VIRGINIA STATE UNIVERSITY COOPERATIVE EXTENSION

2015 impact statements (18) & success story examples (3)

for potential VSU COA media department promotions

Prepared by Dr. Theresa Nartea, Extension Specialist 03.09.2016

The impact statements contained in this report were submitted into the following database system:

Homepage: https://landgrantimpacts.tamu.edu

Search: https://landgrantimpacts.tamu.edu/searchimpacts

The source of the impact statements submitted were from the following:

1) EFARs database
2) Voluntary submissions from personnel

The submitted impact statements may be used for the following purposes:

1) Success story content for media promotions
2) Media additional needs to improve public value factor
    a. May need media staff to add relevant high quality pictures
    b. May need media staff to request specialist to provide "client testimony"
3) Various state and federal reporting needs
4) VSU administrator "talk book" and "show and tell" powerpoint

Select impact statements were converted to a "template" success story that VSU COA media staff may use or transform into web and print formats for promotion purpose. (See pages 18-20)

VIRGINIA STATE UNIVERSITY COOPERATIVE EXTENSION

2015 Impact Statements Report Summary

1	Fish health testing secures market sales, saving limited resource Virginia fish farmers nearly $30,000 Primary Funding Source: State Appropriations Secondary Funding Source: 1890 Extension Synopsis: Since 2012, VSU has saved participating fish farmers up to $30,000 in diagnostic costs. By removing lab testing expense, the VSU Fish Health Diagnostic Laboratory has assisted limited resource fish farmers to access additional lucrative local and international markets that were once closed to them. Statement: In order for fish farmers to sell live fish, many states are requiring a fish health certificate showing that fish have been inspected for specific pathogens. Farmers must find a fish health laboratory capable of performing these tests. These labs can be quite costly and can result in reduced profits for farmers. Virginia State University Fish Health Diagnostic Laboratory is assisting producers in the certification process. Many of the pathogens that are bacterial and parasitic requires testing, and it is being done at no cost to the producers as an outreach service to limited resource fish farmers. VSU Fish lab started doing virology testing in 2010. This further reduces cost to the farmer as much as $1,500 to $2,500. The VSU lab provides diagnostic information to VDACS Veterinary Services for issuing a letter of certificate when required by the importing state. Social Media: The VSU Fish Health Diagnostic Laboratory has assisted Virginia fish farmers in obtaining fish health certificates in order to ship live fish to other states for stocking. The testing required for the fish health certificate may cost farmers up to $2,500. Since 2012, VSU has saved participating fish farmers up to $30,000 in diagnostic costs. By removing lab testing expense, the VSU Fish Health Diagnostic Laboratory has assisted limited resource fish farmers to access additional lucrative local and international markets that were once closed to them. Testimony: Small family fish farmers in Virginia are fortunate to have VSU fish scientists to call upon for help. Our business would not be as successful without them. They are our trusted supporters." Paige Hogge, Buster's Seafood, VA Primary Contact: David Crosby, dcrosby@vsu.edu Primary Focus Area: Agricultural Systems Tags: Alternative Agriculture, Local Foods, Food Systems, Profitability & Competitiveness, Sustainability

2	Raising pollution prevention awareness of 800 youth through on-farm educational experiences at VSU Primary Funding Source: 1890 Extension Synopsis: Youth environmental education may increase environmental protection behavior.800 youth learned pollution prevention at VSU farm. Statement: Youth may not be aware of how they contribute to environmental pollution. Providing hands-on experiential learning on the sources of environmental pollution during elementary school may create a lasting impression on the personal impact individuals have on protecting the natural environment. Conducted educational environmental workshops with hands-on activities to teach about sources of environmental pollution and ways to reduce pollution at Virginia State University Randolph Research farm in Petersburg, VA. As a result of on-farm trainings conducted at Virginia State University Randolph Research farm in Petersburg, VA, over 800 3rd, 4th and 5th graders learned about the sources of environmental pollution and increased awareness of personal ways to prevent environmental pollution. Social Media: Providing hands-on experiential learning on the sources of environmental pollution during elementary school may create a lasting impression on the impact individuals have on protecting the natural environment. As a result of on-farm trainings conducted at Virginia State University Randolph Research farm in Petersburg, VA, over 800 elementary age youth learned about environmental pollution sources and increased personal awareness of ways they could prevent environmental pollution in their lives. Primary Contact: Ngowari Jaja, njaja@vsu.edu Primary Focus Area: Environmental Stewardship Secondary Focus Area: Youth, Family, & Communities Tags: Youth Development & 4H, Waste Management, Community Engagement in Public Issues

3	New agent market mentoring increases marketing skills of 423 Virginia small farmers Primary Funding Source: 1890 Extension Resource Links: http://www.agriculture.vsu.edu/special-programs/cooperative-extension/marketing-and-agribusiness-program.php Synopsis: Extension agent mentoring in marketing supports 423 farmers in market display, website design, market plans, and value added. Statement: Increasing consumer demand for local foods in Virginia has opened direct market outlet opportunities for new and existing extension clientele in the form of online sales, farmers markets,CSAs, food hubs, and value added products. New ANR field agents may not be skilled in training county based clientele in marketing and business topics and may need mentoring support to build confidence in developing effective county based programs serving the marketing and business educational needs of clientele interested in profiting from local foods market opportunities. The VSU CE marketing and agribusiness program, led by Dr. Nartea developed a VSU extension specialist-VT extension agent mentor and training program in the expertise area of marketing and agribusiness. The agent mentor program responds directly to local marketing and business issues identified by new ANR agents (VT), with a goal to equip agents with the skills and resources they need to independently train their and clientele seeking education on marketing their products or improving their business skills. In the 2015 fiscal year, the VSU CE marketing and agribusiness program has provided direct training and mentoring to five new VCE field agents, and together, we have successfully educated 423 of their clientele in farmers market display, creating farm websites, writing marketing plans, and value added product marketing. The potential impact of this program is that through institutional teamwork (VSU & VT), VCE clientele profitability is greatly increased through the empowerment of new VCE extension agents in the educational outreach areas of farm marketing and business programming. Social Media: Educational training for extension agents in local foods direct marketing techniques resulted in training 423 limited resource farm clientele in farmers market display, creating farm websites, writing marketing plans, and value added product marketing. Submitted By and Primary Contact : Theresa Nartea, tnartea@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Food Security Tags: Local Foods, Food Preservation, Food Safety, Food Supply Systems, Profitability & Competitiveness

4	Non-traditional farmers market models demonstrate winning formula for small business owners and small farmers in Virginia Primary Funding Source: 1890 Extension Resource Links: http://www.boulevardflowergardens.com/weekly-vendors/ http://www.hopewellnews.com/article_7626.shtml#.Vst-9UD1_Mg Synopsis: Socio-economic benefits of farmers markets captures business attention.Starting a farm market may profit retailers and farmers. Statement: The socio-economic benefits of farmers market establishment has attracted the attention of businesses. Few models exist for companies interested in starting an on-site farmers market. Cooperative Extension has an educational opportunity to educate and technically support companies interested in setting up a farmers market in non-traditional locations such as senior centers, nursing homes, or retail stores. In response to direct request from a local businesses and communities, Virginia State University Cooperative Extension Marketing and Agribusiness Program provided direct technical assistance in the form of market rules and regulations, farmer recruitment (vendor application), event organization and education, template promotional materials and marketing advisement to two Colonial Heights businesses (Boulevard Flower Gardens at Ruffin Mill, Dunlop House) to establish two area farmers markets in 2014 and 2015. As a result of providing educational and technical support to foster the establishment of two Colonial Heights farmers markets, participating farmers and vendors earned a minimum of $68,000 from January 2015 to September 2015. The Boulevard Flower Gardens Farmers Market will continue year-round in 2016. Plans to incorporate interested Dunlop House senior adult residents as a potential vendor in 2016 are being considered to enhance quality of life of senior center residents. Social Media: Socio-economic benefits of farmers markets captures business attention.Starting a farm market may profit retailers and farmers. As a result of providing educational and technical support to foster the establishment of two non-traditional farmers markets at a senior assisted living center and a garden center. Participating farmers and vendors earned a minimum of $68,000 from January 2015 to September 2015. "The VSU Marketing and Agribusiness program provided the educational and technical advisement we needed to start an indoor winter farmers market at our garden center. We have experienced more off-season traffic and increased sales, and we feel the farmers also benefit by having a warm place to sell their goods during the winter." Francine & Mark Landa, Boulevard Flower Gardens, VA Submitted By and Primary Contact : Theresa Nartea, tnartea@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Food Security Tags: Local Foods, Profitability & Competitiveness, Alternative Agriculture, Food Supply Systems, Food Availability

5	Extension grant writing workshops increase Virginia FMPP and LFPP grant submissions and awards Primary Funding Source: Other USDA Capacity – Extension Secondary Funding Source: 1890 Extension Synopsis: Extension hosted USDA grant writing workshops increases Virginia grant awards in 2015 within the FMPP and LFPP categories. Statement: In order to encourage more organizations in Virginia to submit for USDA funding in the impact areas of local foods and farmers markets, USDA requested extension specialist instutional support from both VT (1862)and VSU (1890) to jointly conduct regional workshops to provide training and technical support to organizations interested in applying for either a USDA Local Foods Promotional Program (LFPP) & USDA Farmers Market Promotional Program (FMPP) grant in 2015. Through institutional cooperation, VSU and VT jointly organized and conducted 3 VCE regional USDA Local Foods Promotional Program (LFPP) & USDA Farmers Market Promotional Program (FMPP) grant writing workshops to interested community organizations and individuals. As a result of attending grant writing workshops, 52 individuals learned how to apply for USDA LFPP and FMPP grants. During the 2015 grant award cycle, Virginia applicants were awarded $499,745 in USDA LFPP funding and $277,884 in USDA FMPP funding, which was an increase in Virginia funding over the 2014 award cycle. Social Media: As a result of attending grant writing workshops, 52 individuals learned how to apply for USDA LFPP and FMPP grants. During the 2015 grant award cycle, Virginia applicants were awarded $499,745 in USDA LFPP funding and $277,884 in USDA FMPP funding, which was an increase in Virginia funding over the 2014 award cycle. Submitted By and Primary Contact : Theresa Nartea, tnartea@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Youth, Family, & Communities Tags: Economic Development, Community Development, Alternative Agriculture, Profitability & Competitiveness, Food Systems

6	The City of Suffolk "Buy, Cook, Eat" program teaches 178 below poverty families to buy, cook, and eat local produce Primary Funding Source: Private Grants & Contracts Secondary Funding Source: 1890 Extension Synopsis: Veggie Van planning grant may bring local farm foods and healthy cooking education to City of Suffolk food desert neighborhoods. Statement: Within Suffolk 63% of adults and 25% of children are overweight. Healthy diet choices such as eating five or more daily servings of produce may improve overall weight management. In low income inner city neighborhoods, access to fresh produce is limited by lack of nearby grocery stores with produce departments. Lack of transportation and adequate funds to purchase local fresh produce from distant grocery stores reduces the likelihood that low income individuals and families will have adequate nutritious produce to eat on a daily basis. VSU marketing and agribusiness program led by Dr. Nartea worked directly with City of Suffolk Cooperative Extension ANR agent Mr. Marcus Williams to train and support local office efforts to write an OBICI foundation grant to obtain $25,000 to address City of Suffolk food desert issues through a comprehensive educational program to teach individuals how to buy, cook, and eat local foods from area farms. As a result of grant funding and conducting food desert education 178 individuals (either grandparents or parents) within the City of Suffolk with income below the poverty level learned how financial literacy, cooking, and nutrition skills. Five local farmers earned a total of $7,535 and reported making over 10% of their current farm sales income from participation in pilot food desert distribution program. Prior to event 91% of attendees self-assessed themselves as overweight and unhealthy; over 50% ate out 2-7+ times every week, and 90% did not eat or feed their family 5 produce items a day. After the events, 100% wanted to include more produce in their diet, and that learning how to cook local foods helped them and would buy from Veggie Van if it came to their neighborhood in future. Due to the promising results from the planning grant phase, the OBICI foundation has invited us to submit a $250,000 grant application to fund the establishment of a City of Suffolk local food distribution system in target area food deserts. Social Media: As a result of recieving a planning grant, the City of Suffolk extension office and partners determined the need for a future Veggie Van program to provide local farm foods and healthy cooking education to neighborhood food deserts. Initial demonstrations earned Five local farmers earned a total of $7,535 providing meal ingredients to 178 food insecure families in the City of Suffolk. Submitted By and Primary Contact : Theresa Nartea, tnartea@vsu.edu Primary Focus Area: Food Security Secondary Focus Area: Agricultural Systems Tags: Local Foods, Profitability & Competitiveness, Food Supply Systems, Chronic Disease Prevention and Management, Food Affordability

7	Spicy-hot sales for Virginia small farmers diversifying into fresh ginger and turmeric production Primary Funding Source: 1890 Extension Secondary Funding Source: Other USDA Competitive Synopsis: Spicy-hot sales for VA farmers. Local fresh ginger & turmeric generating direct sales of $7/lb ginger; and $10/lb turmeric. Statement: Small farmers in Virginia are increasingly turning to direct to consumer markets (farmers market, Community Supported Agriculture, and on-farm sales) to sell their products. Direct to consumer markets demand unique crops that are interesting and even considered beneficial for health. Ginger and Turmeric are of high interest to consumers and are medically proven to reduce inflammation and improve blood pressure. Ginger and Turmeric are high value specialty crops that may increase small farm profitability in Virginia. Small farmers and consumers in Virginia are seeking information on how to grow, sell, and use ginger and turmeric. To address the need for additional information on the production, marketing and culinary use of ginger and turmeric, Virginia State University Small Fruits and Vegetable unit (VSU SFVU) conducted a statewide Ginger and Turmeric production, marketing, and culinary workshop inviting health professionals and other experts to present current knowledge in the areas of growing, marketing, cooking, and health benefits. Throughout the year, VSU SFVU provided interested small growers with ginger and turmeric plants to grow and test market in Virginia local markets. Social Media: In 2015, to increase awareness of growing and selling ginger and turmeric in Virginia, the Virginia State University Small Fruits and Vegetable Program (VSU SFVP) conducted a statewide Ginger and Turmeric production, marketing, and culinary workshop attended by over 150 interested growers and other individuals. Additionally, the VSU-SFVP grew and distributed 300 ginger plants and 100 turmeric plants to interested small farmers to grow and sell in local markets. The marketable yield for ginger was 2,100 pounds; for turmeric 300 pounds. The participating growers sold their ginger for $7 per pound, and turmeric for $10 per pound, with an estimated total value of $14,700 (ginger) and $3000 (turmeric) earned by local small farmers. Testimony: "Research at Randolph Farm we have been able to establish ginger root as an important financial component of our yearly growing program. In addition to the establishment of a new cash crop, the VSU extension horticulture program is leading us to improved cultivar management. We believe Dr. Rafie's improvements in growing ginger in Virginia will have positive impacts on our plant yields which translates to an enhanced contribution to our farm's bottom line." Bill Cox, Casselmonte Farm LLC Primary Contact: Reza Rafie, arafie@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Food Security Tags: Chronic Disease Prevention and Management, Food Supply Systems, Profitability & Competitiveness, Local Foods, Plant and Animal Food Products

8	Virginia small farms are "berry" profitable to the tune of $106,000 in 2015 sales Primary Funding Source: 1890 Extension Secondary Funding Source: Other USDA Capacity – Extension Synopsis: Small farms are "berry" profitable! VSU collaboration yields growers over $106T in local berry sales in 2015. Statement: Small farmers in Virginia are searching for alternative crops with market potential. Berry crops, including strawberry, blueberry, blackberry and raspberry are considered crops with considerable market demand. For example per capita consumption of strawberry increased from 2 lbs. in 1980 to 8 lbs. in 2013. According to the USDA report the total value of the U.S. berry crops was estimated to be over five billion dollars. National and local demands for berries are on the rise, this is because consumers associate berry crops with healthy food choices with considerable health benefits. Virginia's diverse agro-climate is suitable for production of many berry crops. Therefore, it is appropriate to promote the production and marketing of berry crops among small farmers in Virginia. To address the needs of small growers in finding alternative crops with market potential, Virginia State University Small Fruits and Vegetable unit (VSU SFVU) identified berries as crops with market potential. Several research projects were conducted to identify high yielding strawberry, blackberry, raspberry, and blueberry varieties to be shared with interested growers. An annual educational conference, 'Virginia Berry Production and Marketing Conference' was established to provide educational training to interested growers. Additionally, two annual field-days provides hands-on learning to small farmers. Social Media: The VSU-VCE Berry Project has made it possible for Virginia consumers to have access to fresh wholesome locally grown berry crops, including raspberry, blackberry, blueberry and strawberry and therefore reducing the volume of imported berries from other countries and /or from the West Cost of the United States. Specifically, as the result of this project, in 2015, growers who collaborated with this project generated a total of $106,653.00 sales of different berries in different markets. A total of 55 seasonal job was created in different communities where this project was implemented. Testimony: "The VSU extension team has been essential in the successful beginning of our small fruit project at our small family farm. We had plans to grow small fruits but little experience and limited finances. Advice, instruction, grant funding, loan of equipment, experience, and networking, the VSU team deserves significant credit for the successful start of our small fruit growing venture." Tim Miller, Westover Farm Primary Contact: Reza Rafie, arafie@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Food Security Tags: Local Foods, Sustainability, Crop Management, Alternative Agriculture, Profitability & Competitiveness

9	87 limited resource farmers in Virginia diversify and profit through VSU Small Farm Outreach Program efforts Primary Funding Source: 1890 Extension Secondary Funding Source: Other USDA Competitive Synopsis: VSU-CE Small Farm Outreach Program education efforts increased income of 50 farmers by 15% in 2015. Statement: Traditionally, the major crops produced by small, limited-resource, and socially disadvantaged farmers in Virginia are tobacco, cotton, and peanuts. With the advent of tobacco buy-out, increasing production cost, and shrinking farm incomes from these traditional crops, most of the farmers are unable to sustain their farm businesses, and some even lose their farms due to foreclosures. This vicious cycle of high production costs, and unprofitable and unsustainable traditional production practices, provide evidence for the need to transition these producers to the production of high value and profitable and sustainable alternative crops/livestock. In an on-going efforts to improve the quality of life of small, limited-resource, and socially disadvantaged farmers and ranchers in Virginia, Virginia State University-Small Farm Outreach Program plans and conducts a holistic program (planning, production, and marketing) to equip them with the information and skills needed to plan, produce, and market high value alternative crops/livestock. In addition to one-on-one farm/home visits, strategies used to conduct activities are, but not limited to, workshops, field days, hands-on demonstrations, conferences, farm and market tours, and group meetings. From the results of the various activities conducted, 87 farmers transitioned to the production of alternative crops and livestock 2015; and 58% of them have reported at least 15% increase in farm incomes from previous year. Social Media: VSU-CE Small Farm Outreach Program education efforts increased income of 50 farmers by 15% in 2015. Primary Contact: William Crutchfield, wcrutchfield@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Food Security Tags: Profitability & Competitiveness, Local Foods, Alternative Agriculture, Food Systems

10	VSU Aquaponics training "hooks" middle and high school agricultural educators Primary Funding Source: 1890 Extension Secondary Funding Source: State Appropriations Synopsis: VSU Aquaponics training "hooks" middle & high school agricultural educators. Dinwiddie HS students grow fish, lettuce, tomatoes. Statement: The Virginia Department of Education instructional area of Career and Technical Education guides Agriculture Educators in middle and high schools through core competencies in different agriculture areas. Through working with state specialists and many agriculture teachers, aquaponics was determined to be an area which could be utilized by some schools to provide education to students in horticulture, biology, construction, math and culinary arts. In order to address the needs of the agriculture teachers requesting training in the area of aquaponics production, the VSU Aquaponics Team developed training and assistance to facilitate quick utilization of aquaponics technology. Tours of existing aquaponics production at VSU's Randolph Farm, planning meetings, seminars, displays, hands-on workshops and production assistance was provided to help those interested. Over 30 agriculture educators were given hand-on training in construction, set-up and operation of a typical aquaponics system at the Virginia Association of Agriculture Educators annual conference. Twenty individual planning meetings were provided to educators to help with their specific systems. Tours were given to 20 groups of teachers/students of VSU's aquaponics demonstrations. From the above efforts, five schools have started aquaponics systems and five others have modified their existing systems for better efficiency and use. Through working with the VSU Aquaponics Team, Miss Cindy Blaha, the agriculture educator at Dinwiddie High School, has added aquaponics and hydroponics to their greenhouse production area and decreased the amount of space she had for ornamental production. Agriculture and horticulture students are learning how to grow fish, lettuce and tomatoes while the culinary arts students are learning to prepare the same products. The Dinwiddie County School Board recognized her and VSU with an award noting the collaboration and the innovation involved in the project. Social Media: As a result of VSU aquaponics training in 2015, five Virginia schools have started aquaponics systems and five others have recieved technical and educational assistance in modifying their existing aquaponics systems for better efficiency and use in the training of middle and high school students in core competencies in the following areas: horticulture, biology, construction, math and culinary arts. Primary Contact: Mullins, Chris, cmullins@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Youth, Family, & Communities Tags: Community Development, Technology Use, STEM, Alternative Agriculture, Food Systems

11	Local TV series and hands on lessons teach 20,000+ Virginians to garden successfully Primary Funding Source: 1890 Extension Resource Links: https://www.youtube.com/watch?v=GiBWRtVZ-ZA&list=PL85DDFA3722B049B8&index=41&noredirect=1 Synopsis: Local TV series and hands on lessons teach 20,000+ Virginians to garden successfully "from the ground up." Statement: Virginia consumers are trending to locally grown food and the ability to know where their food's origins. Along with that many persons are interested in vegetable gardening in order to produce for their own consumption. However most have little or no experience with or knowledge of gardening. Many have a desire to learn about gardening as evident in the full master gardener training classes provided in many localities from the VCE. Simple gardening education from plant selection to post-harvest is needed to help these individuals. In order to address the needs of the individuals needing training, VSU is providing vegetable gardening training to Master Gardener interns in many central Virginia localities and providing tours of VSU's Randolph Farm demonstration gardens. In order to reach a wider audience, VSU greenhouse and vegetable specialist Chris Mullins is featured on a monthly segment of the Farm Bureau TV show "Real Virginia". This segment is call "From the Ground Up" and focuses on gardening topics. This segment reaches a statewide, national and internet audience. Each year, over 100 master gardener interns are trained in new and innovative gardening topics ranging from better cultivating instruments to new cultivars. Greater than 20,000 persons tune in monthly to the "From the Ground Up" segment to learn about different vegetables and production techniques. Over 100 persons tour the vegetable gardens at VSU's Randolph Farm each year. From these efforts each year, 100 persons try different production techniques, tools and varieties. Of these, greater that 75% continue to use the new practices. Social Media: Through VSU's master gardening training in Henrico County, five gardeners have adopted the practice of irrigating their home garden using drip irrigation. In this same locality, VSU provided heirloom tomato seed along with propagation instruction. Seventy five plants were produced and distributed to gardeners with all participants wanting to grow that variety in the future. In Chesterfield County, three gardeners purchased push planters after being exposed to the tool during VSU master gardener training. Testimony: One gardener stated that "it saved my back by keeping me from bending over when I plant". Primary Contact: Chris Mullins, cmullins@vsu.edu Primary Focus Area: Food Security; Secondary Focus Area: Environmental Stewardship Tags: Food Availability, Food Affordability, Water Conservation, Stewardship

12	Old is new again! Ancient fish harvesting techniques key to hybrid striped bass market yields Primary Funding Source: State Appropriations Secondary Funding Source: 1890 Extension Synopsis: Old is new again! Ancient fish harvesting techniques key to hybrid striped bass marketable yields for Virginia fish farmers Statement: Pond culture of hybrid striped bass (hsb) is a focus of extension efforts and faces multiple constraints. Permits must be obtained for each operation to assure no chance for escapement. Many of Virginia's ponds qualify to be permitted for hsb culture since they do not directly discharge into the Chesapeake Bay watershed. However, they are unsuitable for pond farming due to large surface area, variable depth and uneven bottoms making harvest by seining impossible. Wholesale demand for hsb exceeding one kilogram makes pond culture economically feasible if delivery of a minimum quantity can be achieved. One cooperating hybrid striped bass farmer agreed to demonstrate the ancient fish harvesting technique at his farm to see if it would be successful in a bass harvest. VSU researchers used a large scale replication of harvesting lift nets used in developing countries. A 100 square-meter net with a mesh size that will maintain fish exceeding 800g was staked to the pond bottom in a designated feeding area. Corners of the bottom net were attached to wires with rings extending above the surface of the 8 hectare pond. Fish were conditioned to come to this feeding area. A mechanical lift unit was positioned on the pond bank next to the net feeding area and readied for a planned harvest. On harvest day, after feed was used to lure fish into the net area, the mechanical lift unit raised the net with captured fish and moved to a land-based processing area. The on-farm project was documented to share with other interested fish farmers in Virginia. As a result of multiple successful harvests, the ancient method of lift net use is relevant in modern fish industry and demonstrates the ability to expand ponds that are available for profitable hybrid stripe bass culture in Virginia. The age-old system promotes small farm profitability, farm safety and saves labor costs. Less damage occurs to harvested fish which improves market value increasing the likelihood of successful sales for small producers in Virginia. Social Media: The ancient method of lift net use resulted in multiple successful harvests proving relevant for modern fish industry. The on-farm trial demonstrated an ability to expand pond use for profitable hybrid stripe bass culture in Virginia. The age-old system promotes small farm profitability, farm safety and saves labor costs. Less damage occurs to harvested fish which improves market value increasing the likelihood of successful sales for small producers in Virginia. Primary Contact: Brian Nerrie, bnerrie@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Food Security Tags: Profitability & Competitiveness, Food Supply Systems, Plant and Animal Food Products, Alternative Agriculture, Local Foods

13	Virginia State University becomes 3rd Virginia campus to earn prestigious "Tree Campus USA" designation Primary Funding Source: 1890 Extension Secondary Funding Source: Other USDA Capacity – Extension Resource Links: https://www.arborday.org/programs/treecampususa/ Synopsis: 191 US colleges are deemed as Tree Campus USA In 2015, VSU was named the third campus in Virginia to become a "Tree Campus USA" Raising awareness of the value of urban forests at university campuses and at public schools increases the likelihood youth and young adult citizens will promote the preservation, maintenance, and installation of trees in urban settings in the future. Statement: In order to bring greater awareness of the value of campus urban forests, the VSU CE Urban Forestry program worked with VSU facilities management and other campus stakeholder to educate the university personnel, students, alumni, and visitors on the relevance of urban forests and the need to maintain the VSU urban forest. The campus urban forest is a functional and aesthetic asset to our campus. In order to better manage the urban forest we applied for Tree Campus USA designation through the National Arbor Day Foundation. There are currently 191 US colleges and universities designated as a "Tree Campus USA" In 2015, VSU was designated as the third campus in Virginia to become a "Tree Campus USA" through the efforts of the Virginia State University Cooperative Extension Urban Forestry (VSU-CE UF) program. Through the efforts of the VSU-CE UF program, an in-depth review was conducted to ensure VSU campus had met the stringent "Tree Campus USA" designation requirements to: Create an original tree care plan; Develop a tree care stakeholder committee meeting three times per year; Commit $2 per capita expenditure for tree care at VSU; and conduct a campus-wide arbor day celebration. In 2015, VSU became the third University in Virginia to achieve the prestigious "Tree Campus USA" designation. The campus celebrated in the conduct of an Arbor Day celebration resulting in off campus activities to raise awareness of urban forests. Trees and supplies worth $1,400 were donated by the community to conduct Arbor celebration activities. Once the designation was granted, VSU facilities and site manager realized the designation aided the campus with the Multiple Municipal Sewage Systems (MS4) requirements and it has prompted campus unity in completing service projects done in accordance with the requirements of the program. Related outreach with VSU students occured at Peabody Middle School in Petersburg to install an MLK tree (American Sycamore)worth $600 for labor and supplies, as well as remove dangerous dead trees at a labor cost savings of $600. Additionally, VSU facilities as part of the "Tree Campus USA" requirements has committed over $10,000 per year to tree planting, care, and maintenance to maintain VSU urban forests. Primary Contact: Joel Koci, jkoci@vsu.edu Primary Focus Area: Environmental Stewardship Secondary Focus Area: Youth, Family, & Communities Tags: Community Development, Stewardship, Community Engagement in Public Issues, Soil Conservation, Water Quality

14	2,400 Virginia citizens take a bite out of obesity & chronic disease development through "Superfoods" cooking demonstrations Primary Funding Source: 1890 Extension Resource Links: http://wtvr.com/2015/08/26/farm-fresh-produce-is-the-star-of-this-roasted-eggplant-dip/ Synopsis: 2,400 Virginia citizens take a bite out of obesity and chronic disease development through "Superfoods" cooking demonstrations. Statement: Eating the recommended amount of fruits and vegetables reduces obesity rates (Trust for America's Health, Robert Wood Foundation, 2012). According to the Centers for Disease Control, only one in 10 US adults eats the recommended amount of fruits and vegetables daily. In 2015, CDC determined a "culture shift" of "widespread action" was needed to change the average American diet to include 2 cups of fruit, and 3 cups of vegetables daily. According to CDC experts, "Substantial new efforts are needed to build consumer demand for fruits and vegetables through competitive pricing, placement, and promotion in child care, schools, grocery stores, communities and worksites." VSU Cooperative Extension's culinary expert Ms. Wanda Johnson is teaching adults throughout Virginia to select, prepare, and cook easy and delicious meals and snacks using locally grown "Superfoods" many of which are considered specialty crops that small farmers in Virginia can produce and market to local consumers. In 2015, 30 "Superfoods" cooking demonstrations were conducted to teach adult learners about healthy eating and cooking behaviors to include more produce in daily diet to prevent obesity and chronic disease development. The cooking demonstrations included local grown crops such as kale, berries, turmeric, ginger, sweet potatoes, winter squash, mushrooms, bittermelon, eggplant, and long beans. Most recipes developed included five or more produce items and took less than 30 minutes to prepare and cook. During the cooking demonstrations, participants would observe how to prepare and cook produce grown at VSU Randolph Research farm, and afterwards would be able to eat a meal made from various local produce crops. Participants would be encouraged to shop at local farmers markets, or to ask their favorite grocery store to buy local farm produce for their consumption. As a result of conducting "Superfoods" cooking demonstrations, 2,400 adults learned healthy eating behaviors that they were able to use in their daily lives. After eating the prepared meals, 100% of participants agreed that they would eat more fruits and vegetables, and that they were aware that they needed to eat five or more one cup servings (2 fruit; 3 vegetable) daily for obesity and chronic disease prevention. Participants recieved recipe cards and the majority stated their intention to cook the meals for themselves or families after the class. In some instances, class participants would contact Ms. Johnson with a testimony of "weight loss" or "lowered high blood pressure" or "lowered cholesterol. One testimony was of a woman who felt learning how to cook and eat healthy with local produce everyday was the reason she no longer had cancer. The demand for the VSU "Superfoods" cooking classes is growing and each year demand for more classes increases 25%. Social Media: For over a century, the Cities of Hopewell and Prince George celebrate local business owners at an annual event. In 2015, the Chamber of Commerce was responsible for hosting the event and invited VSU CE culinary expert, Wanda Johnson to conduct a superfoods cooking demonstration for over 250 small business owners. After the event, over 50 participant calls came into the Chamber of Commerce on behalf of the VSU-CE cooking demonstration praising efforts to teach healthy produce cooking and eating. Primary Contact: Wanda Johnson, wjohnson@vsu.edu Primary Focus Area: Nutrition & Health; Secondary Focus Area: Agricultural Systems Tags: Functional Foods, Nutritional Value, Food Availability, Chronic Disease Prevention and Management, Local Foods

15	Lambuary: A new idea to market lamb and sheep products for Virginia industry Primary Funding Source: 1890 Extension Secondary Funding Source: Other USDA Capacity – Research Resource Links: http://www.vsu.edu/lambuary/ http://vagrown.va-vdacs.com/Default.aspx?category=LAMB Synopsis: VSU "Lambuary" raises consumer awareness of the lamb industry. Lambuary happens in January. It is about eating healthy local lamb! Statement: Virginia sheep farmers struggle in with two major business obstacles: consumers' lack of knowledge on how to find local sheep farmers and their products, as well as their unfamiliarity with how to prepare lamb meat. The unique idea came from Dr. Theresa Nartea, VSU marketing and agribusiness specialist when she announced at the 2014 VSU Small Rumininant conference to nearly 200 small ruminant farmers.that VSU would attempt to create a "Lambuary" demonstration. In 2015, VSU began a marketing demonstration named Lambuary which is conducted in January. The objective of "Lambuary" is to assist Virginia sheep farmers in novel ideas to assist them in consumer awareness of lamb availability in Virginia, and in providing consumer information examples to increase local lamb consumption. In 2015, the month of January was named "Lambuary" to raise consumer excitement and awareness of local lamb produced by small farmers in Virginia. VSU College of Agriculture Cooperative Extension specialists Dr. Dahlia O'Brien and Dr. Theresa Nartea partnered with VSU Agricultural Research Station Sheep Researcher, Dr. Stephan Wildeus and VSU Department of Hospitality Management's Chef Jeff Chapman and Dr. Michelle Mosely, to launch an interdisciplinary program called "Lambuary" to help grow Virginia's lamb industry. The program involved a month long celebration in 2015 promoted to over 8,000 VSU employees and students to participate in cooking classes, a cooking competition, and a farm tour at the VSU Randolph Farm. A Lambuary website was developed to inform about Virginia lamb. As a result of the Lambuary marketing initiative, over 8,000 VSU employees and students were made aware of local lamb farmers and were sent information on buying and cooking Virginia lamb products. Over 100 individuals participated in Lambuary activities, the majority of individuals had either 1) never consumed lamb; 2) never cooked lamb at home; 3) had no previous awareness of Virginia grown lamb. Over 90% of participants, after trying local lamb dishes stated they would include Virginia lamb in future home cooked meals or ask for Virginia lamb when they shop for meats. After conducting the first Lambuary, the promotion model was a proven success and in 2016 plans were made to open the Lambuary activities to Virginia farmers to give them ideas and support on planning their own Lambuary events to promote their businesses. Social Media: Through the extension outreach model, lamb producers are able to observe how to use novel marketing methods such as "Lambuary" to excite and educate consumers about locally produced lamb products in order to increase local lamb sales in Virginia. Primary Contact: Dahlia O'Brien, dobrien@vsu.edu Primary Focus Area: Agricultural Systems; Secondary Focus Area: Food Security Tags: Food Supply Systems, Alternative Agriculture, Profitability & Competitiveness, Livestock Management, Local Foods

16	Cheese or meat? 130 Virginia goat and sheep producers gain confidence in value-added meat production & marketing Primary Funding Source: 1890 Extension Synopsis: VSU Small Ruminant field day equips 130 goat and sheep farmers to add value with locally produced meat & dairy products in VA. Statement: The small ruminant industry in VA is growing, however there are many producers who lack the basic knowledge on regulations governing the slaughter, processing, and sale of small ruminant meat products in the state. This also includes the legalities of allowing customers to slaughter on-farm. The current regulations governing the establishment of a small ruminant dairy, value-added processing and sale also need to be addressed. To address this issue, the VSU small ruminant program conducted the 2015 Small Ruminant Field Day to increase producer knowledge, skills and abilities in "Small Ruminant Slaughter, Meat and Dairy Processing and State Regulations." Unique classes included cheesemaking and processing high value cuts from goat carcasses. Participants observed how to make a popular market cheese, and how to physically cut a goat carcass to produce high value cuts. Current regulations were covered, and selected producers presented on their challenges and successes in value added prodution and marketing. The goal of the field day was to improve producers'practical understanding regarding the regulations and issues pertaining to slaughter, processing and sale of small ruminant meat and dairy products in VA. As a result of the conduct of the VSU Small Ruminant field day, 130 Virginia goat and sheep producers attended. Participant evaluations indicated that the field day was successful in improving understanding and increasing knowledge of the regulations and issues related to regulations governing the processing and selling of value-added small ruminant meat and dairy products in Virginia. Social Media: Value added livestock products of chevon meat, lamb, and dairy are increasing desired by Virginia consumers. Small ruminant farmers interested in producing and marketing vslue added products must be aware and adhere to existing regulations in order to protect public food safety. Knowledge of value added sales may increase the likelihood of added on-farm income for Virginia limited resource goat and sheep farmers. Primary Contact: Dahlia O'Brien, dobrien@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Food Security Tags: Local Foods, Livestock Management, Profitability & Competitiveness, Alternative Agriculture, Plant and Animal Food Products

17	Transforming a community through improved urban farm and food access in Petersburg, VA Primary Funding Source: AFRI Secondary Funding Source: 1890 Extension Synopsis: The Harding Street Urban Agriculture Center focuses on increasing food access through indoor production in Petersburg, VA. Statement: According to the Robert Wood Johnson Foundation, Petersburg is the unhealthiest location in Virginia, 36% of residents are obese, and 12% suffer from diabetes. Nearly 25% of Petersburg residents are considered food insecure. According to USDA, food insecurity is a state of being in which "consistent access to adequate food is limited by a lack of money and other resources at times during the year." Adhering to Centers of Disease Control dietary recommendations of eating five or more one-cup servings of produce may not be a attainable for residents who are forced to shop at corner markets and convenience stores. Many Petersburg inner city residents do not have cars. Walking or taking the bus to major grocery stores stocked with fresh produce may not be an option for most inner city Petersburg residents. Recognizing the need to eliminate food scarcity and improve food access for City of Petersburg residents, community based organizations, local government and the Virginia State University's College of Agriculture-Cooperative Extension Program have launched an urban farm and food access initiative. Through this grassroots community initiative, we have collectively developed educational outreach programs and urban agricultural research projects aimed at lowering the number of Petersburg Citizens that do not have access to fresh local produce. We have initiated the development of a City of Petersburg food hub to distribute local produce to inner city neighborhoods. We have established the Harding Street Urban Agriculture Center to teach indoor production techniques and nutrition classes year-round. All educational programs taught at the Harding Street Urban Agriculture Center are aimed an increasing Petersburg residents' exposure to nutritional education, as well as contributing to economic development of Petersburg through training and promotion of agricultural enterprises, entrepreneurship and 21st century food production technology. As a result of the VSU-COA urban farm and food access initiative at the Harding Street Urban Agriculture Center, the following results have occured: 1. We have worked with Petersburg officials in recognizing and supporting urban agriculture as a vital re-development solution. The city is taking steps to remove policies that limit agricultural practices within the city-limits to encourage residents to start small businesses that grow and sell local farm products within the city. 2. We have worked with Petersburg to make fresh food more accessible by establishing a farmers market location which is centrally located and within walking distance to food desert neighborhoods. 3. We have distributed 3,200 lbs. of local fresh produce to members in the community with a retail value of $8,000 ($2.50 per pound). 4. The center has hosted and educated 1000 visitors on the science and business of indoor production. 5. The center has trained and utilized 75 volunteers to help build systems, plant and harvest indoors with a dollar value of $23.07 (Independent Sector, 2015) per hour for 8 hours per volunteer for a total labor savings value of $13,842.00.

	6. The center has utilized 100 volunteers to help build grow boxes, plant and harvest outdoors with a dollar value of $23.07 (Independent Sector, 2015) per hour for 4 hours per volunteer for a total labor savings value of $9,228. 7. Generated additional project funding from Dominion Power ($25,000) and Cameron Foundation ($60,122) to continue work related projects. "This is exciting, this is the changing face of agriculture. We really need to spend our tax dollars right here in Petersburg. I'm tired of seeing our community suffer. " Atiba Muse, Petersburg School Board Representative. Social Media: "I think the Center has a great deal to offer the city of Petersburg. They are doing it in a way that is cost effective for everyone involved. Food should be our medicine and having a facility like this will be beneficial to the community." Will Allen, Growing Power Inc. Primary Contact: Marcus Comer, mcomer@vsu.edu Primary Focus Area: Food Security Secondary Focus Area: Agricultural Systems Tags: Local Foods, Food Availability, Food Affordability, Food Supply Systems, Alternative Agriculture

18	Mitigating food deserts in Virginia through comprehensive urban agriculture education Primary Funding Source: Other USDA Capacity – Extension Secondary Funding Source: 1890 Extension Synopsis: in 2015, food desert residents saved $26,000 in fresh produce purchases through community gardening projects. Statement: Nearly 18 percent of Virginia's residents live in a food deserts, defined as areas with low access to affordable and nutritious food. In such areas, fast-food restaurants and convenience stores that offer fewer healthy, affordable food options prevail over supermarkets and grocery stores. Vast food insecurity exists in the Southside region, but also in the Central, West Central, and Hampton Roads regions of Virginia. To respond to the challenge posed by the food deserts, Virginia State University Sustainable and Urban Agriculture Program (SUAP) conducted extensive educational activities including workshops and hands-on training. In addition, the program developed 6 educational resources in sustainable and urban agriculture. The program reached 48 participants who gained knowledge on various urban agriculture practices; 35 participants who received awareness on urban agriculture; and 18 participants who adopted some sustainable agriculture practices. The program provided technical assistant to start five community gardens and two inner city school gardens. The financial impact of training and offering technical assistance in urban agriculture include non-certified organic produce yields valued at over $26,000. If the seven demonstration gardens were not started in 2015, low income, many below poverty, food desert residents would have spent up to $26,000 for fresh, non-certified organic produce. Social Media: "Virginia State University has been a great source of information and assistance. We have a very successful garden this year. Thank you for the continued assistance you have provided ACE over the past couple of years. We are excited about the future of ACE." Billie Brown, Another Chance to Excel (ACE) Garden, Creighton Rd, VA. Primary Contact: Leonard Githinje, lgithinji@vsu.edu Primary Focus Area: Agricultural Systems Secondary Focus Area: Food Security Tags: Sustainability, Alternative Agriculture, Local Foods, Profitability & Competitiveness, Food Supply Systems

Fish Health Testing Saves Farmers $30T, Opens New Market Access

Pictured above: Virginia fish farmer Paige Hogge all smiles selling healthy fish at local farmers markets.

Since 2012, **VSU has saved participating fish farmers up to $30,000** in diagnostic costs. By removing lab testing expense, the VSU Fish Health Diagnostic Laboratory has assisted limited resource fish farmers to access additional lucrative local and international markets that were

Pictured above: Dr. David Crosby testing fish pond water quality.

"Small family fish farmers in Virginia are fortunate to have VSU fish scientists to call upon for help. Our business would not be as successful without them. They are our trusted supporters."

Paige Hogge, Buster's Seafood, VA

In order for fish farmers to sell live fish, many states are requiring a fish health certificate showing that fish have been inspected for specific pathogens. Farmers must find a fish health laboratory capable of performing these tests. These labs can be quite costly and can result in reduced profits for farmers.

Virginia State University Fish Health Diagnostic Laboratory is assisting producers in the certification process. Many of the pathogens that are bacterial and parasitic requires testing, and it is being done at no cost to the producers as an outreach service to limited resource fish farmers. VSU Fish lab started doing virology testing in 2010. This further reduces cost to the farmer as much as $1,500 to $2,500. The VSU lab provides diagnostic information to VDACS Veterinary Services for issuing a letter of certificate when required by the importing state. To date, VSU has saved participating fish farmers up to $30,000 in diagnostic costs and assisted in opening new market access that were once closed to them.

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Non-Traditional Farmers Market Models: A "Win-Win" for All

Left: Promoting new farmers market at a private senior care center. Right: Crowds mingle with senior residents.

Few models exist for companies interested in starting an on-site farmers market. Cooperative Extension has an opportunity to educate and technically support companies interested in setting up a farmers market in non-traditional locations such as senior centers, nursing homes, or retail stores. VSU-CE is ready to market!

Pictured above: Dr. Theresa Nartea teaching market display.

"The VSU Marketing and Agribusiness program provided the educational and technical advisement we needed to start an indoor winter farmers market at our garden center. We have experienced more off-season traffic and increased sales, and we feel the farmers also benefit by having a warm place to sell their goods during the winter." *Francine & Mark Landa, Boulevard Flower Gardens, VA*

The socio-economic benefits of farm market establishment has attracted the attention of businesses. Few models exist for companies interested in starting an on-site farmers market. Cooperative Extension has an educational opportunity to educate and technically support companies interested in setting up a farmers market in non-traditional locations such as senior centers, nursing homes, or retail stores. In response to direct requests from a local businesses and communities, Virginia State University Cooperative Extension Marketing and Agribusiness Program provided direct technical assistance marketing advisement to two small businesses to establish two area farmers markets. As a result of providing start-up support of two non-traditional farmers markets, participating farmers and vendors earned a minimum of $68,000 in 2015. The Boulevard Flower Gardens Farmers Market will continue year-round in 2016. Dunlop House senior adult residents will make crafts to sell in 2016 farmers market to enhance quality of life for senior center residents.

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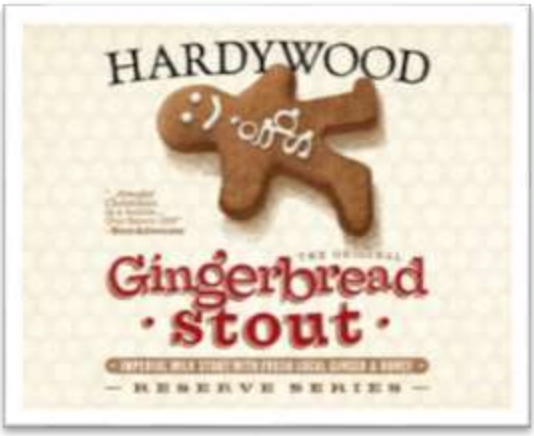
SPICY-HOT SALES FOR VIRGINIA SMALL FARMERS IN GINGER AND TURMERIC



Left: Virginia brewery buying Casselmonte Farm ginger. Right: Value added Hardywood Gingerbread Stout label.

Ginger and Turmeric are of high interest to consumers and are medically proven to reduce inflammation and improve blood pressure. Ginger and Turmeric are high value specialty crops that may increase small farm profitability in Virginia.

Pictured above: Local farmer selling fresh turmeric for over $2 an ounce, or $24.99 per pound.

"From research at VSU Randolph Farm we have been able to establish ginger root as an important financial component of our yearly growing program. In addition to the establishment of a new cash crop, the VSU extension horticulture program is leading us to improved cultivar management. We believe VSU research in growing ginger in Virginia has positive impacts on our plant yields which translates to enhanced contribution to our bottom line." *Bill Cox, Casselmonte Farm, VA*

Ginger and Turmeric are of high interest to consumers and are medically proven to reduce inflammation and improve blood pressure. Ginger and Turmeric are high value specialty crops that may increase small farm profitability in Virginia. Small farmers and consumers in Virginia are seeking information on how to grow, sell, and use ginger and turmeric. In 2015, to increase awareness of growing and selling ginger and turmeric in Virginia, the Virginia State University Small Fruits and Vegetable Program (VSU SFVP) conducted a statewide Ginger and Turmeric production, marketing, and culinary workshop attended by over 150 interested growers and other individuals. Additionally, the VSU-SFVP provided 300 ginger plants and 100 turmeric plants to small farmers to grow and sell in local markets. Participating growers sold their ginger for $7 per pound, and turmeric for $10 per pound, with an estimated total value of $14,700 (ginger) and $3,000 (turmeric) earned by local small farmers.

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