The University of Maryland Extension (UME) was established in 1914 through Congress and the Maryland General Assembly. In Maryland, UME operates through the University of Maryland at College Park, and the University of Maryland Eastern Shore. UME has field offices in all twenty-three Maryland counties and Baltimore City. UME is financially supported by federal, state, and local government. Faculty and staff of UME provide research-based information, educational programs and services on a variety of subjects to strengthen the social, economic and environmental well-being of families, communities and agricultural enterprises in areas such as:

- Agriculture
- Environmental and Natural Resources
- 4-H Youth Development
- Health and Wellness
- Financial Education
- Food and Nutrition
- Horticulture and Master Gardener Program
- Water and Chesapeake Bay

County Extension offices strive to respond to local needs. One mechanism for doing so is through the Dorchester County Extension Advisory Council. The following individuals from the community served as members of the 2013 Extension Advisory Council:

- Gage Thomas, President
- Bill Thomas, Vice-President
- Mary Handley, Secretary
- Diana Willey, Treasurer
- Don Jones
- Libby Nagel
- Gloria Warner
- George Windsor
Agriculture and Natural Resources

**Agronomy and Crop Production:** University of Maryland Extension (UME) Ag programs provide Agronomy recommendations to growers for successful crop production and organizes an annual “Agronomy Meeting” in Dorchester County with an average attendance of 65 farmers. The program is offered to farmers and includes training and credits for nutrient management and pesticide recertification. In collaboration with UME Extension specialists, UME in Dorchester County has provided assistance in weed control, soil fertility management, cover crop production, disease and insect control to find answers from current research to address production issues.

**Private Pesticide Applicator Certification:** The State of Maryland requires private pesticide applicators to receive recertification training every 3 years and UME provides the re-certification training. On average, participants who attended the training in Dorchester County increased their profit by $5.95 per acre.

**Nutrient Management Voucher Certification:** The State of Maryland requires a nutrient voucher for those applying nutrients to 10 acres or more. UME trains farmers to comply with this law and increase their knowledge about fertilizer and nutrient application efficiency. On average, participants who attended the training in Dorchester County increased their profit by $7.49 per acre.

**Good Agricultural Practices Certification:** Food Safety is a topic that inspires great interest and occasionally concerns in the media and the public. Several outbreaks of foodborne illness have been traced to contaminated fruits and vegetables that were either grown domestically or imported. In 2013, UME organized food safety trainings for fresh fruit and vegetable producers. This one day workshop equipped producers with an understanding of how to meet current and future U.S. Food and Drug Administration food safety requirements and seeking Good Agricultural Practice (GAP) certification. The training has provided assistance in writing and implementing a GAP program for both wholesale growers and direct marketers.

**Potato Production – Research & Extension:** UME has developed a potato program to help Maryland potato growers and industry partners to meet the increasing demand while achieving higher standards of nutritional quality for Maryland grown potatoes. Dorchester County is the largest potato producing County in the State of Maryland. It is estimated that the farmgate value of Maryland grown potatoes is over 6 million dollars annually. The payroll and operational receipts are accounted over 2.5 million dollars. At present, 75% of Maryland potatoes are grown for chipping with a majority contracted to Fritolay® and the rest goes to UTZ® and Herr’s®. Maryland’s proximity to processing plants allow Maryland grown potatoes to be processed into chips directly following harvest from the field allowing growers to gain premium pricing in return for the fresh quality and the processors benefit in reducing their transportation costs and their carbon footprints.

UME potato program support growers and industry by providing production training and assistance, integrated pest management, rural business and economic development and risk management education. The UME potato program also involves two major research components: 1) Potato germplasm testing and evaluation program to develop varieties with stress earliness, chip quality from the field, tolerance to high temperatures during bulking and resistance to internal heat necrosis (IHN). 2) Development, testing, evaluation and field calibration of potato crop simulation model to provide production management decision in irrigation schedule, cultivar comparison, fertility management, planting time, harvest dates and forecast of final yield. By providing up to date science based information for successful potato production this program is helping create 20 fulltime positions and 60 seasonal work positions in potato production in this region.

During the growing season, UME hosts a field day called “Annual Eastern Shore Potato Workshop”. This field event showcases different potato varieties and advanced breeding clones grown in Maryland conditions. This popular event is attended by growers from the entire DelMarVa region. In 2013, Maryland potato growers produced a record 80 million pounds of potatoes using the education they received from the UME potato program.

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**On average, farmers who attended the Nutrient Management Voucher Certification training in Dorchester County increased their profit by $7.49 per acre.**
Interactive potato research: Providing a transforming experience for 4-H

Nearly 50 4-H youth and adult counselors from the Randallstown Sweet Potato Kids 4-H Club had the opportunity to visit University of Maryland’s potato research farm on the Maryland’s Eastern Shore, headed by Sudeep Mathew from Dorchester County.

Through a multi-cluster effort, Nia Imani Fields (Baltimore County 4-H), Dwayne Murphy (Baltimore County 4-H) and Sudeep Mathew (Dorchester County Ag.) hosted the field day in August. The potato research was conducted at a field tilled by BlackGold Farms. The research plot is located in Hebron, MD. This is one of the many innovate research initiatives lead by UME agriculture programs.

This research is enabling the development of new potato varieties for processing (potato chips, French fries) table stock tubers in varying colors of purple, red and yellow. This research evaluates agronomic practices for optimizing yield and quality for potato production in the Maryland and Delmarva Peninsula.

Sweet Potato Kids is an interactive center where children come to explore the field of their dreams. Programs include pre-school, afterschool and expressive art classes for children. 4-H’ers from the Sweet Potato Kids club engage in several programs including leadership, robotics, filmmaking, environmental science, gardening and community service.

Participants had the opportunity to engage in a variety of activities including harvesting potatoes, learning about the potato research process and a potato t-shirt print art project. Youth engaged in field games including none other than the well-known “hot potato game” and “potato sack races”! While it was a long trip from Randallstown to Hebron, MD, youth had a great opportunity to explore a new part of Maryland and learn a little more about how their food is grown. At the end of the day, the Sweet Potato Kids harvested several pounds of potatoes, some of which went home to be a part of their next meal! And of course it never hurts to provide opportunities for youth to get outdoors and explore the environment!

Master Gardeners

Dorchester Master Gardeners are volunteers, trained by the University of Maryland, who provide horticultural education services to individuals, groups, and communities including government agencies, neighborhood associations, non-profit organizations, historic sites, school and youth groups, senior citizens and garden clubs. Master Gardener programs and services are available to all Dorchester County residents and community groups.

In 2013, 21 Dorchester Master Gardeners contributed 832 hours of their time to the community. The Independent Sector of Maryland estimates that the value of a volunteers time is $23.05 per hour. This equates to $19,177.60 of in-kind volunteer service provided in Dorchester County.

Master Gardener training classes are conducted annually by University of Maryland Extension. Through the 40 hour training program., participants are taught many different horticultural subjects by specialists, educators, and other horticulture professionals. Master Gardeners are trained in the following topics:

- Botany
- Ecology
- Lawn care
- Diagnosing plant problems
- Composting
- Entomology
- Flower gardening

Dorchester County Master Gardeners contributed $19,177.60 of in-kind volunteer service in 2013.
Family and Consumer Sciences

The Lower Shore County Family and Consumer Science Extension Educator, Dhruti Patel, offers research-based, practical information for consumers, community groups, and business audiences. Offerings include programs, educational seminars, technical assistance and the answering of questions in the following areas: Nutrition; Physical Activity; Food Safety and Food Preservation and Food Supplement Nutrition Education (FSNE). Specific 2013 program activities that occurred in Dorchester County include:

Senior Nutrition Program: This program was offered at the Cambridge and Hurlock MAC Senior Centers. Approximately 40 seniors participated and learned about: healthy habits, goal setting, physical activity sessions (chair based exercises, that was done every day at the center for 20 minutes), healthy cooking with minimal effort, identifying healthy food items while grocery shopping and reading label activities. A small vegetable outdoor garden was established along with activities that encourage the consumption of more fruits and vegetables. The program was funded by Food Supplement Nutrition Education (FSNE). FSNE also supported the outdoor garden and secured a small grant for start up.

Worksite Wellness Program: This program worked in collaboration with University of Maryland Shore Regional Health and included Shore Medical Center at Dorchester and Easton. Approximately 40 employees participated. The focus of the sessions was on changing behavior. The program was adapted and piloted from “Small Steps to Health and Wealth” created by Rutgers Cooperative Extension. Topics covered were nutrition and personal finance concepts.

Findings:

- 100% said they will increase physical activity; 46% said they will move out of never or rarely making small changes to increase activity; and 74% said they will often or always make changes to increase activity after attending.
- 64% of attendees said they will consume more than 6 glasses of water daily after attending whereas before only 30% said they would increase consumption.
- 90% said they are now more likely to increase fruits and vegetables consumption by at least 2 to 3 daily servings.
- 100% said they will track income and spending with a 23% increase in the number who said they will now always track income and expenses.
- Attendees are 92% more likely to develop a spending plan.
- A dramatic decrease in resistance with 51% saying they will move out of rarely or sometimes setting savings priorities/goals; and a dramatic increase in habituated goal setting with 54% saying they will often or always set savings priorities/goals after attending.

Sea Grant

Established in 1977, Maryland Sea Grant has been a dedicated leader in efforts to protect and restore Maryland’s coastal resources. Both on its own and in collaboration with its many partners, Sea Grant proactively addresses the scientific, economic, and social challenges facing the Chesapeake Bay.

Jennifer Dindinger serves as the Regional Watershed Restoration Specialist, Sea Grant Extension Program, for Dorchester, Somerset, Wicomico and Worcester Counties. She is housed in the UME Dorchester County Office.

2013 efforts in Dorchester County include:

- Collaboration with the Dorchester County Master Gardeners (4 volunteers), Dorchester Citizens for Planned Growth (2 volunteers), and the League of Women Voters (1 volunteer) to modify and edit the “From My Backyard to Our Bay” homeowners guide. 1,500 copies were printed courtesy of University of Maryland Sea Grant Extension and have been distributed in the County.
- Grant writing assistance was provided to the Dorchester Historical Society and the City of Cambridge for shoreline restoration and urban greening.
- 4-H after school program workshops were provided to youth about watershed concepts.
- Participation in the COACH event in Cambridge to educate potential homeowners about lawn care practices that are good for water quality.
- Assistance provided to the Dorchester County Public Works and Planning & Zoning through one-on-one technical assistance on storm water management and septic system management.
Nutrient Management

The University of Maryland Extension’s (UME) Agricultural Nutrient Management Program (ANMP) is a component of the University of Maryland’s College of Agriculture and Natural Resources. The ANMP was established as a cooperative effort between the UME and the Maryland Department of Agriculture (MDA). The goal of the ANMP is to provide educational opportunities and nutrient management planning services to farmers in Maryland in an effort to reduce the amount of nutrients from agricultural operations that enter the Chesapeake Bay.

In 1998, the Water Quality Improvement Act (WQIA) was enacted and many changes were brought about which affected Maryland’s agricultural community. Most notable among the changes are the requirement for farmers to obtain and implement a nutrient management plan if they meet either of the following criteria for their agricultural operation:

1) 8 or more animal units (8,000 pounds of live animal weight) or 2) $2,500 gross annual income from the agricultural operation.

Each county extension office has a nutrient management advisor assigned to provide nutrient management–related services to that county’s farmers. Extension nutrient management advisors can provide:

- nutrient management plan development for farmers in the counties to which they are assigned,
- soil analysis for the Pre-Sidedress Nitrate Test (PSNT) and Fall Soil Nitrate Tests (FSNT), and
- instruction and assistance with manure spreader calibrations and yield goal checks.

In 2013, Nutrient Management Advisors updated 40 Nutrient Management plans that covered a total of 11,320 acres in Dorchester County. The plans included recommendations for participants of the cover crop programs. In addition, four new plans were written totaling 39 new acres.

UME Dorchester County developed and updated the Nutrient Management component of 10 Comprehensive Nutrient Management plans for Poultry producers under the CAFO or MAFO designation in our county. Other services provided by the Nutrient Management Advisor included Phosphorus Site Index evaluations for 93 fields.

4-H Youth Development Program

The objective of the 4-H Youth Programs in Dorchester County is to provide youth the opportunity to learn life-long skills and improve interpersonal relationships through continued participation in 4-H clubs, projects, experiential learning activities, fairs and camping experiences. This is accomplished through the development, organization and maintenance of 4-H Clubs in Dorchester County.

Dorchester County 4-H emphasizes programs about our Environment; Horsemanship (riding, safety, accessories); Photography; Animal Science (goats, rabbits, horses); Sport-Fishing; Shooting Sports (rifle, shotgun, archery); Agriculture and so much more - all by way of fun hands-on experience, workbooks, guest speakers and field trips.

Volunteers are key to the success of the 4-H program. The following volunteer data is available for 2013:

<table>
<thead>
<tr>
<th>2013 Dorchester County 4-H Volunteer Data</th>
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<tbody>
<tr>
<td>Number of UME 4-H Volunteers</td>
</tr>
<tr>
<td>Volunteer Service Hours</td>
</tr>
<tr>
<td>Value of Service hours to county 2013</td>
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</tbody>
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2013 4-H youth development program efforts include 71 Dorchester County 4-H Members, 85 youth in 4-H special interest clubs such as Beginning Shooting Sport Classes and Hunter Safety, 43 afterschool 4-H programs at four elementary schools and 164 4-H School Enrichment Program participants. The school programs are highly focused and contain many hands-on activities that lead to creative learning. Total youth 4-H involvement in 2013 was 363.
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If you need special assistance to participate in any program, please contact University of Maryland Extension, Dorchester County 410-228-8800.