

Northern Shenandoah Valley 2018 Annual Report

Virginia Cooperative Extension

Clarke County
Frederick County
Page County
Shenandoah County
Warren County



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^{*} Serve the counties of Clarke, Frederick, Page, Shenandoah, and Warren

^{**} Serve the counties of Clarke, Culpeper, Fauquier, Frederick, Madison, Orange, Page, Rappahannock, Shenandoah, and Warren

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Making an impact in **CLARKE COUNTY**



"Because of 4-H, our family has taken on raising livestock that we would not have otherwise been exposed to. Over the past nine years, our 14-year-old daughter has been taught life skills, and her self-confidence and communication skills have improved, along with her organization and time management skills."

SHELLY MORRIS, 4-H LEADER AND PARENT



Clarke County is predominantly agricultural, forested, and open space. The land west of the Shenandoah River is considered the agricultural heartland of Clarke County. A significant portion of the land is used for agriculture-related operations, and as a result, agritourism is a flourishing business sector in the area. Farms in the county include historic cattle farms, poultry operations, dairy farms, fruit orchards, and classic grain farms. The 4-H Youth Development program in Clarke has a vested interest in promoting youth livestock programs to the county's youth in order to preserve the rich agricultural industry in the county for the next generation. 4-H programming includes livestock education, workshops, and hands-on 4-H animal science projects.





"Working with Clarke County 4-H youth has been one of the highlights of my career. Being able to educate and witness their achievements firsthand through their 4-H projects has been a humbling and rewarding experience."

CLAUDIA LEFEVE, EXTENSION AGENT, 4-H YOUTH DEVELOPMENT

GET IN TOUCH: clarke.ext.vt.edu/ | 540-955-5164

CLARKE COUNTY BY THE NUMBERS

\$506,418

TOTAL FUNDING:

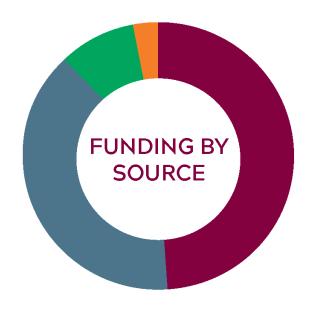
49% State

39% Federal

9% Local

0% Grants

3% Other



\$1.17

RETURN ON INVESTMENT FOR EVERY DOLLAR INVESTED BY THE STATE IN CLARKE COUNTY

\$31,565

VALUE OF EXTENSION VOLUNTEER
HOURS IN CLARKE COUNTY



OUTREACH BACKED BY RESEARCH

Virginia Agricultural Experiment Station researchers and specialists work in Blacksburg and at the state's 11 Agricultural Research and Extension Centers to create knowledge that benefits the commonwealth. They then share this knowledge with Virginia Cooperative Extension agents, who share this information with the citizens of Virginia to help individuals, businesses, and communities thrive.

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Making an impact in FREDERICK COUNTY



"I just got back from my doctor's appointment! I have very good improvement in my labs. I am no longer pre-diabetic. YAY! She was so excited about my weight loss too. This is what I really was working toward – a healthier me. Thanks for teaching me how to be healthy."

M. HYMAN, DIABETES PREVENTION PROGRAM PARTICIPANT

The Junior Master Gardener program has been offered as a 4-H youth program to children in the third to fifth grades since 2010. Roughly 20 youth complete the program each year. Extension Master Gardener Volunteers teach 12 classroom sessions on topics such as soil composition, root structure, plant propagation, fruit production, plant development, and other horticultural and environmental subjects, in conjunction with over 20 hands-on in-garden workshop days. On a vacant lot in Winchester, a 1,500-squarefoot vegetable garden is planted, nurtured, and harvested to supply over 4,000 pounds of healthy and nutritious produce to the Community Congregational Action Project, a nonprofit community organization.



Junior Master Gardener students tend to the raised beds at Greenwood Mill Elementary School.



"We are working with farmers, area residents, commercial industries, and local government to educate, raise awareness, and to help manage spotted lanternfly, an invasive insect that has potential to be a threat to agriculture, the forest industry, and general commerce, as well as a nuisance in the home landscape."

MARK SUTPHIN, EXTENSION AGENT, AGRICULTURE AND NATURAL RESOURCES, HORTICULTURE

GET IN TOUCH: frederick.ext.vt.edu/ | 540-665-5699 | F

FREDERICK COUNTY BY THE NUMBERS

\$824,093

TOTAL FUNDING:

34% State

25% Federal

31% Local

6% Grants

4% Other



\$3.62

RETURN ON INVESTMENT FOR EVERY DOLLAR INVESTED BY THE STATE IN FREDERICK COUNTY

\$478,905

VALUE OF EXTENSION VOLUNTEER HOURS IN FREDERICK COUNTY

OUTREACH BACKED BY RESEARCH

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Making an impact in **PAGE COUNTY**



"I can confidently say that 4-H camp is the reason that I am the successful young adult that you see today. As a camper, I benefited from positive teenage role models and expanded my social skills. As a counselor, I learned to be a responsible leader and became a positive role model for hundreds of children. I have learned so many important life skills and formed lifelong friendships. 4-H camp has changed my life, and I will be forever grateful for it."



KELSEY VAUGHN, 4-H CAMP COUNSELOR

Read for Health is a nutrition and literacy program that encourages children to try fresh fruits and vegetables and live a healthier lifestyle. The program has grown steadily since 2014 and now includes every first-grade class in our local school system. The Virginia Foundation for Healthy Youth reports that less than 10% of youth eat enough fruits and vegetables. Read for Health uses children's literature to change youth perceptions by challenging the children to try at least one bite of new fruits and vegetables. A teacher's follow-up survey said that her students enjoy treats for good behavior and have requested kiwi and strawberries instead of cookies. Other



4-H Cloverbud campers get some hands-on learning with drums from around the world.

teachers reported that students have started bringing fruit for snacks and are more willing to try new foods at lunch.



"Our Life in the State of Poverty program offers valuable insight into the financial issues many Page County residents face. By giving service providers a better understanding of people's daily struggles to put food on the table and pay the bills, we are strengthening individuals and families through financial education."

KAREN POFF, SENIOR EXTENSION AGENT, FAMILY AND CONSUMER SCIENCES

GET IN TOUCH: page.ext.vt.edu | 540-778-5794 | **F**

PAGE COUNTY BY THE NUMBERS

\$626,120

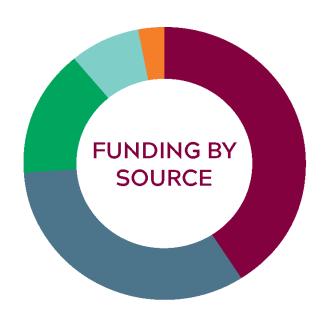
TOTAL FUNDING:

41% State

33% Federal

15% Local





\$2.00

RETURN ON INVESTMENT FOR EVERY **DOLLAR INVESTED BY THE STATE IN PAGE COUNTY**

\$150,175

VALUE OF EXTENSION VOLUNTEER HOURS IN PAGE COUNTY

OUTREACH BACKED BY RESEARCH

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Making an impact in SHENANDOAH COUNTY



"I was pleased with the 2017 stockpiling test, but I think my cattle lost a little body condition. This past summer I used fields that did not have as much fescue as was in the 2017 field trial. I was pleased with the outcome. I will likely use summer stockpiling again next summer."

JULIAN PRICE, FARMER



In the summer of 2017, Julian Price participated in an onfarm demonstration called Summer Stockpiling on his farm near Luray. With the stockpiling technique, instead of baling hay, farmers allow a field to accumulate growth until late summer when they graze the area. This allows the remaining pastures to regrow for fall and winter grazing. The technique has been extensively tested at the Shenandoah Valley Agricultural Research and Extension Center. This demonstration resulted in a savings of \$1,000 for Price because it enabled him to graze his cattle longer into the winter than he would have without summer stockpiling.





"We grow leaders through 4-H. Many of my current 4-H club leaders were my 4-H'ers when I came to Shenandoah County. Other former 4-H'ers are now in leadership roles in their communities and careers, attributing their leadership skills to what they learned in 4-H."

CAROL NANSEL, EXTENSION AGENT, 4-H YOUTH DEVELOPMENT

GET IN TOUCH: shenandoah.ext.vt.edu | 540-459-6140

SHENANDOAH COUNTY BY THE NUMBERS

\$630,929

TOTAL FUNDING:

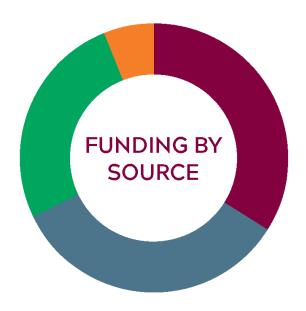
34% State

34% Federal

26% Local

0% Grants

6% Other





\$3.10

RETURN ON INVESTMENT FOR EVERY DOLLAR INVESTED BY THE STATE IN SHENANDOAH COUNTY

\$251,985

VALUE OF EXTENSION VOLUNTEER HOURS IN SHENANDOAH COUNTY

OUTREACH BACKED BY RESEARCH

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Making an impact in WARREN COUNTY



"Extension agent Corey Childs has helped over the years do successful programming in our area, such as the Beef Quality Assurance certification for local beef producers. As the local livestock market manager at Virginia Livestock LLC, this has helped us to promote and market more of our customers' cattle as being raised by a BQA-certified producer. Corey has been very helpful in offering these trainings locally to our customers."

RICK MATHEWS, OWNER/MANAGER, VIRGINIA LIVESTOCK LLC

The Reality Store teaches high school students about money management through experiential learning. After receiving a scenario with their occupation, family situation, and income, 96 Skyline High School juniors visited booths representing the spending categories in a household budget to see if they could make ends meet. Afterward, 83% of the students said they are better prepared to make smart financial decisions. Students learned about the importance of saving money, planning ahead, getting a good job, making sure to be financially ready before having kids, and taking care of the important things first. One student commented, "Money is important for life, and a job that pays more is essential if you have children. Be minimalistic with your finances in order to pay ALL your expenses."





"I provided federal and state food product and meat handling certification requirements, plus GAP and HACCP training information to Kaylee Richardson and her Farm at Quail Hollow. This helped Kaylee create a local direct market for her products, 'from bees to bacon.'"

C. COREY CHILDS, EXTENSION AGENT AND UNIT COORDINATOR, AGRICULTURE AND NATURAL RESOURCES

GET IN TOUCH: warren.ext.vt.edu | 540-635-4549 | **F**

WARREN COUNTY BY THE NUMBERS

\$585,933

TOTAL FUNDING:

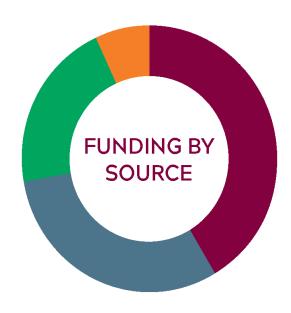
42% State

31% Federal

21% Local

0% Grants

7% Other



\$1.64

RETURN ON INVESTMENT FOR EVERY DOLLAR INVESTED BY THE STATE IN WARREN COUNTY

\$55,078

VALUE OF EXTENSION VOLUNTEER
HOURS IN WARREN COUNTY

OUTREACH BACKED BY RESEARCH

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ALSON H. SMITH JR.

Agricultural Research and Extension Center



Sherif Sherif (center, in blue) at an in-orchard meeting in Washington, Virginia, showcases how the pollen tube-growth model can be used for crop load management under organic systems.

The AREC's grape pathology lab is developing a web-based decision support system for grape pest management called GrapeIPM.org. This mobile-ready system allows grape growers and other users to access this information from anywhere. A user can set up multiple vineyards and blocks to input site-specific information, including fungicide inventory, spray plan/records, disease observations, and more.

This system helps growers make decisions on their pesticide application by providing: guidance in pre-season fungicide application-planning based on the AREC's pesticide database; reminders of in-season actions; a personal fungicide inventory for planning; recordkeeping on fungicide application and other viticulture-related information; printouts for EPA reports and for Worker Protection Standard postings; and, daily weather and disease-risk information based on user input and nearby weather stations. In order to keep our objectives simple, we are currently focusing on disease management. Over the next several years, the system will be expanded to include other pesticide uses. The development of GrapelPM.org has been supported by the Virginia Wine Board and the USDA NIFA Extension Implementation Program and was officially released to growers in 2018.

PARTNER WITH US

595 Laurel Grove Road Winchester, Virginia (540) 869-2560

https://www.arec.vaes.vt.edu/arec/alson-h-smith





"We recently detected the samurai wasp in northern Virginia. The wasp is an effective biocontrol agent for the brown marmorated stink bug, an invasive agricultural pest. We hope to reduce stink bug populations by releasing samurai wasps widely in Virginia."

CHRIS BERGH PROFESSOR OF ENTOMOLOGY



"Dr. Wolf and his team's technical contributions to the Virginia Vineyards Association meetings have been invaluable. The team also provided me with instructional materials to teach aspiring agricultural high-school students the basics of vineyard management. Some of those students are now working in local vineyards."

FRANCOISE SEILLIER-MOISEIWITSCH PROPRIETOR REVELATION VINEYARDS

ALSON H. SMITH JR. AREC AT A GLANCE



DISCIPLINES

- Entomology
- Pathology

- Pomology
- Viticulture

INNOVATIVE TECHNOLOGIES

- · Membrane-based grapevine virus sampling kit
- · Molecular tools to detect and identify major grape pathogens
- · High Resolution Melting (HRM) analysis
- · Marker Assisted Breeding (MAB) of apple
- · CRISPR/Cas9-mediated gene editing of apple
- Weather-based prediction models for managing crop load in apple

FACILITIES

- 124 acres on the farm with over 40 field plots
- · 6 modern labs
- 24,500 square foot complex
- · 100 (78) person auditorium

INDUSTRY PARTNERS

- · Virginia Agribusiness Council
- · Wine Industry
- · Apple Industry
- Virginia Department of Agriculture and Consumer Services

ABOUT THE ALSON H. SMITH JR. AREC

The Alson H. Smith Jr. Agricultural Research and Extension Center serves Virginia's commercial fruit and value-added horticultural food crops industries through research, educational programs, development of sustainable production systems and technologies, and increased public knowledge of horticultural opportunities and benefits. Our central stakeholders are current and future fruit producers, allied agricultural industries, producer associations, students, and research and Extension colleagues.

A COLLABORATIVE NETWORK

The ARECs are a network of 11 centers strategically located throughout the state that emphasize close working relationships between Virginia Agricultural Experiment Station, Virginia Cooperative Extension, and the industries the work with. The mission of the system is to engage in innovative, leading-edge research to discover new scientific knowledge and create and disseminate science-based applications that ensure the wise use of agricultural, natural, and community resources while enhancing quality of life.

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VT/0219/AREC-258



Northern Virginia 4-H Educational Center

600 4-H Center Drive Front Royal, VA 22630 (540) 635-7171

Our Mission

Since 1981, the Northern Virginia 4-H Educational Center has offered year-round, research-based programming to the youth and families of Northern Virginia. In addition to its acclaimed camps, the Center hosts a variety of corporate retreats, festivals, team building programs, and outdoor recreation.

Our beautiful setting in Harmony Hollow, just outside Front Royal, Virginia will leave you invigorated and inspired. Home to acclaimed year-round camps and educational programs, we provide facilities and services to groups seeking a relaxed, economical retreat experience. Located on 229 acres in the Blue Ridge Mountains, the Center was deeded to Virginia Tech in 1976 and is the site of the historic U.S. Cavalry Remount Center. We are just 1 hour from the suburbs of Northern Virginia and Dulles International Airport and 1.5 hours from Washington DC!

1. Mission

1. The Northern Virginia 4-H Educational and Conference Center's mission is to facilitate proven experiential learning programs for youth, families, and adults that educate, inspire and connect.

2. Vision

1. The Center's vision is to improve all aspects of the world in which we live, work and play through recreation, education, leadership, and life skill development. Our vision is put into action through the support of diverse communities, impactful stewardship and the creation of meaningful relationships with those around us, making the 4-H Center a truly sustainable organization.

3. Core Values

1. Educate, Inspire, Connect





Program Impacts



Title: Tree Fruit Production and Pest Management in Virginia

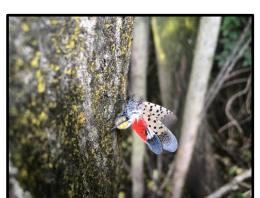
Relevance: Fruit crops are a knowledgeintensive, high value set of crops. Virginia ranks 7th in the nation in apple production with a crop valued at over \$35.9 million and 13th in peach production w5ith a crop valued at \$5.23 million (NASS 2016). Cherries, pears, and plums are also produced in Virginia. According to the 2012 Census of Agriculture, Virginia had 1,365 orchard operations with 19,114 acres. These crops are intensely managed, high value (approximately \$2,500 to \$20,000+ per acre depending on production per acre and processing versus fresh market values). Numerous critical thinning and IPM decisions

must be made by each grower throughout every production season. Growers seek the guidance of the VCE Tree Fruit program to assist them with management of these crops as new and widespread pests (insects and fungal) continue to impact and pose great potential to reduce the quality and value of tree fruit crops, disrupt long established IPM programs, and increase the occurrence of pesticide resistance. Growers and consumers are ever increasingly concerned about sustainability.

Response: Extension has a long history with the tree fruit industry in Virginia that dates back to W. Alwood and the founding of the Virginia State Horticultural Society (VSHS). Tree fruit faculty still work with the VSHS and other industry associations today. Along with individual orchard visits throughout the state by Extension faculty, we offered the following meetings and workshops in 2018 to share best practices in production and IPM: six Winter Fruit Schools; fourteen early season meetings in Winchester, Rappahannock, and Central Virginia; orchard tour in Cana, VA; an organic summer meeting and three summer twilight meetings. Pesticide applicators received recertification at the winter fruit schools and the Mid-Atlantic Fruit and Vegetable Conference in Hershey, PA. Additionally, specialists supplied time sensitive production and environmental updates via the web, blogs, and Facebook (43,028 contacts via Virginia Tech Tree Fruit Extension and Outreach Facebook page in 2018 alone).

Results: At the 2018 Winter Fruit Schools, orchardists were surveyed with 63 respondents representing 11,148 orchard acres. These operations have worked with VT and VCE for 2,097 years (34.38 each), with 16 relying on VCE for 50 years or more. 90.4% have learned about new invasive pests. Evaluations show 87.3% have learned more about pest life cycles, pest damage thresholds, pesticide efficacy, new technology, biological controls, cultural controls, or environmental conditions that impact the management of arthropod and disease pests of tree fruit. These programs resulted in 61.9% reduction in pesticide use by 5% or greater with an estimated total annual savings of \$301,500 for 16 responding growers. Fifty-three growers (84%), said this learned information was implemented and has helped their operation remain viable.





Title: 2018 Citizen Science Spotted Lanternfly Detection Project

Relevance: A potentially very serious insect pest of grapes, peaches, hops, and a variety of other crops, the spotted lanternfly (SLF), Lycorma delicatula, was detected in Frederick County, VA, on January 10, 2018. Initial infestation was determined to be about 1 square mile. By late fall of 2018, it had spread to 18 square miles. Spotted lanternfly, Lycorma delicatula, is a fulgorid plant bug that has been expanding its range in Asia, with a 2014 Pennsylvania discovery being the first outside of that continent. SLF feeds on more than 70 host plant species. Vineyards, orchards and forests are at risk. Feeding damage on grape, apple and peach occurs close to harvest and reduces yield and fruit quality. SLF is also known to be a significant nuisance in the home landscape. Spotted lanternfly is easily identified and can be detected by using traps on the primary host plant, Tree of Heaven (TOH), Ailanthus altissima, thus making it a good candidate for citizen science detection. Pennsylvania has been successful with a similar program for several years.

Response: Extension Master Gardener (MG) volunteers in the Northern Shenandoah Valley expressed interest in surveying for this new pest. We purchased supplies for trapping SLF and set up an app for the volunteers to report both positive and negative findings. We held seven meetings

starting with training sessions and 6 more meetings for identification of trap catches:

SLF Agent Training - April 26, 2018 SLF Citizen Science Detection Training - April 26, 2018 SLF Citizen Science Detection Meeting to check traps - May 30, June 8, June 14, and July 11, 2018 MG Meeting SLF wrap up - October 21, 2018

Additionally, as part of the larger SLF response, the VCE team of agents and specialist developed seven fact sheets and multiple presentations for the trainings.

<u>Results</u>: Fifty-one MGs learned about SLF life cycle and identification information. Seventeen eager and highly-trained MGs with TOH on their personal property conducted surveys that provided valuable information for farmers and businesses that ship in and out of Virginia. The survey gives farmers an early warning system for the arrival of

the SLF in their area. Seventy-eight unique observations were made by eight detectors. Of those observations 10% were positive for SLF. The remaining negative observations served to help delimit the VA infestation. With the known expansion range and the potential spread to other areas of the state, a Train-the-Trainer training is planned for March 22, 2019. This session will expand the citizen science SLF detection program across the state. Over fifty volunteers and Extension Agents representing both Master Naturalist chapters and MG units across the state have registered to participate in this state-wide training in Winchester, as an effort to increase monitoring for this new invasive insect pest. Additionally, staff from Virginia Department of Forestry, Shenandoah National Park, and VDACS will be partnering. 15



Title: Strasburg Community Garden and Educational Workshops, Serving a Food Desert Population

Relevance: Strasburg is the fastest growing community in Shenandoah County. Since 2000, the town's population has increased 63 percent and is becoming more diverse. According to the 2014 Census, population is approximately 6,559, with a surrounding county population of 43,021. The town takes up a total area of 3.2 sq. miles. Over 90% of the town is considered a food desert, according to the USDA Economic Research Service, with the entire northern tip of Shenandoah County, the area surrounding the town, included in this designation. This area has a high density of low-income families located



more than a mile from a supermarket or have limited access to a vehicle to travel to get food.

Response: In 2017, Lord Fairfax Soil and Water Conservation District (LFSWCD) pulled together community partners, including VCE, Town of Strasburg, faith-based organizations, local civic groups and non-profits (including FFA and Boy Scouts) to acquire a \$50,000 National Association of Conservation Districts Urban Ag Conservation grant with \$43,750 in community matching support. The partners formed an Urban Ag Working Group to serve as the planning and steering leadership. In addition to overseeing construction of a garden in Strasburg Town Park in 2018, VCE Agents, Master Gardeners, and LFSWCD staff conducted 15 workshops ranging from garden planning, soils, and pest management to harvesting and preserving. We advertised workshops and plots with fliers at low-income housing communities and at local businesses, through town mailings, via a Facebook page and with a garden newsletter. The garden filled with 18 individual plot holders, six plots are elevated beds for ADA accessibility. Community plot demonstration gardens (square foot garden, children's garden, and a pollinator bed) are maintained by MGs, LFSWCD, and a local church.

<u>Results</u>: The garden maintains a waiting list for plots and workshops have averaged 22 participants each. In addition to growing food for their own tables, plot holders donated in excess of 300 pounds of produce to local food pantries. Evaluation responses (15) showed a one to two-fold increase in knowledge in each workshop subject. Workshop participants reported the following actions:

- "I began companion planting for the first time and planted cover crops for the first time. I also added flowers that will attract pollinators and hummingbirds. I built a mason bee box..."
- "I started composting for the first time. I have come up with a few ways to catch rainwater... I'm
 more cognizant with regard to the soil and to be careful not to create situations where there may
 be erosion and do my best to protect the top soil."
- "I've used the information... and am saving seeds from the garden for the first time."



• "I'm more confident than I was with food preservation."

A similar 2019 series is underway and will include a Super Pantry series with education on nutrition and basic financial mgt., in collaboration with FNP and FCS faculty and staff.

Title: 2018 Consumer Horticulture and Environmental Programming in the Northern Shenandoah Valley

Relevance: For over 38 years, Extension Master Gardeners (EMGs) have assisted state and county faculty in providing current, relevant, research-based, and timely responses to Virginia's homeowners who need assistance with their home landscapes. As personnel resources diminish, we rely more heavily on our volunteers to help deliver quality programming and services to our constituents. The work of EMGs is important in multiplying the efforts of our paid faculty as they impart best practices to homeowners wishing to manage their landscapes in sustainable and environmentally friendly ways. In the Northern Shenandoah Valley (NSV), there is a population of over 229,000 individuals residing in the counties of Clarke, Frederick, Page, Shenandoah, Warren and the City of Winchester. There has been an active network of EMGs in the NSV since 1993.



Response: In 2018, 24 additional volunteers participated in the EMG training program in Winchester. Extension agents, specialists and veteran EMGs all worked to provide quality training to this new cohort of volunteers. Following training EMGs began volunteering to employ their new training in educational projects across the area. With a 5-county area we rotate training geographically each year to better accommodate all community members. To reach a diverse audience for the 2019 Front Royal training, we hand delivered fliers to minority faith-based organizations in addition to utilizing other traditional advertising methods.

In 2018, EMGs participated in two radio interviews and 14 interviews for newspaper articles. NSV EMGs conducted nearly 75 educational programs, projects, and events to extend best management practices and knowledge into the local communities.

EMGs partnered with the Lord Fairfax Soil and Water Conservation District (LFSWCD) to establish a new community Garden in Strasburg, VA. Along with some demonstration plots designed, installed, and maintained by EMGs, LFSWCD allotted \$10,000 for VCE to offer urban agriculture educational programs. We advertised workshops and plots with fliers at low-income housing communities and at local businesses, through town mailings, via a Facebook page and with a garden newsletter.

Results: 24 trainees participated in EMG trainings and joined forces with the 105 currently active EMGs, Emeritus, Interns, and Trainees in the NSV. In 2018, there were 129 volunteers working on behalf of VCE providing service and educational programming to 42,795 contacts. In the course of working with NSV citizens, EMGs reported 14,596 volunteer hours. The volunteer time equated to more than 7 full-time equivalents. This means



that collectively, VCE had an additional 7 full-time, staff disseminating best practices in the NSV. The economic value of the reported

non-paid,

volunteer time is \$390,443 (based on an hourly rate for Virginia of \$26.75 from the independent sector), a tremendous in-kind contribution and return on investment to the NSV.

Title: Extension Addresses Giant Hogweed Issues; a New Invasive Plant in Virginia in 2018

Relevance: In June of 2018, a homeowner in Clarke County, Virginia, reported a plant on their property believed to be a noxious weed to the local unit office. A team consisting of an Extension Master Gardener Volunteer, Agent, Specialist, and the Curator of the Massey Herbarium, all worked to collect necessary information to verify the plant to be giant hogweed (Heracleum mantegazzianum). Skin contact with the sap in the presence of sunlight can result in severe burning and blistering. Extension Agents were concerned that more plants may exist in the area, or elsewhere in the state, and potentially cause severe harm to anyone coming in contact with the plant.

Response: The Extension team worked with the homeowner to notify Virginia Department of Agriculture and Consumer Services (VDACS) about the presence of the confirmed identification. Giant hogweed is classified as a Tier 1 noxious weed. As such, VDACS would assist with treatment and management to ensure safety of



everyone involved and to try to prevent its spread. VDACS sent a press release to media outlets and Extension posted information on Facebook to alert local citizens of the potential danger. Additionally, a VCE publication was developed to aid in the identification of giant hogweed and to instruct readers should they suspected giant hogweed on their property.

Results: Media throughout the Commonwealth and beyond responded in earnest to this problem. Over 65 different media outlets published stories on giant hogweed. Extension Agents, Specialists, and herbarium representatives provided interviews and photographs for many media accounts, including TV, radio, and newsprint. Various VCE Facebook posts received a total of 145,478 views. 54 Extension Agents across Virginia responded to 431 requests to identify plants that citizens suspected to be giant hogweed. Fortunately, most of these were only plants that look similar and determined to be false reports. 5 citizen reports, in 4 different counties, were confirmed to be giant hogweed and reported to VDACS. In all of these situations, the specimens were determined intentionally planted and had not spread significantly from the source. Virginians can take comfort that, based on the number of negative reports, giant hogweed has not spread throughout the Commonwealth. By working with local citizens, VDACS, and other partners, VCE was successful in early detection of giant hogweed, making the eradication efforts likely to be successful and potentially saving millions of dollars to manage the plant had it become widespread. Extension has been instrumental in identifying and providing management options for new problematic pests. Each time a new pest either evolves or is accidentally introduced into Virginia, the challenges of managing it are different. Virginia Cooperative Extension brings personnel, knowledge and educational resources to address these new pests.

Title: VCE Develops a Northern Shenandoah Valley Community Survey to Inform Situational Analyses Across Planning District 7

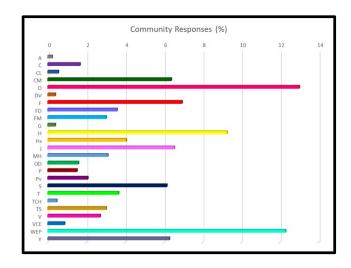
Relevance: Mike Lambur states in VCE Situation Analysis, "Virginia Cooperative Extension (VCE) takes pride in the premise that vital programming is based on the issues, problems, and needs of the people. A thorough analysis of the situation provides context for understanding these problems. This is a process of determining what situations exist at local, regional, and state levels, and for determining which problems have become issues of major public concern. Situation analysis provides the foundation and rationale for deciding which problems should receive the time, energy, and resources of VCE."

In the Northern Shenandoah Valley (NSV), VCE programming is done across the planning district (PD) by Family Consumer Science (FCS) and Agriculture and Natural Resources (ANR) agents. PD7, with a population of 235,443 (US Census Population Estimates July 1, 2018), includes the counties of Clarke, Frederick, Page, Shenandoah, and Warren, as well as the City of Winchester.

Response: FCS, ANR, and 4-H agents in the NSV collaborated and teamed up with the Extension Leadership Councils (ELCs) in each of the five counties to develop a PD-wide community survey to better understand area needs, not solely individual county needs. The survey was made available in January 2018, online or via hardcopy and over a period of seven months, distributed to local civic organizations, featured in four area newspapers, shared on social media, posted on VCE and county websites, and mailed through VCE participant contact lists. The survey allowed respondents to prioritize topics in current programming areas as well as state, through open-ended questions, the top three issues in the NSV.

Results: A total of 671 survey responses were recorded; 10.5% respondents were not familiar with VCE at all and 43.7% had not previously participated in a VCE program. Despite our efforts to reach minority community members through mass media, NAACP, and minority faith-based organizations, survey respondents identified as 96.2% white. VCE agents and ELCs in PD7 synthesized the data both as a whole and by individual county responses. We also performed key informant interviews to produce an updated 2018 Situation Analysis in each county.

			-
PD7 Data			
			Community Responses
Issues in Alphabetical Order	Code	Total	<u>(%)</u>
Aging Population	Α	3	0.24
Child Care (also Senior Care)	С	21	1.68
Climate Change/Energy (renewable energy)	CL	7	0.56
County Management (taxes, budget decisions on resource use, teacher salaries, school maintenance, emergency & fire services)	CM	80	6.39
Drugs (alcohol, human trafficking, related crime)	D	163	13.01
Domestic Violence	DV	5	0.4
Farms (and forests, preservation/conservation, production issues, maintaining rural lifestyle)	F	87	6.95
Food (availability, quality, cost)	FD	45	3.59
Financial Management	FM	38	3.03
Guns (firearms training)	G	5	0.4
Health (insurance, exercise, recreation, obesity, chronic pain,		116	0.27
elderly, isolation)	H	116	9.27
Housing (affordability, availability, rental rights & responsibilities)	Hs	51	4.07
Jobs (employment, growth, economic development, encouraging small businesses, tourism)	ر ا	82	6.55
Mental Health	MH	39	3.12
Overdevelopment/Overpopulation	OD	20	1.6
Parenting (skills, child abuse)	P	19	1.52
Poverty	Pv	26	2.08
Schools (curriculum, structure, student behavior, overcrowding,	FV	20	2.06
bullying, teacher turnover: but not funding which is under CM)	S	77	6.16
Transportation (I-81, lack of public transit, farm traffic on back roads)	Т	46	3.67
Technology (affordable computer training for all ages, phone scams, need for choice in internet/cable providers)	TCH	6	0.48
Trade Schools (need for more vocational training)	TS	38	3.03
Values (community spirit, toxic political climate)	V	34	2.72
Comments directed to Virginia Cooperative Extension Services	VCE	11	0.88
Water/Environment/ Pesticides (including air quality)	WEP	154	12.3
Youth (healthy after school activities, work habits, life skills, job skills, programs for teens, social skills, responsibility)	Y	79	6.3





Title: Northern Shenandoah Valley Agents Collaborate to Market a 5-County Virginia Household Water Quality Program

Relevance: The Northern Shenandoah Valley (NSV) has karst terrain, due to a large proportion of soluble rocks, causing cracks, fissures, and conduits that allow contaminants direct access to the groundwater. Coupled with poor landowner practices such as infrequent water testing, improper system maintenance, and inappropriate lawn and garden care, the karst terrain makes the region's water supply particularly vulnerable to contamination. Homeowners who use private water supplies are completely responsible for routine testing, system maintenance and addressing any water quality problems, should they exist. Lack of knowledge about private water supply management and water quality issues may lead to system neglect and a lack of regular water testing, which can have serious implications for water quality, longevity of the water supply system, and, ultimately, the health and safety of the families who rely on these systems. Situation analyses support the need for household

water quality education in the region.

Response: Agents have offered drinking water testing and education across the NSV every couple of years since the statewide inception of the program. Since 2012, we have collaborated on these programs, holding drinking water clinics in all five counties over several weeks, which allows for broader advertising and enables residents to attend the meetings that best suit their schedules and commuting patterns. Recognizing that many limited-resource families get their only drinking water from a private water supply, we offer financial burden scholarships through local funds generated since 2013. To generate interest in the program and testing opportunities in the NSV, we use the groundwater demonstration model at several annual fairs and festivals, teaching about groundwater quality, well water, and the need for testing of private water supplies. We use numerous and varied other marketing strategies to promote the program once we have dates for the clinics. You can see examples of the following methods by following the links at the end of the application: radio and television interviews, Facebook events (which we also promoted with sponsored Facebook ads), newspaper articles, and the local office websites.

<u>Results</u>: In 2018, NSV Area Agriculture and Natural Resources and Family and Consumer Sciences agents conducted five separate water clinics, one each in Clarke, Frederick, Page, Shenandoah, and Warren counties, sampling 189 water sources in the Northern Shenandoah Valley. You can view Piktochart of the results for each locality for the years 2011 to 2015 at the following links:

https://create.piktochart.com/output/7397558-vahwqp2011-15clarkecounty

https://create.piktochart.com/output/7412608-vahwqp2009-15frederickcounty

https://create.piktochart.com/output/8091937-vahwqp2012-15pagecounty

https://create.piktochart.com/output/8072499-vahwqp2012-15shenandoahcounty

https://create.piktochart.com/output/8093923-vahwqp2012-15warrencounty





WHAT IS THE **EXTENSION** MASTER GARDENER PROGRAM?

Virginia Cooperative Extension

Master Gardener Program Northern Shenandoah Valley

Mission: Sharing Knowledge and Empowering Communities

Extension Master Gardeners (EMG) are trained volunteer educators who work within their local communities to promote sound horticultural practices. The Extension Master Gardener program delivers the horticultural resources of Virginia's land-grant universities: Virginia Tech and Virginia State University.

Five Year Impact: 2014-2018 Northern Shenandoah Valley

118 Master Gardeners

11 Master Gardener Interns

8 Emeritus Master Gardeners



WHO DROVE 418,171 miles **AND MADE**



78,064 direct educational contacts



CONTRIBUTING A TOTAL OF

68,962 volunteer and continuing education hours VALUED AT

\$1,793,916*

TO CLARKE, PAGE, FREDERICK, SHENANDOAH, AND WARREN COUNTIES

*Based on Independent Sector Value of Volunteer Hours by State by Year

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Northern Shenandoah Valley Financial Education Program

2018 Annual Report



Virginia Cooperative Extension

Virginia Tech · Virginia State University

Special points of interest:

- Managing Your Money Series participants averaged \$1,389 in savings or debt reduction in the three months after completing the program.
- 1,621 students learned how the choices they make now can affect their financial future.
- 92% of poverty simulation participants now understand the difficult choices that people with few resources have to make.
- 89% of workshop participants improved their knowledge of retirement planning.

Inside this issue:

Series Improves 2 Money Management Skills

Students Experience 2 "Real World" Money Management

Poverty Simulation 3 Reveals Limited-Resource Needs

Workshop Steers
Participants on Road
to Retirement

Our Sponsors

Thank You to Our

Volunteers!

Your Roadmap to Retirement

Cresented by:
at Education Volunteers or an Porf, MPA, AFC®

Strengthening Personal Finances Through Education

Families who achieve financial stability are better able to meet their own housing, social welfare, and health care needs. They are also less likely to experience conflict over finances

and thus better able to provide for their children's physical and emotional needs. Families who are able to make their payments on time, meet their tax obligations, and

reduce their debt contribute to the overall well-being of the local economy. By strengthening personal finances through education, our programs support family self-sufficiency.

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Northern Shenandoah Valley Financial Education Program

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2018 Annual Report

Series Improves Money Management Skills



Managing Your Money Series at HN Funkhouser

The 69 participants in our six-lesson Managing Your Money Series learned important financial skills such as understanding credit, developing a spending and savings plan, traditional and nontraditional banking, insurance and recordkeeping, and getting out of debt.

Participants include not only those who may be struggling financially; but also those who have financial goals such as owning a home, paying for their children's college education, or saving for retirement. Each session includes a list of "Action Steps" to help participants apply what they learn to their own situation.

Surveys showed that because of the course participants had improved an

average of seven financial behaviors, including writing goals, developing spending and savings plans, establishing emergency funds, reviewing credit reports, and reevaluating insurance needs. One commented, "[the program] made me accountable for my actions and I am much more conscious of the way I spend money!"

Students Experience "Real World" Money Management

"I learned how to manage real world problems and costs...super effective!"

> ~Student Comment After Reality Store



Real Money Real World Credit Card Booth

The Real Money, Real World (middle school) and Reality Store (high school) programs showed 1,621 students how the choices they make now can affect their financial future.

Students receive a scenario with an occupation, family situation, and income. Then, students visit booths that represent spending categories in a typical budget such as: housing, food, transportation, child

care, insurance and entertainment.

Afterwards, students at both levels showed they had improved their understanding of important financial concepts.

- 89% of the high school students said they increased their awareness of making smart financial decisions.
- 72% of the middle school students said

they are likely to get more training or education after high school because of the experience.

One middle school student noted, "If you don't take care of your money, you will be broke!" Another comment from a high school student stated, "I learned it's important to budget and always have a back-up plan. I feel better prepared after the reality store!"

Poverty Simulation Reveals Limited-Resource Needs

Throughout a Community Action Poverty Simulation©, participants role-play the lives of lowincome families, from single parents trying to care for their children to senior citizens trying to maintain their self sufficiency on Social Security. Each 'family' is expected to obtain food, shelter and other basic necessities at various community resource tables staffed by volunteers.

The simulation gives participants a

greater understanding of what it is like to live in poverty. They experience the stressors of low incomes, scarce resources, and limited transportation; leaving the simulation much better prepared to work effectively with the limited-resource families in our communities.

In 2019, 77 youth and adults participated in the poverty simulation. Surveys showed that participants (92%) improved their understanding of the difficult choices that people with few resources have to make when stretching a limited income. They also left with a better understanding of the emotional stresses (82%) and the positive and negative impacts of the service system (88%).

When asked to list the most education part of the program, one participant responded, "really understanding what our clients go through."



Poverty Simulation Participants

"I learned how merciless the economy can be to the people who struggle with finances."

~Comment from a Poverty Simulation Participant

Workshop Steers Participants on Road to Retirement

Thermo Fisher
Scientific hosted our
Your Roadmap to
Retirement workshop
to help 28 employees
better prepare for
their future.
Employees learned
about building a solid
foundation, setting
goals, estimating
retirement costs,
sources of retirement
income, investing

basics, and making resources last in retirement.

Most of the employees (89%) said that the workshop improved their knowledge of retirement planning. More than half of said after the program that they were going to estimate the amount

of money they would need in retirement in order to plan more effectively. Others said they planned to meet with a financial professional about retirement (41%), set or revise retirement goals (37%), and start or increase contributions to a personal retirement account (33%).



Your Roadmap to Retirement Workshop at Thermo Fisher Scientific

2018 Annual Report

Karen Lynn Poff, MPA, AFC®

Senior Extension Agent
Family and Consumer Sciences
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VCE-Warren County

220 North Commerce Avenue, Suite 500 Front Royal, VA 22630

Serving the Northern Shenandoah Valley Counties of:

Clarke — (540) 955-5164 Frederick — (540) 665-5699 Page — (540) 778-5794 Shenandoah — (540) 459-6140, Warren — (540) 635-4549.

E-mail List: tinyurl.com/nsvfepemails

facebook.com/nsvfinancialeducation linkedin.com/in/karenlynnpoff twitter.com/VCEKarenPoff Website:

warren.ext.vt.edu/programs/nsvfep.html

We would like to thank the following sponsors who have each invested at least \$650 each in support of our programs. Through their gifts we are able to help more local families achieve a brighter financial future:

> Wells Fargo Farmers & Merchants Bank MidAtlantic Farm Credit Raffa, P.C. Shenandoah Community Foundation First Bank

For more information about becoming a business sponsor, contact Karen Poff. If you personally share in our vision and would like to make a gift to ensure this work continues, use the "Give Now" link at our website or visit: http://tinyurl.com/givetonsvfinancialeducation. Gifts are made to our program through the Virginia Tech Foundation, Inc., a 501c3 organization. Every gift, big or small, has a lasting impact.

Thank You to Our Priceless Volunteers!

We could not accomplish this work without the enthusiasm and dedication of our volunteers. During 2018, 184 volunteers gave 1,977 hours of their time in support of our programs. Many of these volunteers assisted with our financial simulations, providing handson financial education to youth and adults or serving in support roles such as publicity and data entry.

Others served in educational roles, teaching classes, working with small

groups or individuals, and managing specific programs or other volunteers. These volunteers complete a 30-hour training program, as well as a thorough screening process. Those completing 50 hours of service receive the title of Master Financial Education Volunteer.

The following volunteers achieved *Master Financial Education Volunteer* status in 2017 or 2018:

Emma Bridges Barry Gaffney Moya Gaffney
Mary Ann Gentry
Keith Leggett
Katrina Meade
Kathy Rasmussen
Jim Sylvester
Dorothy Welch
Matt Wendling
Roger Young

"Volunteers are not paid -- not because they are worthless, but because they are priceless."