their classroom.

- Second graders learned about LETTUCE, that we eat the leaf of the plant, and its health benefits. They then tasted lettuce using it as a taco stuffed with shredded carrots and voted on the taste. Students then created a MyPlate food group model.
- Third graders learned about SPINACH, that we eat the leaves of the plant, and its health benefits. They then tasted the spinach with ranch dressing. Students then created a rainbow drawing of fruits and vegetables of different color and matched them with a human body drawing indicating which parts of the body the vegetable could benefit.
- Fourth graders learned about SNAP PEAS, that we eat the fruit of the plant, and their health benefits. They then tasted the peas and voted on the taste. Next the students used a flower model to talk about parts of flowers and pollination and played pollinator tag using pom-poms that symbolized pollen.
- Fifth graders learned about HERBS, that we eat the stems and leaves of the plant, and their health benefits. They then tasted the fresh herbs and voted on the taste. Nest students learned about recipes and created their own dip recipes using herb ingredients. Finally, students tasted the different dips that they made.
- The second component of the pilot was the PLANTING experience. During this session, children were taught how to plant, care for, and track the growth of their grade's vegetables. This experience also included other activities related to each vegetable, such as: Kindergarten students watch a time lapse video of radish seeds growing; First graders traced all of a cheeseburger's ingredients back to soil; Second graders defined a scientific experiment to determine the impact of grow lights on the growth of their green onion garden; Third graders created 3-dimentional models of the life of the butterfly, an important pollinator; Fourth graders created a self-contained garden in a balloon; Fifth graders constructed a food chain out of paper.

Fifth graders also had an Agriculture Career learning experience as part of the pilot. University of Maryland (UMD) Extension visited the fifth grade and showed students pictures of large and small farms, discussed different farming methods, displayed mature versions of the students' vegetables, and talked with students about careers in agriculture. One added component of the pilot was a GARDEN CHECKUP, to see how each grade level was progressing with their gardens and to obtain feedback on the pilot from students and teachers. In classrooms where lack of watering over Easter vacation, created a lack of growth, EHC instructors provided more seeds for another planting experience. For the pilot's final component, the MAY SALAD BAR events, students from each grade level talked about their vegetable's contribution to the salad and showed their parents the posters they had created to capture how many students tried, liked, and/or loved the vegetable they grew. EHC instructors also delivered age-appropriate garden and nutrition books to the students' teachers for future reference.

Goal outcomes were to provide quality experiential education. As a result, 100% of the teachers surveyed rated the program as very good to excellent for content, instruction, and program overall; 80% rated it as excellent for all three metrics; 90% of the teachers surveyed strongly agreed that Elementary Edibles is a doable program that can be replicated at other

schools/school districts; the remaining 10% agreed. 439 South Penn Elementary School K-5 students (425 or 90% of the total was the target) and all 20 of their teachers participated in the pilot, which also served as agricultural literacy professional development training for the teachers. An average of 81% of the parents participated in the salad bar lunch (the target was 35%). Per the Center for Public Education, parent participation can result in students achieving higher grades and test scores. Program results saw an increase in agriculture literacy from 23% to 27% per 3rd, 4th, and 5th grade pre/post- tests (the target was 25%). **Approximately 50% of the students were willing to try new foods prior to the pilot. 100% were willing to try their vegetable/herb as a result of the pilot, a 100% increase.** The target was only a 10% or better increase.

Community College Agricultural Programs

Between Fiscal Year 2001 and 2018, MAERDAF supported 15 Community College agriculture programs with a total amount of $229,165.04. Funds have supported projects initiated by Allegany College, Carroll Community College, Cecil Community College - Equine Program, Chesapeake College, Garrett College, and Hagerstown Community College. Projects have included the development of horticulture classes including the purchase of equipment such as a hoop house and tools needed for students, safety training, and curriculum development.

Frederick CTC Student with Bee Smoker, Photo Courtesy of Frederick CTC

An example of a successful Community College program is the Frederick Career and Technology Center FFA Alumni. In Fiscal Year 2016, MAERDAF awarded $14,370.00 to Frederick Career and Technology Center FFA Alumni, Inc. for a dual enrollment agricultural entrepreneurship program. Six students from that school took advantage of the dual enrollment opportunities during the spring 2016 semester at the Frederick Career and Technology Center. As part of this initiative, four students created a business plan for the state SkillsUSA Entrepreneurship competition. Their business was Bee Friendly Landscaping, LLC. Their business ideas stemmed from their work with the school apiary and mentors. The major goal of their business was to develop custom landscape plans for consumers that contained native, pollinator friendly plant material. This team of students placed 1st in the state and 7th in the nation. Students had to present their business plan to a panel of judges and compete in a business challenge where they were given a problem that most entrepreneurs face in the first year and had to develop a plan to overcome that problem. Another student created a business plan for a marketing firm that she plans to start after completing college. Another student

completed a proficiency application in swine production and was chosen the state winner in that category, and was also chosen as a state star. She competed at The Big E (Eastern Regional FFA Program) later in the fall 2016 for the regional state star (consists of 19 states). Her proficiency application was submitted to National FFA for additional judging.

The program successfully promoted community based agricultural enterprises. Students in the dual enrollment courses cultivated honeybee hives; 200 pounds of honey were estimated to have been extracted. Students from Manchester Valley High School (23 students) and Boonsboro High School (17 students) also participated in an all-day field trip to visit working bee hives in spring 2017. As part of their trip, students were able to observe the honeybee hives after a presentation that was geared towards questions they submitted. Mentors from the Frederick County Beekeepers were on hand to assist with the presentations. The program hopes to extract and bottle the honey in the very near future and sell it at a local farmer's market and the local county fair. In addition to the honey, the students grew onions, tomatoes and pumpkins in the school gardens. The intent behind producing these crops (tomatoes/onions) was to produce large quantities that could be sold to the culinary program. The pumpkins were to be sold in conjunction with the annual fall mum sale.

2015 LEAD Maryland Fellows visiting Frederick County Farm, Photo Courtesy of LEAD Maryland

In addition to the practical experience, the program provided college-level (dual enrollment/credit) business courses to CTE students. In spring 2017, three students earned dual enrollment credit for coursework in BU109/BU140 – Entrepreneurship and Small Business. For the fall of 2017, 11 students signed-up for BU109/BU140. The program successfully provided a foundational model to develop similar CTE pathways in business, marketing, and entrepreneurship. Due to the success of the grant and pilot, Frederick County Public Schools has brought back a course "Introduction to Agribusiness" that partnered with the dual enrollment course BU140 at Frederick Community College.

Post-College Leadership Development

Between Fiscal Year 2001 and Fiscal Year 2018, MAERDAF supported 18 grants for the LEAD Maryland Foundation, Inc. in the total amount of $346,840.00. MAERDAF funding has supported LEAD Maryland Foundation's two-year statewide leadership development program designed to prepare emerging leaders to seek solutions and communicate in ways that will enhance the future of Maryland's agricultural and rural communities. MAERDAF has been used

to provide for costs for educational seminars in problem solving and leadership skills to those emerging leaders in agriculture, natural resources and rural communities accepted into the LEAD Maryland Fellowship program.

In Fiscal Year 2018, the LEAD Maryland Foundation met the goals described in the proposal. Each seminar was held on the date and at the location as planned, within the budgets as planned, and the curriculum objectives were delivered as planned; Class X Fellows had a high level of engagement and participation in the seminars. Seminars are mandatory for Fellows to attend.

Surveys conducted at the end of seminars showed increases in knowledge and shifts in awareness of public issues. Fellows met many new people who are subject matter experts and/or leaders in agriculture, natural resources, and rural communities. The MAERDAF grant allowed LEAD to provide higher quality seminars to Class X. The grant allowed LEAD to invest into the emerging leaders, and ultimately into the industries, communities, agencies, and organizations the emerging leaders are serving.

The LEAD Fellows—and the communities, industries, organizations, and governments where Fellows serve, lead, influence, and work—all benefit from the grant. LEAD serves Maryland's rural sector, but everyone benefits from having strong, healthy, rural communities, agriculture, and natural resources.

Fellows have benefited through program participation in the seminars:

- Public issues education;
- Personal growth and development opportunities
- Communications and skills training
- Support, directions, and resources to help emerging leaders (fellows) succeed in serving agriculture, natural resources, and rural communities; and
- Opportunities to learn more about Maryland, to meet and network with leaders throughout the state.

Miscellaneous - Economic and Community Development

Between Fiscal Year 2001 and Fiscal Year 2018, a total of 33 grants have been awarded to support economic and community development projects, with a specific focus on agriculture, in the amount of $524,068.99. These grants were awarded to the Chesapeake Fields Institute, Future Harvest CASA, Inc., MidShore Regional Council, Southern Maryland Agricultural Commission, True Oyster Restoration Initiative, Inc., Upper Shore Regional Council, among many others. Projects included the development of tourism trails to capture markets from the tourism industry, development of marketing and promotional materials, including brochures and websites, purchase of equipment and supplies for on-farm use to help off-set costs for farmers, marketing studies, etc.

Appendix B – all MAERDAF agricultural education grant awards

Current Challenges

In current statute, eligible entities for the MAERDAF program include rural serving nonprofit organizations and community colleges. This requirement has created an obstacle for funding 12 month extended duty teaching contracts and the affiliate dues to support individuals who promote agriculture education. Currently, local public school systems are not considered eligible to apply for MAERDAF funds. Individuals and local governments are also not eligible applicants under current statute. A change in the MAERDAF statute would need to be considered to allow individuals, the public school system, and local government to become eligible applicants and to take advantage of the opportunities MAERDAF offers.

In addition, MAERDAF is further constrained by funding limitations. For Fiscal Year 2019, MAERDAF received $680,000.00 in General Fund appropriations; for Phase One of the application process, MAERDAF received a total of 109 applications requesting a total amount of $3,256,990.93.

MSDE Funding and Programs

In 2015, the Maryland State Department of Education (MSDE) submitted a *Report of the Task Force to Explore Incorporating the Subject of Agriculture in Existing Curricular Areas* (MSAR #10650) to the Maryland General Assembly. As part of its charge, the Task Force examined existing agricultural programs and made recommendations for how agriculture could be better incorporated into existing curricular areas. As outlined in the report, agriculture education is delivered in the public school system between two divisions: *Division of Curriculum, Instructional Improvement and Professional Learning* and the *Division of Career and College Readiness (DCCR)*. Agriculture education is still delivered by DCCR and the Division of Curriculum, Instructional Improvement and Professional Learning.

Division of Curriculum, Instructional Improvement and Professional Learning: Agriculture education exists in three components including science, environmental science, and social studies. The Next Generation Science Standards address agriculture through Earth and Human Activity standards beginning in grade 5 and continuing through high school. Courses also include agriculture in the context of human impact, and standards are addressed through geography and economics throughout the curriculum at all grade levels.

The *Division of Curriculum, Instructional Improvement and Professional Learning* does not receive any state funding for Next Generation Science Standards implementation. There is state funding for the state science assessment, and the Division is currently collaborating with the Office of Leadership Development and School Improvement on two grant-funded initiatives.

It is a priority of MSDE to provide customized and targeted support to school leaders in the implementation of fair and valid evaluations of teachers and principals. The Office of Leadership Development and School Improvement was established to provide leadership, support, and technical assistance to local school systems to improve low-performing schools and foster the

growth of effective leaders. Through this Office, school leaders will receive resources and participate in professional learning experiences that support effective leadership.

The Office of Leadership Development and School Improvement is developing resources to support school systems as they transition to the new Professional Standards for Educational Leaders (PSEL).

Overview of Maryland What Matters Now (Maryland WMN):
Maryland WMN Aim: *By May 2021 (the 2021 administration of the MISA), the teachers at the targeted schools will receive the professional learning and resources to equip students to meet or exceed state average results on the science assessment.*

Desired Outcomes for Maryland WMN:

- To introduce the teachers in the Maryland coalition to the "What Matters Now" initiative;
- To develop a shared understanding about how participation in WMN can help secondary science teachers in the network learn from one another about Next Generation implementation;
- To share the network's identified "Problem of Practice" and preview proposed work in the upcoming school year.

Division of Career and College Readiness: Three programs of study are offered, including the Curriculum for Agriculture Science Education (CASE), Certified Professional Horticulturist (CPH), and Environmental Studies/Natural Resources. CASE is a national program of study that incorporates the National Academic Standards and Agriculture Food and Natural Resources (AFNR) Content Standards. Students learn about all aspects of agricultural sciences, and earn college credit upon successful program completion. Courses offered as part of the program include: Introduction to Agriculture; Food and Natural Resources; Principles of Agricultural Sciences - Plant; Principles of Agricultural Sciences - Animal; Animal and Plant Biology; Food Science and Safety; and, Agricultural Business, Research, and Development. CASE has been incentivized with funding from the Perkins Reserve Fund grant for the past six years, and eighteen of twenty-four local school systems now offer CASE to their students.

The CPH Program follows the certification standards established by the Maryland "Green Industry", and students have the opportunity to earn student-level CPH certification by passing an industry exam. Students complete courses to include: Introduction to Environmental/Plant/Animal Science; Foundations of Horticulture; Plant Production; and Landscape Design and Management.

The Environmental Studies/Natural Resources program covers current technologies and resources within these fields of study, including incorporating green technologies, impacts of environment on natural resources, and research and ethics involved in decision-making. Students engage in real-world problem solving through technical research and writing, and have the opportunity to earn college-level credit through articulation agreements with Maryland colleges.

In the *Division of Career and College Readiness*, federal funding is provided to local school systems with State approved career and technology education (CTE) programs of studies. In order for a program to receive federal funding, it must meet the criteria described in the *Policies and Procedures for the Development and Continuous Improvement of Career and Technology Education (CTE) Programs of Study*. Once approved, the program is then placed on a List "A" and eligible for federal funding. School systems apply to add their local programs to the approved list, and when added, they can receive federal funding. The proposals for local programs are reviewed by a panel of workforce and curriculum experts and programs lacking sufficient rigor are not approved to receive federal funding. CASE, CPH and Environmental Studies/Natural Resources are eligible CTE programs, as are several locally developed programs. Funding is provided to school systems for all eligible CTE programs, in amounts determined through a formula dictated by the U.S. Department of Education. The use of federal funds to upgrade eligible CTE programs of study is based upon data showing which programs are in most need of improvement during a particular fiscal year. Under the director of the local School Superintendents, CTE Directors use data to decide the amount of funding to dedicate to CTE programs in each fiscal year. Many fund a specific priority program for a number of years, and then do not fund it for a few years, allowing the funding to support upgrades for other CTE programs of study that did not receive funding in prior years.

The *Division of Career and College Readiness* does not receive state funding for CTE; however, during the 2018 Legislative Session, HB1415 (CH361) - Education - Commission on Innovation and Excellence in Education was passed to develop high-quality, innovative CTE programs. The law provided $2 million for local boards of education and community colleges to form partnerships with industry partners to develop and implement an innovative CTE curriculum framework and pathway between secondary and postsecondary education using promising practices found in the best CTE programs around the world.

Current General Education Funding

A presentation made on January 23, 2018 to the House Ways and Means Committee Education Subcommittee provided an overview of current education funding in Maryland. As explained in the presentation, there are three categories of State aid for public school education: general education aid, targeted aid, and other non-instructional aide. The foundation program is the main program in general education aid and accounts for almost half of State education aid. The foundation program ensures a base level of funding per pupil. At the statewide level, the foundation formula is designed to have the State pay roughly 50% of program costs; however, the State's share for the less wealthy jurisdictions is higher than 50% and the State's share for more wealthy jurisdictions is lower than 50% (wealth equalization). No jurisdiction may receive less than 15% of the base per pupil amount from the State. Other general education aid programs include the Geographic Cost of Education Index (GCEI), and the Guaranteed Tax Base (GTB). The GCEI is a Maryland based index that adjusts the amount of State aid a local school system receives based on regional differences in the cost of educational resources. The GTB program provides additional funds to jurisdictions with less than 80% of the statewide

wealth per pupil that provide local education funding above the minimum local share required by the foundation program.

Under targeted education aid, targeted formulas recognize the additional costs associated with educating certain student populations: special education, compensatory education, and limited English proficiency. Funding amounts and distributions are based on local wealth and enrollments of the three targeted student populations; however, no jurisdiction may receive less than 40% of the full per pupil amount from the State. Non-instructional state aid includes student transportation, early education, food service, adult education, and a variety of innovative programs.

Figure 4. State General Education Funding under the Foundation Program in Fiscal 2019

State Education Funding under the Foundation Program in Fiscal 2019

County	Foundation Formula	Supplemental Grant	Geographic Cost Index	Net Taxable Income Grant	Declining Enrollment Grant	Hold Harmless Grants	Tax Increment Financing Grant	Total Amount
Allegany	$40,474,744	$10,348	$0	$2,067,376	$439,128	$0	$0	$42,991,596
Anne Arundel	218,016,201	0	10,218,141	464,584	0	0	0	228,698,926
Baltimore City	353,459,508	18,310,933	22,211,131	0	15,963,773	11,091,661	541,685	421,578,691
Baltimore	405,335,641	0	6,180,038	0	0	0	0	411,515,679
Calvert	56,348,769	0	2,289,940	1,468,975	362,994	540,610	0	61,011,288
Caroline	28,130,173	966,820	0	912,574	0	0	0	30,009,567
Carroll	90,570,763	0	2,466,296	2,370,293	263,025	99,799	0	95,770,176
Cecil	63,348,523	49,060	0	2,930,021	1,155,410	3,398,555	0	70,881,569
Charles	111,700,280	0	3,685,811	5,614,198	0	0	0	121,000,289
Dorchester	20,901,023	1,321,515	0	876,231	0	0	0	23,098,769
Frederick	162,097,117	0	6,909,909	2,959,906	0	0	0	171,966,932
Garrett	9,924,653	1,201,160	0	553,745	41,124	47,626	0	11,768,308
Harford	138,028,626	0	0	3,612,789	0	0	0	141,641,415
Howard	173,144,210	0	5,868,021	443,286	0	0	0	179,455,517
Kent	2,511,519	1,003,414	131,833	96,142	112,661	0	0	3,855,569
Montgomery	351,744,825	0	37,711,769	0	0	0	0	389,456,594
Prince George's	539,619,273	20,505,652	43,072,564	29,306,129	0	0	0	632,503,618
Queen Anne's	22,353,538	0	585,660	173,828	0	0	0	23,113,026
St. Mary's	68,668,436	3,251,181	242,397	1,646,777	0	0	0	73,808,791
Somerset	13,604,993	0	0	603,719	302,051	0	0	14,510,763
Talbot	4,668,729	0	0	0	0	0	0	4,668,729
Washington	101,451,063	0	0	4,047,046	0	0	0	105,498,109
Wicomico	73,406,199	0	0	2,345,169	0	0	0	75,751,368
Worcester	6,680,664	0	0	0	0	0	0	6,680,664
Total	**$3,056,189,470**	**$46,620,083**	**$141,573,510**	**$62,492,788**	**$18,640,166**	**$15,178,251**	**$541,685**	**$3,341,235,953**

Source: http://dls.maryland.gov/pubs/prod/Educ/OverviewOfEducationFundingInMaryland.pdf

Other Agricultural Education Programs

Maryland Agricultural Education Foundation

The Maryland Agricultural Education Foundation, Inc. is a 501 (c) 3 non-profit, non-governmental organization established in 1989 as recommended by a Governor's Task Force. The Foundation's mission is to promote the understanding and appreciation of the importance of agriculture in our daily lives.

Activities of the Foundation are supported through the efforts of paid staff, volunteers, grants, and generous donations from businesses, institutions and individuals. Additional significant funding is provided through the Maryland agricultural license plate, the Ag Tag, thanks to the support of the Maryland General Assembly and Governor.

Programs offered through MAEF include the “Amazing! Maryland Agriculture” Showcase, curriculum support, teacher professional development, advocacy and facilitation in elementary, middle, high school, and post-secondary education. The Showcase travels throughout Maryland to fairs, festivals and other events informing the public about the importance of Maryland agriculture in our daily lives. Filled with colorful displays, videos, and interactive exhibits, the Showcase both attracts and educates event attendees.

Elementary school programming includes four mobile science labs that travel to schools throughout the academic year, Ag in the Classroom Workshops for teachers grades K-5, an agriculture literacy program, teacher garden grants for urban schools, resources and lessons for elementary teachers and hands-on workshops. Middle school programs include farm-based education, career resources for agriculture and natural resources, Maryland Horse Discovery Center middle school curriculum, Delmarva Poultry Institute middle school curriculum, and the Aldo Leopold Education Project that provides teacher training in agricultural and conservation sciences. High School programs include support for agriculture teacher professional development, FFA, MANRRS, and Envirothon. As of 2017-2018, agriculture education programs currently exist in 48 high schools, 2 middle schools, several community colleges, the University of Maryland (UMD), College Park, and the University of Maryland Eastern Shore (UMES).

Advisory Councils -
PACS - MAEF staff serve on many high school and college Program Advisory Councils (PACS) related to agriculture and natural resources.
GICA - MAEF has a seat with the Governor’s Intergovernmental Commission on Agriculture (GICA)
PGC - MAEF is an active partner member of the Governor’s Project Green Classrooms initiative established by executive order in January, 2017
National FFA - MAEF staff serve on various national committees for national FFA
National Ag in the Classroom - MAEF staff serve on various committees and leadership roles for National Ag in the Classroom.

MAEOE - MAEF serves to advise and help organize programs sponsored by the Maryland Association of Environmental and Outdoor Education

Career Events - As part of its educational programming, MAEF monitors and participates in agricultural career events throughout the state. Agricultural technology, production, processing, and marketing are critical to Maryland's economic landscape. 2017 labor statistics for Maryland emphasize the strength of the agricultural industry as well as its challenges to foster innovation, maintain robust markets, and employ a skilled workforce.

The **Maryland 4-H Youth Development Program** provides a supportive and inclusive setting for all youth to reach their fullest potential in a diverse society. Youth learn beneficial and cognitive life skills through community focused, research-based experiential education programs.

Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS)
MANRRS' mission is to promote academic and professional advancement by empowering minorities in agriculture, natural resources, and related sciences. As described on MANRRS national website, MANRRS 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 and 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 work force in the not too distant future.

Future Farmers of America (FFA)
According to the National FFA organization website, www.ffa.org, the FFA is an intracurricular student organization for those interested in agriculture and leadership. The FFA is not just for students who want to be production farmers; FFA also welcomes members who aspire to

careers as teachers, doctors, scientists, business owners and more. For this reason, the name of the organization was updated in 1988 after a vote of national convention delegates to reflect the growing diversity and new opportunities in the industry of agriculture. Today, the National FFA Organization remains committed to the individual student, providing a path to achievement in premier leadership, personal growth and career success through agricultural education. FFA is an organization made up of state associations, and the state associations are made up of local chapters.

Neighboring States: A Comparison of Agriculture Education Programs K-12

For the purposes of this report, we conducted a survey of agriculture in education in neighboring states to compare funding structures, teacher preparation and professional development, grade spans (elementary, middle, high school), and curriculum sources. We also compared data on FFA and MANRRS (Minorities in Agriculture, Natural Resources, and Related Sciences) where available. All data is for academic year 2016-2017.

Key to Categories:

#SD = No. School Districts
#MS = No. Middle School Ag Programs
#HS = No. High School Ag Programs
Type = CHS (Comprehensive High Schools), CTC (Career & Tech Ctr), Ch (Charter), Mag (Magnet)
Loc = Location: R (Rural), T (Town), Sb (Suburban), City
# Enroll = No. of Students Enrolled in Ag Programs (Statewide)
# FFA Chap = No. of FFA Chapters
# FFA Memb = No. of FFA Members (Students only/ Statewide)
# Jr. MANR = No. of Junior (non-collegiate) MANRRS Members (Students only/ Statewide)
# T/A = No. of Ag Teachers and FFA Advisors

State	# SD	#MS	#HS	Type	Loc	# Enroll	# FFA Chap	# FFA Memb	# Jr. MANR	# T/A
MD	24	2	48	CHS - 37 CTC - 6 Ch - 2 Mag - 2	R - 25 T - 5 Sb - 14 City - 6	5200	50	2382	161	70
DE	19	13	27	CHS - 30 CTC - 2 Ch - 4 Mag - 1	R - 13 T - 8 Sb - 15 City - 3	8703	43	3688	N/A	76
PA	500	2	185	CHS - 110 CTC - 43 Ch - 1 Mag - 0	N/A	7154	185	13K	N/A	255
VA	133	81	223	N/A	R - 120 T - 38 Sb - 30 City - 9	34,758	197	8400	N/A	359
WVA	*	*	*	*	*	*	*	*	*	*

Delaware: CASE is not used in Delaware. Curriculum is designed in collaborative teams of agriculture teachers to include periodic updates. The Department of Education (DoE) CTE provides substitute teacher funding to release collaborative teams from classroom duties monthly for curriculum development projects. Ten to eleven-month extended contracts can be secured with DoE funding to school districts and while twelve month contracts are rare in Delaware (2), agriculture teachers have not had difficulty funding summer duties, Supervised Agricultural Experience (SAEs), and Professional Development (PD) to cover up to 15 days during summer months. Students enrolled in CTE receive CTE credits on their transcripts. Students taking agriculture courses as electives receive science credits on their transcripts.

A new middle school program is opening 2018-2019 in South Delaware, bringing middle school programs up to 14. Middle school programs include agriculture exploration classes (7th grade) and electives in plant or animal science (8th grade). Program expansion is largely the result of agriculture teachers lobbying local and state legislators, who, with industry and community partner support, are credited by Dr. Bart Gill, FFA/CTE DoE (Dover) as driving such a robust and growing agriculture education program in the State.

Pennsylvania: Penn State at State College, Pennsylvania, currently houses the Teach Ag! Center for Personal and Professional Development under the direction of Dr. John Ewing. The Center is responsible for undergraduate agriculture teacher prep and professional development across the Commonwealth. Dr. Ewing estimates that undergraduate cohorts range from ten to twenty students coming from around the Northeast to pursue preparation for teaching

agriculture and natural resources education. Penn State provides many of the graduates hired to fill positions in Delaware and Maryland. In addition to undergraduate teacher preparation, the Center provides graduate level and professional development opportunities in pedagogy, training new technical education teachers, Level I and Level II agriculture teacher refresher courses, horticulture PD at Longwood Gardens, new and beginning agriculture teacher training (1st - 3rd year teachers), annual CASE workshops, FFA events and trainings.

Pennsylvania Ag in the Classroom is directed by the Friends of Pennsylvania Farm Bureau Foundation and offers six mobile labs for elementary students in every region of the Commonwealth, teacher training, and a recent Urban Agriculture in the Classroom (AITC) program.

Virginia: High numbers of retirements among agriculture education teachers in Virginia is very concerning, according to LaVeta Nutter, Agriculture Education Specialist, Department of Education. As agriculture education programs expand across the Commonwealth, the department is experiencing an agriculture teacher shortage that may affect future and current programs.

Comments

Based on interviews with agriculture teacher prep programs and district/state CTE coordinators in surrounding states, several recommendations were made regarding how to improve agriculture education to benefit rural communities. In every discussion, interviewees stressed the importance of involved farmers and the farm industry in supporting the success of agricultural education programs.

In addition, rural school districts will benefit greatly by working much more closely with the farm industry and college teacher prep programs to ensure that the agricultural education needs of rural communities, local agriculture industry, and school districts are met. Despite agriculture serving as a top economic driver for rural communities, however, there are significant challenges to making sure students are prepared to enter the workforce. There was some discussion concerning curriculum.

As mentioned, Delaware creates its own agriculture curriculum in collaborative teams of teachers that include the farming industry (including culinary) and farm community input. Teams also coordinate with university agriculture programs to make sure that curriculum serves as a solid foundation for college programs. The support of the agriculture industry is integral.

Across the region agricultural education programs are affected by agriculture teacher retirements, new agriculture teacher shortages, and funding challenges at district and state levels. In some cases (Delaware and Virginia) the number of agricultural programs at the middle and high school level are expanding, but concerns about filling vacant or new teaching positions to accommodate these programs were expressed. Agriculture teacher preparation programs must be brought into better alignment with regional classroom vacancy demands through

improved student recruitment, cohesive theory and practical training platforms, and university-to-school district communications for best placement of new teachers.

There appears to be a lack of programming opportunities at the middle school level, which limits the high school career education programs during recruitment. In all states surveyed, extended contract funding originates solely from local school districts.

Conclusion

According to the United States Department of Agriculture, there has been a 30% increase of farmers over the age of 75 and a 20% decrease of farmers under the age of 25 (USDA; https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/Farm_Demographics/#average_age). The aging farmer population, coupled with a growing demand to fill agriculture positions, has led to a need for agriculture education curriculum in public schools.

While the demand to fill agriculture positions is high, there is a shortage of skilled workers to fill roles. The USDA cites, of an estimated 57,900 high-skilled job openings annually in the food, agriculture, renewable natural resources, and environment fields in the United States, there is only an average of 35,400 new U.S. graduates with a bachelor's degree or higher in agriculture related fields - 22,500 short of the jobs available annually (USDA Employment Opportunities; https://www.purdue.edu/usda/employment/).

In conclusion, this report offers three policy recommendations for consideration: 1). Amendment of the State Finance and Procurement Article, Section 2-206 MAERDAF statute to allow for local governments and public school systems to apply for agriculture education program funding; 2). Encourage agricultural education consortia to apply for the Career and Technology Education (CTE) Innovation grant program; and 3). Encourage the inclusion of agriculture education programming in the policy recommendations offered by the Commission on Innovation and Excellence in Education.

Promoting agriculture education will not only meet the demand to replace existing farmers, it will continue to support the profitable agriculture industry in Maryland.

APPENDIX A – MAERDAF Statute

Article – State Finance and Procurement
§2–206.

(a) (1) In this section the following words have the meanings indicated.

(2) "Board" means the Maryland Agricultural Education and Rural Development Assistance Board.

(3) "Council" means the Rural Maryland Council established under Title 13, Subtitle 4 of the Economic Development Article.

(4) "Fund" means the Maryland Agricultural Education and Rural Development Assistance Fund.

(b) The General Assembly finds and declares that:

(1) many nonprofit organizations that serve the needs of the rural areas of the State experience fiscal difficulties in addressing the areas of economic and community development and agriculture and forestry education because of the inadequacy of funding resources for them;

(2) these organizations do not have the access to private and public sources of funding that are generally more available to nonprofit groups that serve the needs of the metropolitan areas of the State; and

(3) as a result, the rural areas of the State face a serious deficit of resources where the need, in many instances, is greatest.

(c) (1) There is a Maryland Agricultural Education and Rural Development Assistance Fund that shall be administered by the Council.

(2) The purpose of the Fund is to provide funding:

(i) to rural regional planning and economic development organizations and rural community development programs whose missions and work have statewide implications and merit State support; and

(ii) to augment the efforts of advanced technology centers and similar programs that serve agricultural and natural resources based small businesses in rural areas through community colleges.

(3) (i) The Fund is a continuing, nonlapsing fund which is not subject to § 7•302 of this article.

(ii) The Treasurer shall separately hold and the Comptroller shall account for the Fund.

(iii) The Treasurer may invest moneys in the Fund in the same manner as other State money may be invested.

(4) Expenditures from the Fund may only be made:

(i) pursuant to an appropriation approved by the General Assembly in the annual State budget; or

(ii) by the budget amendment procedure provided for in § 7•209 of this article, provided that:

1. the budget amendment and supporting information have been submitted to the budget committees for their review and comment; and

2. at least 45 days have elapsed from the time the budget amendment

and supporting information were submitted to the budget committees.

(d) The Council shall award grants on the basis of the binding recommendations of the Maryland Agricultural Education and Rural Development Assistance Board.

(e) (1) There is a Maryland Agricultural Education and Rural Development Assistance Board.

(2) The Board shall consist of:

(i) the Secretary of Agriculture or the Secretary's designee;

(ii) the Secretary of Business and Economic Development or the Secretary's designee;

(iii) the Secretary of Housing and Community Development or the Secretary's designee;

(iv) the Secretary of Health and Mental Hygiene or the Secretary's designee;

(v) the Secretary of Natural Resources or the Secretary's designee; and

(vi) the Chairman of the Council or the Chairman's designee.

(3) The agencies listed in paragraph (2)(i) through (v) of this subsection may assist the Council with administering individual grant awards.

(4) The Board shall:

(i) establish procedures for applications for grants;

(ii) review applications for grants; and

(iii) make binding recommendations to the Council regarding the recipients of grants and the amount of the grants.

(5) The Board shall give funding priority to organizations described in subsection (c)(2)(i) of this section that have:

(i) obtained an equal matching amount of funding from a source other than the State in the immediate prior fiscal year; or

(ii) sufficient evidence of a commitment of a third party funding source to provide an equal matching amount of funding in the current fiscal year.

(f) (1) A grant recipient shall submit to the Council written documentation of how the grant recipient spent or otherwise used the grant.

(2) On or before June 30 of each year, the Council shall submit to the Governor and, in accordance with § 2•1246 of the State Government Article, the General Assembly, a written report that includes:

(i) the number of grants made during the fiscal year;

(ii) the names of the recipients of the grants;

(iii) the specific purpose of each grant awarded; and

(iv) documentation of how the grant recipient spent or otherwise used the grant.

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All MAERDAF Grantees -- FY 2001 to FY 2018																	
Grantee Organization	**FY01**	**FY02**	**FY03**	**FY04**	**FY05**	**FY07**	**FY08**	**FY09**	**FY10**	**FY11**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**Total**
Adkins Arboretum, Ltd.													$6,850				**$6,850**
Allegany College					$15,000						$16,812			$25,000	$7,185		**$56,812**
Arc Northern Chesapeake Region								$5,700									**$5,700**
Allegany County Human Development Resources Commission														$8,638			**$8,638**
Allegany Health Right															$9,580	$19,900	**$29,480**
Arundel Lodge, Inc.																$29,951	**$29,951**
Asian American Center of Frederick														$6,500	$13,297		**$19,797**
Atlantic General Hospital Corporation																$26,591	**$26,591**
Bay Center for Independent Living															$6,227	$20,000	**$26,227**
Bay Community Support Services, Inc.																$13,000	**$13,000**
Calvert County Farm Bureau														$7,075			**$7,075**
Caroline County Council for the Arts																$13,000	**$13,000**
Caroline Economic Development Corporation													$11,504				**$11,504**
Carroll Community College (AATC)	$15,875	$7,220															**$23,095**
Cecil Community College					$14,950												**$14,950**
Center for Children						$13,100			$14,700								**$27,800**
Chesapeake Bay Region Technical Center of Excellence			$15,000														**$15,000**
Chesapeake College								$5,000							$8,526	$9,470	**$22,996**
Chesapeake Fields Insitute	$15,000	$50,000	$25,000	$10,000		$11,300											**$111,300**
Chesapeake Leadership Foundation, Inc.														$8,000			**$8,000**
Chesapeake Multicultural Resource Center, Inc.													$10,000	$10,000			**$20,000**
Chester Bridge Foundation, Inc.					$7,000	$8,750											**$15,750**
Chesterwye Center, Inc.															$15,807	$30,000	**$45,807**
College of Southern Maryland Foundation (Small Business &													$11,500				**$11,500**
College of Southern MD			$25,000	$10,000	$10,000			$2,913									**$47,913**
Community Development Network of Maryland, Inc.																$30,000	**$30,000**
Community Foundation of the Eastern Shore								$14,500									**$14,500**
Compass Regional Hospice															$16,286		**$16,286**
Cove Point Natural Hertitage Trust															$22,513		**$22,513**
Crossroads Community, Inc.													$4,875	$4,875	$3,683		**$13,433**
Delmarva Advisory Council	$20,000																**$20,000**
Delmarva Education Foundation						$15,000	$12,869	$22,252									**$50,121**
Delmarva Community Services, Inc.															$14,370		**$14,370**
Eastern Shore Area Health Education Center															$21,555	$15,120	**$36,675**
Eastern Shore Entrepreneurship Center						$9,800			$17,962	$10,000	$14,098		$14,923	$17,841			**$84,624**
Enchanted Haven Horse Rescue													$8,000				**$8,000**
End Hunger in Calvert County																$15,000	**$15,000**
Energetics Technology Center												$25,000					**$25,000**
Evergreen Heritage Center Foundation, Inc.										$16,200	$18,749	$21,705	$23,500		$11,304	$9,625	**$101,083**
Farming 4 Hunger															$14,370	$27,000	**$41,370**
For All Seasons, Inc.															$21,789		**$21,789**
Frederick County Career & Tech FFA Alumni/Frederick														$24,889	$14,370		**$39,259**
Friend of the Grape							$20,000									$30,000	**$50,000**
Future Harvest, Inc.	$20,000	$18,500	$20,000	$5,000			$2,330										**$65,830**
Garrett Community College (AAATC)	$20,000	$22,000	$20,000	$10,000	$9,500												**$81,500**
Garrett County Community Action Committee, Inc.															$19,160		**$19,160**
Garrett Regional Medical Center																$25,000	**$25,000**
Girl Scouts of the Chesapeake Bay						$10,000	$5,000										**$15,000**
Habitat for Humanity Choptank										$13,000			$6,150			$26,625	**$19,150**
Habitat for Humanity of Talbot County						$32,000	$21,500	$30,000	$12,000								**$95,500**
Hagerstown Community College																$29,813	**$29,813**
Harry R. Hughes Center for Agro-Ecology										$3,000					$8,143		**$11,143**
Heart of the Civil War Heritage Center															$12,794	$11,800	**$24,594**

All MAERDAF Grantees -- FY 2001 to FY 2018																	
Grantee Organization	**FY01**	**FY02**	**FY03**	**FY04**	**FY05**	**FY07**	**FY08**	**FY09**	**FY10**	**FY11**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**Total**
Historic St. Mary's City Foundation															$14,370		**$14,370**
Historic Sotterley, Inc.																$27,581	**$27,581**
LEAD Maryland	$23,500	$30,000	$29,180	$14,000	$14,000	$35,000	$32,000	$30,000	$12,000	$8,000	$25,000	$25,000					**$50,107**
LEAD Maryland Foundation, Inc.													$10,000	$10,000	$19,160	$30,000	**$69,160**
Lifestyles of Maryland Foundation															$9,368		**$9,368**
Lower Eastern Shore Heritage Council											$18,610						**$18,610**
Lower Shore Broadband Cooperative						$12,958	$20,000										**$32,958**
Lower Shore Child Care Resource Ctr						$9,362											**$9,362**
Lower Shore Land Trust													$7,054		$9,263		**$16,317**
Maintaining Active Citizens, Inc.(MAC, Inc.)							$13,105	$25,000	$26,000	$3,200	$25,000	$24,729		$8,000	$5,786		**$130,820**
Maryland Association of Soil Conservation Districts													$2,500	$2,500	$4,790	$3,400	**$13,190**
MD Agricultural Education Fund	$20,000	$28,400	$28,000	$5,000	$5,000	$32,660											**$119,060**
MD Association of Soil Conservation Districts (Environthon)	$20,000	$17,200	$6,500	$10,000	$7,900	$10,495	$9,800	$19,000	$7,000			$14,268					**$122,163**
MD Business Incubation Association															$11,496		**$11,496**
MD Capital Enterprises						$19,000	$21,625			$15,000	$12,556						**$68,181**
MD Center for Community Development (Rural Training)	$20,000	$20,000															**$40,000**
MD Dairy Shrine									$1,750								**$1,750**
MD Eastern Shore Resource Conservation & Development C	$6,000																**$6,000**
MD Farmers Market Association															$16,933		**$16,933**
MD FFA Foundation, Inc.						$6,500	$8,000										**$14,500**
MD Forests Association	$20,000	$20,000					$5,000	$5,000	$1,500	$3,500					$5,460		**$60,460**
MD Forestry Foundation															$18,298	$47,740	**$66,038**
MD Organic Food & Farming Assn	$16,625																**$16,625**
MD Rural Development Corporation	$50,000	$47,500	$47,000	$10,400	$13,208	$25,000	$22,510	$22,550		$8,200							**$246,368**
MD Rural Health Association	$40,000	$40,000	$35,000	$10,000	$4,000	$5,000		$4,173	$18,000	$8,000	$10,000						**$174,173**
MD Rural Water Association	$21,000																**$21,000**
Medbank of MD						$15,000											**$15,000**
MedStar St. Mary's Hospital															$23,950		**$23,950**
Mental Health Association of the Eastern Shore																$12,552	**$12,552**
Microenterprise Council of MD			$30,000	$10,000	$29,600	$5,000	$12,000	$12,500									**$99,100**
Mid-Shore Regional Council				$10,000		$24,000	$24,000	$24,000	$19,000	$13,215	$18,731			$3,500			**$136,446**
Mountain Laurel Medical Center							$44,000										**$44,000**
Off Street Sports Performance													$15,000				**$15,000**
Phillips Wharf Environmental Education Center, Inc.																$22,100	**$22,100**
Preservation Maryland															$19,160	$30,000	**$49,160**
Queen Anne's County Library/Allegany County Library														$9,900	$4,139		**$14,039**
Rural Maryland Foundation										$4,600							**$4,600**
Salisbury Univeristy - BEACON		$24,320															**$24,320**
Salisbury University - Small Business and Technology Development Center												$17,327					**$17,327**
SHORE UP!															$15,629		**$15,629**
Southern MD Agricultural Development Commission											$17,400	$15,650					**$33,050**
Southern MD Resource Conservation and Development Cou	$6,000	$21,000	$15,000												$22,034	$10,000	**$74,034**
Spring Dell Center, Inc.															$14,370		**$14,370**
Susquehanna Workforce Network																$18,800	**$18,800**
Tourism Council of Frederick County dba the Heart of the													$15,500				**$15,500**
Tri-County Council Foundation															$7,185	$10,269	**$17,454**
Tri-County Council for Southern MD			$30,000							$3,685				$11,900	$13,508		**$59,093**
Tri-County Council of Western MD	$7,000				$500	$10,000	$10,000	$25,000		$7,500							**$60,000**
Tri-State Community Health Center			$30,000	$17,792													**$47,792**
True Oyster Restoration Initiative, Inc.															$20,686		**$20,686**
Tuckahoe Habitat for Humanity, Inc.															$13,412		**$13,412**
UMES - Rural Development Center (Distressed Community Econ Dev)			$50,000		$12,000												**$62,000**

All MAERDAF Grantees -- FY 2001 to FY 2018																	
Grantee Organization	**FY01**	**FY02**	**FY03**	**FY04**	**FY05**	**FY07**	**FY08**	**FY09**	**FY10**	**FY11**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**Total**
Upper Shore Regional Council				$10,000	$5,000	$10,000	$5,000	$13,600	$15,000	$12,900	$19,000	$24,900					**$115,400**
Ward Museum of Wildfowl Art													$12,795		$14,370		**$27,165**
Washington County Community Action Council																$29,600	**$29,600**
Washington County Museum of Fine Arts																$30,000	**$30,000**
Western Maryland Area Health Education Center														$8,350			**$8,350**
Western Maryland Resource Conservation and Development													$4,882			$17,380	**$22,262**
Western MD Regional Library												$19,500					**$19,500**
Western MD Resource Conservation and Development Coun	$6,000														$19,160		**$25,160**
Women Supporting Women, Inc.													$4,908		$7,034	$9,200	**$21,142**
Wor-Wic Community College															$5,397		**$5,397**
Total Grants	**$347,000**	**$346,140**	**$405,680**	**$132,192**	**$147,658**	**$319,925**	**$288,739**	**$261,188**	**$144,912**	**$130,000**	**$195,956**	**$188,079**	**$169,941**	**$166,968**	**$555,916**	**$680,516**	**$4,480,810**
Average Grant Amount	**$19,278**	**$26,626**	**$27,045**	**$10,169**	**$10,547**	**$15,235**	**$16,041**	**$16,324**	**$13,174**	**$8,667**	**$17,814**	**$20,898**	**$9,997**	**$10,436**	**$13,236**	**$20,016**	**$255,502**
Number of grantees	18	13	15	13	14	21	18	16	11	15	11	9	17	16	42	34	283