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Roanoke/Salem 2023 Situation Analysis Report

Authored by:

Shawn Jadrnicek, Associate Extension Agent, ANR;

Leslie Prillaman, Senior Extension Agent, 4-H Youth Development, Unit Coordinator;

Emma Todoroff, Associate Extension Agent, FCS SNAP-Ed;

Naida Young, Associate Extension Agent, FCS



Summary of Community Issues and Extension Office response

Priority Issue	Planned Unit Response
Strengthening an Accessible, Local Food System	Investment in community gardens and school gardens; farm social and farm tour programs; Partnerships with food access organizations through local coalition efforts
Fostering Youth Life Skills Development	Positive and sustained relationships between youth and adults involved in 4-H programs, through clubs, camping and other 4-H activities; Creating opportunities for youth to apply what they are learning to improve their community both as participants and leaders, and to build important life skills; Giving youth a safe space to socialize productively with their peers
Preserving Natural Resources	Master Gardener training program; Pond clinics; Drip irrigation workshops; Demonstration gardens; Soil testing; Plant problem identification and control; Nutrient management workshops; Farm designs and management plans
Promoting Well-Being and Healthy Lifestyles	Nutrition education; Food safety and preservation education; Chronic disease prevention programs; Partnerships with healthcare systems for collective action on mental health awareness and stress reduction; Development of stress reduction programs

Introduction

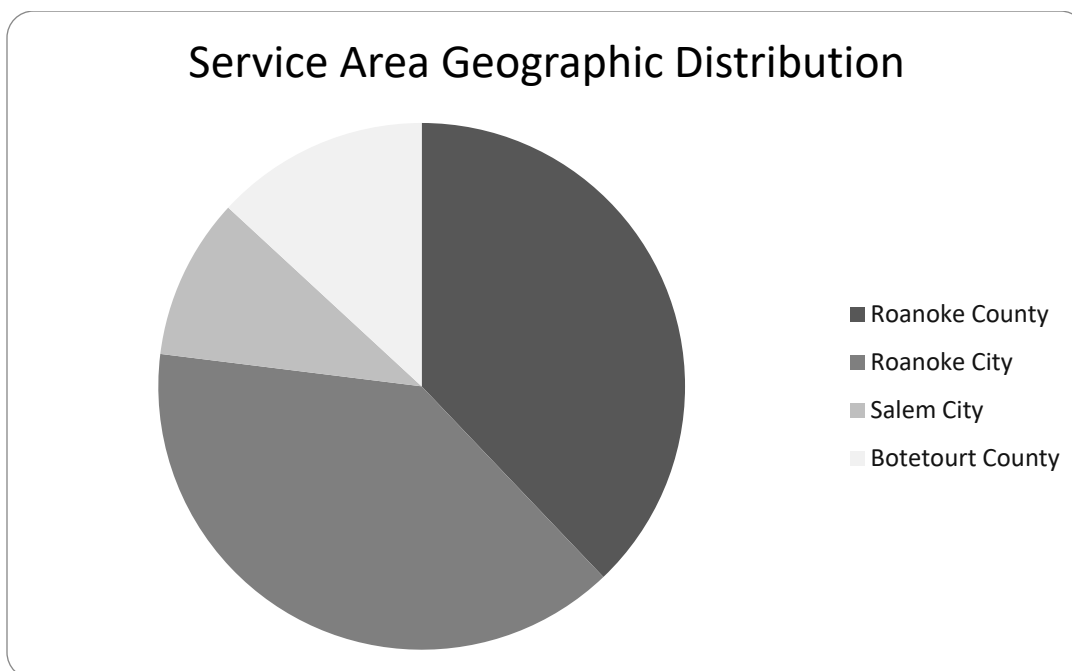
The Roanoke Unit of Virginia Cooperative Extension (VCE) conducted a situation analysis from March to November 2023 to identify key issues facing the citizens of Roanoke City, Roanoke County, and the City of Salem. The Roanoke Unit conducted its situation analysis by reviewing the unit profile prepared by VCE state staff and by working with the Roanoke Extension Leadership Council (ELC) to distribute a community survey. The Roanoke ELC, composed of volunteers and unit staff, held three meetings to plan for and complete the situation analysis. The initial meeting was held on March 30 to organize and plan for action; the second meeting was held on July 13 to review and revise the community survey; and the third meeting was held on October 26 to discuss survey results and assess issue prioritization. The ELC and unit staff took an active role in encouraging community members to complete the community survey which was administered online. Unit staff analyzed the data from the unit profile and community survey to identify priority issues.

Unit Profile

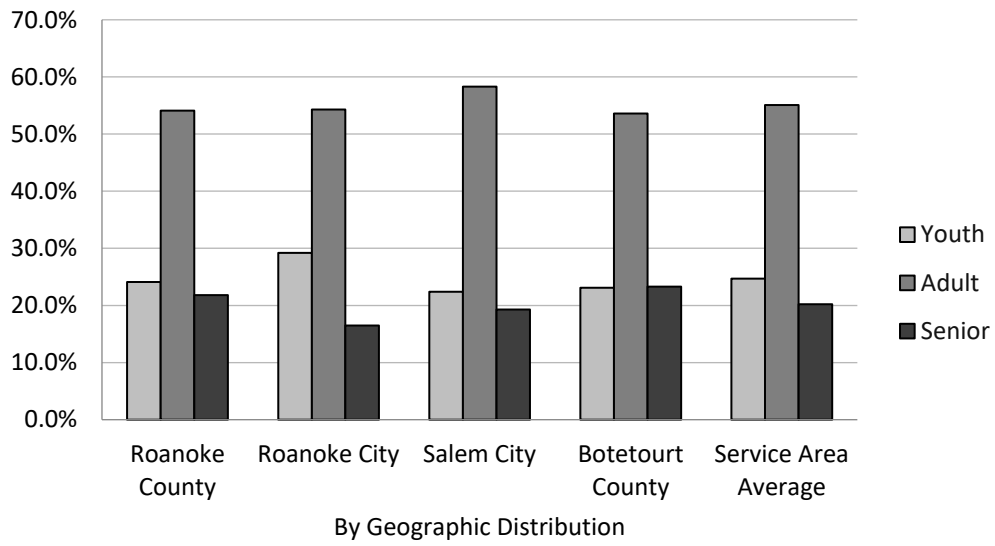
The unit profile compiled by state-level VCE administration provided key demographic, economic, health, education, and agricultural data for the region. The data was summarized from various federal and state sources and statistics are listed below.

Demographics

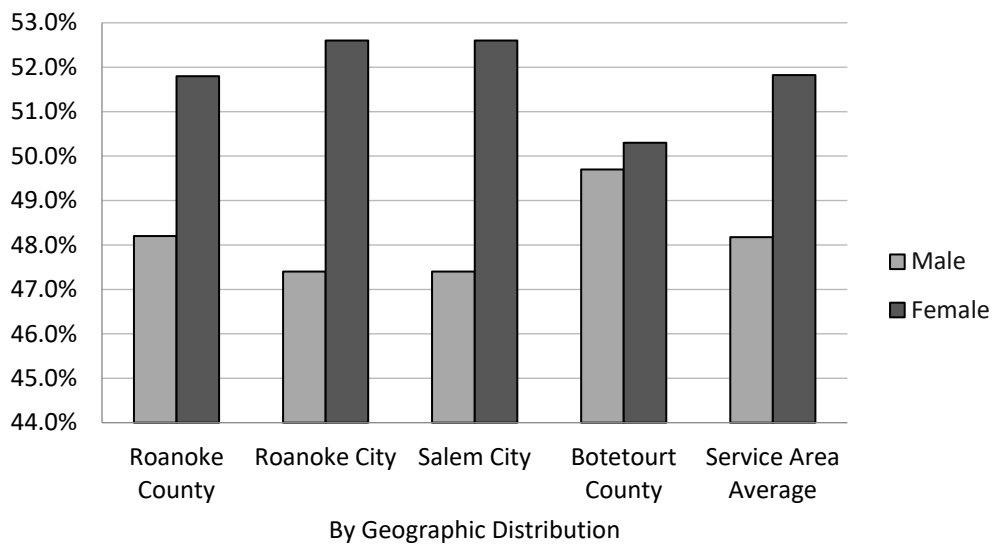
- As of 2021, the combined population of Roanoke County, Roanoke City, and Salem was 220,789.
- Between 2018 and 2021, the population of Roanoke County increased by 2.5% while the population in Roanoke City and Salem City remained the same.
- The median age of Roanoke City (38.2) trends slightly lower than Roanoke County (43.5) and Salem City (41.2).
- Residents are fairly evenly distributed across age groups with 22% under 19, 23% between 20-39, 26% between 40-59, and 29% over age 60.
- Between 2018 and 2022 the percentage of residents over age 60 increased by 3%.
- Roanoke City remains the most racially and ethnically diverse population in the Metropolitan Statistical Area (MSA) with approximately 58% White or Caucasian, 29% Black or African American, 3% Asian, 4% two or more races, and 7% Hispanic or Latino ethnicity.
- Roanoke County and Salem City are racially and ethnically similar with 84% White or Caucasian, 5-7% Black or African American, and 3.5% Hispanic or Latino ethnicity.



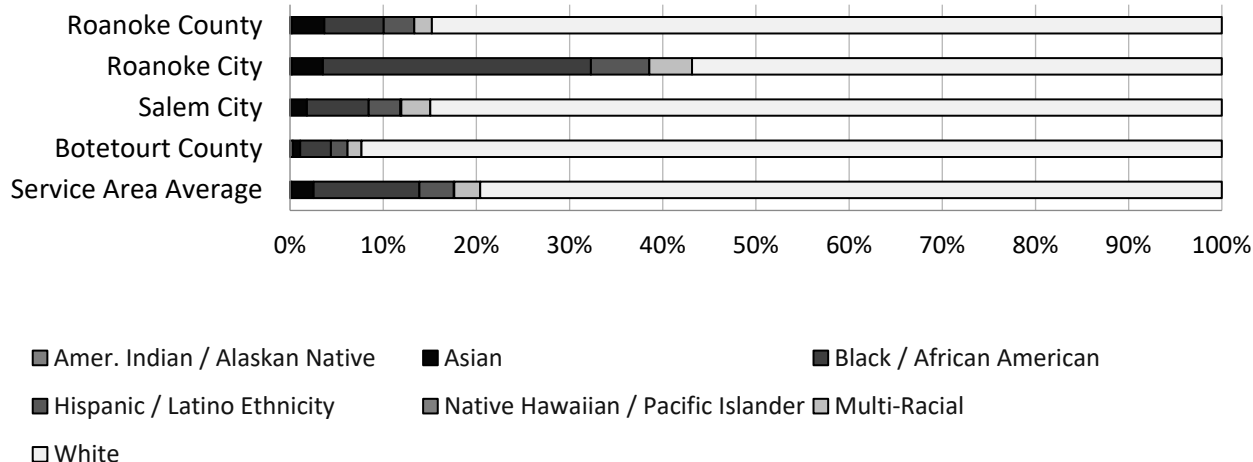
Service Area Age Distributions



Service Area Gender Distributions



Service Area Racial & Hispanic Origins Distribution



Economic Status

- The Roanoke MSA ended 2023 with a 2.9% unemployment rate which is comparable to Virginia's unemployment rate of 2.7%.
- Healthcare, the public school system, and local government jobs are the largest employers in Roanoke City and Roanoke County. Carilion Clinic and Lewis Gale health systems provide the most healthcare jobs in the area.
- Manufacturing and the federal government are some of the largest employers in Salem City because of the U.S. Department of Veterans Affairs and manufacturers like Yokohama Tire Co.
- The median household income in Roanoke City (\$47K), Roanoke County (\$72K), and Salem City (\$66K) are lower than the median household income in Virginia as a whole (\$81K).
- Roanoke City has the lowest median income of the surrounding area (\$47K), the highest rate of individuals living in poverty (18%), and the highest rate of children living in poverty (27%).
- The percentage of households receiving SNAP benefits in Roanoke City (15%) is double that of Roanoke County (8%) and Salem City (7%).

Health and Well-Being

- The Roanoke Valley is home to the largest number of medical resources in the region like those provided by Carilion Clinic and Lewis Gale health systems. There are also ample opportunities for outdoor recreation thanks to nearby camping, hiking, greenways, and parks.
- According to the 2021 Carilion Clinic Community Health Assessment, the top five health issues in the Roanoke Valley were: Overweight/obesity, mental health, COVID-19, alcohol and illegal drug use, and poor eating habits.
- County Health Rankings published by Robert Wood Johnson Foundation in 2023 are as follows: Roanoke County- #28, Salem City- #51, and Roanoke City- #117 out of a total of 133 ranked counties. Behaviors considered in the ranking analysis include tobacco/drug use, diet and exercise, access to and quality of healthcare, and social determinants of health like education, employment, social support, and community safety.
- From 2018 to 2023, the health ranking of Roanoke County improved from #31 to #28 while the health ranking of Roanoke City declined from #104 to #117. Salem City's ranking did not change.
- As of the 2020 U.S. Census, the median life expectancy was 79 years in Roanoke County, 75 years in Salem City, and 73 years in Roanoke City.
- The gap in County Health Rankings combined with life expectancy discrepancy reveal a health disparity between Roanoke and Salem Cities and the surrounding Roanoke County. The Center for Disease Control

(CDC) defines health disparity as, “preventable differences in the burden of disease or opportunities to achieve optimal health that are experienced by socially disadvantaged populations.”

- Rates of obesity (37%), smoking (21%), food insecurity (13%), physical inactivity (28%), teen births (46/100K), drug overdose deaths (56/100K), and children living in single-parent households (45%) are all significantly higher in Roanoke City than in Virginia overall and likely contribute to health disparity.

Education

- High School graduate or higher: Roanoke County (93%), Roanoke City (90%), Salem City (93%)
- Bachelor’s degree or higher: Roanoke County (37%), Roanoke City (30%), Salem City (32%)
- Higher education institutions are a major economic driver with Roanoke College, Hollins University, and Virginia Western Community College all located in the Roanoke Valley.
- From 2018 to 2023, the percentage of individuals with a Bachelor’s degree or higher increased by 7% in Roanoke City, 4% in Salem City, and 2% in Roanoke County.
- Households where English is not the primary language: Roanoke City (8.3%), Roanoke County (7.3%), and Salem City (4.6%)
- As of 2023, all Roanoke City public schools participate in the Community Eligibility Provision (CEP). The CEP is a provision from the Healthy, Hunger-Free Kids Act of 2010 that allows school agencies with high poverty rates to provide free breakfast and lunch to all students.

Agriculture

The following data were compiled from the 2017 U.S. Census of Agriculture:

- Between 2012 and 2017 farm numbers declined 6% with a total of 262 farms reported in 2017.
- Roanoke County has 26,114 acres in farmland with an average size of 100 acres.
- Total market value of farm products sold was down 39% from 2012 to \$2,539,000 with net cash farm income in the negative at -\$722,000.
- Total farm related income was up 8% to \$838,000 representing the contribution of income from activities like farm services, renting farmland, and agritourism.
- 44% of farmland was in woodland, 24% in pasture and 24% in cropland
- Crops represented 67% of farm sales type and livestock represented 33% of sales type.
- The sales distribution in crops (\$1000) was nursery, floriculture and greenhouse at 743, hay at 580, fruits at 251, vegetables at 76, grains at 32 and Christmas trees at 31.
- The sales distribution in livestock and poultry (\$1,000) was calf cow at 713, horses at 43, small ruminants at 42, poultry and eggs at 11, and hogs at 3.
- Out of the 392 producers reporting in the census, 40% are female and 99.5% are white.
- In 2023, farms selling community supported agriculture (CSA) shares reported overall sales at 60% of what they wanted to sell.
- An analysis of the farmers markets in Roanoke County revealed the following:
 - Some markets are advertised open while farmers are only participating during approximately 10% of the advertised time indicating a need for accurate advertising of market hours.
 - Roanoke County farmers markets are advertised open 114.5 hours per week which is not realistic for the number of farmers we have in the area.
 - The Roanoke farmers markets are in close proximity to each other and on the same days and times leading to competition for farmers and customers at the markets and reduced sales at the farmers markets.

Community and Resident Perspectives

The Roanoke Unit worked with the ELC to develop a community survey. The survey was shared with partner organizations, volunteers, and program participants. Additionally, a flier with a link to the survey was distributed via the monthly newsletter, staff social media pages, and during community events. A total of 144 respondents completed the survey.

Among respondents, 62% reported being currently or previously involved with VCE programs, while 38% reported never having participated in VCE programs. Sixty-six percent (66%) of respondents were female, 26% were male, and 1.5% were non-binary. The largest age group of respondents were adults between the ages of 18-64 (60%), followed by seniors age 65 or over (25%), and finally youth younger than 18 (12%). Respondents were asked to rank topics within three broad areas: Agriculture and Natural Resources; Family and Community Well-being; and Positive Youth Development.

Based on the survey results the top five *Agriculture and Natural Resources* issues identified as extremely important were:

1. Strengthening the local food system
2. Improving access to safe high-quality food
3. Protecting freshwater resources
4. Assisting land managers with sustainable management practices
5. Promoting natural resource and environmental literacy

Based on the survey results, the top five *Family and Community Well-Being* issues identified as extremely important were:

1. Improving access to healthy, locally available food
2. Teaching safe food handling practices
3. Helping consumers focus on healthy food choices
4. Addressing community mental health
5. Reducing obesity

Based on the survey results, the top five *Positive Youth Development* issues identified as extremely important were:

1. Helping youth develop strong leadership, citizenship, and other life skills
2. Teaching youth strong money management skills
3. Promoting scientific literacy among youth
4. Preventing youth violence
5. Addressing before- and after-school challenges

These results in combination with the unit profile helped identify four priority issues. The four priority issues are: 1) Strengthening an Accessible, Local Food System; 2) Fostering Youth Life Skills Development; 3) Preserving Natural Resources, and 4) Promoting Well-being and Healthy Lifestyles

Priority Issues

Issue 1: Strengthening an Accessible, Local Food System

Access to healthy, local food is a challenge in the Roanoke/Salem area. Within the cities and Roanoke County, farm acreage is limited and the number of farms is declining. More than 50% of respondents to the VCE community survey felt that the Roanoke VCE unit should focus a high amount of effort on strengthening the local food system (90%) and improving access to healthy, local food (88%).

Strengthening the local food system

Strengthening the local food system will require more awareness of local farms and how customers can purchase from and support farms in the region. In 2017, a series of farmer listening sessions were conducted and major concerns and priorities were voiced. The top issues for the Roanoke area producers were accessibility to markets, farm profitability, farm scale and consumer education. VCE has implemented a program to bring customers and farmers together at local farms via farm tours and farmer socials. Seven farm tours and farmer socials were held during 2023. These tours allowed customers to learn about local farms while also providing a space for farmers to learn from each other as well as experts in attendance. VCE will continue to offer farm tours and socials over the coming years. VCE will also work to bring more awareness to local farm CSAs through the development of resources like a fact sheet with CSA pickup times and pertinent information for customers.

The Roanoke Foodshed Network, a coalition of food access and food production partners, has also been formed by a local nonprofit to facilitate and uplift action-oriented and collaborative efforts that support an equitable and resilient food and farm system in the Roanoke region. The funding for the Roanoke Foodshed Network is managed through the nonprofit Local Environmental Agriculture Project (LEAP). The ANR agent and FCS SNAP-Ed agent have served on the leadership teams of the Roanoke Foodshed Network for multiple years, collaborating on efforts for the Farming and Food Production and Healthy Food Access working groups.

Improving access to safe, local, healthy food

Community gardens play a key role in enhancing access to healthy, local food. Gardens in Roanoke City and County have historically been created using raised wooden or metal beds for growing vegetables. This type of gardening requires a large amount of materials and increases the cost of gardens as well as the associated maintenance. In these expensive constructed raised bed systems, it is often difficult to recoup the cost of the raised beds in vegetables before the raised beds decompose and need to be replaced. The Roanoke VCE unit wrote and published a [fact sheet](#) to compare raised bed methods, materials, and costs and have focused efforts on multiple demonstrations of more cost-effective systems at community gardens, schools, and homes. VCE Roanoke has also used its volunteer base of Master Gardeners to promote more cost-effective growing systems through a combination of training on new raised bed gardening techniques and incorporation of new ideas and efficiencies.

VCE Roanoke concentrates on implementing these cost-effective techniques in Northwest Roanoke where community members are subject to shorter lifespans and higher prevalence of chronic disease. The health disparity in Northwest Roanoke makes access to healthy, local food even more critical for the citizens living there. VCE has been partnering with local community garden managers in Northwest Roanoke over the past three years who have indicated that controlling perennial weeds like wiregrass and johnsongrass are major problems. Modern techniques like tarping/occultation were being implemented on a small scale but were not using UV resistant tarps and weight bags, leading to degradation of materials and incomplete kill of perennial weeds. In addition, sharp debris and trash was being used to secure tarping material which looked unsightly and was creating holes in the tarping material, thereby reducing the effectiveness of the material. After meeting with community garden managers, VCE has assisted in the purchasing of more effective and longer lasting materials.

VCE has developed strong partnerships with organizations working in Northwest Roanoke to implement these practices in the creation of two new community gardens. A strong partnership with One Valley Inc. community gardens has embraced the new tarping/occultation techniques and use of automated drip irrigation systems and, after implementation, were able to reduce labor and increase productivity. Thanks to these methods, One Valley Inc. has been able to construct a new community garden using modern gardening techniques to bring more food into the underserved Northwest community. Another new community garden has also been designed and implemented in partnership with the Roanoke Housing Authority at the Envision Center in Northwest Roanoke. The garden utilizes modern techniques including automated drip irrigation system and woven poly ground cover to reduce weeds and increase production.

VCE has also been partnering with public schools to support food production via school gardens. School gardens offer opportunities to support student learning objectives as well as to introduce students to new vegetables and

how to grow and use them. During the 2022 and 2023 growing seasons, nine school and youth gardens were built or renovated in Roanoke City and County using modern low-maintenance techniques that eliminate the need to weed, water or mow. The gardens were built using grant funds from the Virginia Foundation for Healthy Youth (VFHY). VCE will continue to utilize VFHY funds to build and renovate school gardens over the coming years. Projects in the works include the renovation of a greenhouse at William Fleming High School. The redesign of the greenhouse will triple the amount of productive space and eliminate the need to weed. The addition of an automated mist system will also provide more uniform irrigation throughout. With improved utilization of space in the greenhouse, the school will be able to grow more transplants for their plant sale as well as provide all the school gardens and some of the community gardens with transplants.

Issue 2: Fostering Youth Life Skills Development

Life skills are defined as the ability for adaptive and positive behavior that enable us to deal effectively with the demands and challenges of everyday life. They are a set of human skills acquired through teaching or direct experiences that are used to handle problems and questions commonly encountered in daily human life. More than 50% of respondents felt that the Roanoke VCE unit should focus a high amount of effort on the following youth development topics: helping youth develop leadership, citizenship and other life skills (75%), teaching youth strong money management skills (70%); promoting scientific literacy among youth (69%), preventing youth violence (69%), and addressing before and after school challenges (65%).

Developing leadership, citizenship, and other life skills

By participating in 4-H, young people can acquire the leadership life skills they need to take responsibility for their actions and to work with others in achieving individual and group goals. In a 4-H leadership project, youth gain experience in understanding themselves, communicating, getting along with others, learning to learn, making decisions, managing, and working with groups. 4-H gives youth opportunities to be leaders through club participation, teen leadership, 4-H Congress, and many other district and state offerings, including serving as teen ambassadors and serving on the state 4-H cabinet. Youth learn to be better citizens also in project work, 4-H Day at the Capitol, club community service events and programs, and the Character Counts! program in 4-H after-school programs.

The Roanoke 4-H Program targets life skill development in order to support youth in becoming productive, contributing individuals in society. All three school systems (Roanoke City, Roanoke County and Salem) have integrated 4-H School Enrichment programs to supplement their curriculum. Skills taught include teamwork, leadership, communication, cooperation, decision making, handling criticism, flexibility, initiative, and social skills. The 4-H Reality Store program focuses on money management and decision-making skills. Youth also learn money management in multiple 4-H projects, serving on fundraising committees, and by being a club officer.

Promoting scientific literacy among youth

4-H programs are available in Roanoke and Salem through local 4-H clubs, 4-H camps, in-school and after-school settings. 4-H science programs provide 4-H youth the opportunity to learn about Science, Technology, Engineering and Math (STEM) through fun, hands-on activities and projects. Integration of these concepts are key for the most complete understanding of a topic. STEM can be found in a wide variety of 4-H programming and in everyday life. In Virginia 4-H, we strive to incorporate STEM and experiential learning into as many of our activities as possible- enabling our youth to develop important life skills such as critical thinking and problem solving. The largest in-school 4-H enrichment program in the Roanoke Unit is the 4-H Embryology program, which enrolls over 2,000 youth each year. The 4-H tree seedling program and 'Ag in the Classroom' also involve many Roanoke and Salem youth each year. 4-H Camp offerings include Robotics, Computer Science, Rocketry, Animal Science, Marine Science, and Chemistry.

Preventing youth violence

Research conducted by the University Wisconsin-Madison reveals that violence prevention initiatives can be strengthened when youth are invited into community decision making with authentic opportunities for empowerment and membership. Youth in the Roanoke Valley have many options to be active in their

communities. By being involved in 4-H at the local, district, state and national levels, youth are empowered to create their own world. Local 4-H youth are on teen empowerment state committees, serve on the local Extension Leadership Council and are invited to be involved in decision making for their community.

According to the CDC, youth violence prevention can be facilitated by strengthening youth's skills, connecting youth to caring adults and activities, and creating protective community environments. 4-H has a long history of doing all of these things. The 4-H framework is based on connecting our youth with caring adults and teen mentors, and giving young people a safe space to learn new skills and to build and strengthen skills learned.

Addressing before and after-school challenges

As a partner with the 21st Century Learning Grant, VCE-Roanoke has played a key role in bringing life skill programming to youth in the after-school program in Roanoke City public schools, since 2000. Traditionally, 4-H clubs have met after school, and give youth another opportunity to explore their interests, meet other youth in their community, experience mastery on subject matter of their choice, have the opportunity to interact with caring adults and participate in community service activities. By relying on volunteers, after-school opportunities are more available and provide a diversity of projects and programs for youth participation. Currently, no before-school programs are offered through 4-H.

Issue 3: Preserving Natural Resources

Preserving natural resources is a high priority for Roanoke city and county residents. More than 50% of respondents to the VCE community survey felt the Roanoke VCE unit should focus a high amount of effort on protecting freshwater resources (84%), assisting land owners with sustainable management practices (82%) and promoting natural resources and environmental literacy (81%).

Protecting freshwater resources

Personal conversations with growers indicated that automated drip irrigation systems were not in use in many gardens and farms. Observations of gardens, farms and farm produce showed that increased use of drip irrigation could improve productivity and the quality of the produce in addition to reducing disease problems. Multiple drip irrigation workshops were conducted at community gardens and the Carilion urban farm to demonstrate how to construct and schedule simple drip irrigation systems. Multiple trainings were also conducted for the Master Gardeners on modern gardening techniques and drip irrigation systems. A demonstration was constructed at the Carilion urban farm and Mountainview community garden to show the difference between hand watering and drip irrigation systems. Automated drip irrigation systems were constructed at both One Valley community gardens and at the Salem Giving Garden. Additional workshops at the Mountain View community garden were canceled as the automated drip irrigation system violated LEAP's community garden rules and the demonstration was removed.

Assisting land managers with sustainable management practices

Communication with growers indicated more deer fencing was needed and the cost of fencing was a factor. ANR agent Shawn Jadrnicek had previously implemented a new fence design at Wild Hope Farm to reduce fence costs. The fence design also reduces fence maintenance by eliminating weeds under the fence line. Cacti incorporated with the fence create a living fence with cacti fruits sold for income, generating \$13/linear foot of fencing at Wild Hope Farm. An article about the technique was published in Modern Farmer magazine and used to advertise the fence design. Fencing demonstrations were implemented at the Envision Center, One Valley community gardens and at Northside Middle School. A workshop was offered on construction techniques and an instructional manual was created. A cold hardy cacti variety was brought up from South Carolina and incorporated into some of the fences. More workshops are needed on use of this technique as there have been some failures to replicate the fence design at the LEAP managed community gardens. Potential also exists to incorporate the fence technique into cattle operations as a living fence that could also be utilized as a cattle feed. One commercial fruit grower in Roanoke County experiencing bear and deer damage on fruit trees is experimenting with the cacti fence design.

Fruit production was once abundant in the Roanoke area but has been steadily in decline. Conversations with growers indicated a large effort was needed to spray and prune trees and the next generation of growers were hesitant to take on the workload required to maintain orchards. Personal observations showed a lack of disease resistant low maintenance fruits being grown in the community. New fruit varieties were introduced at the annual commercial fruit school and multiple workshops and television appearances were conducted on edible landscaping and disease resistant fruit varieties. In addition, 34 non-astringent Asian persimmon trees were planted across seven schools in Roanoke County. Asian Pear rootstock has been purchased and scion wood secured for a grafting workshop in the spring of 2024. The Master Gardener training program was also updated to include disease resistant fruit varieties.

Occultation or tarping is a new technique being implemented on small farms across the country. The technique uses light blocking UV resistant tarps to cover the soil, killing weeds in preparation to plant. The technique can save small farms considerable time and money by eliminating the need for heavy equipment while also improving control of annual and perennial weeds. A literature review conducted by a Hollins University intern determined little information was available regarding the new technique. A SARE grant was applied for and funds procured to conduct research on an urban farm in Roanoke City. The research focused on how long perennial weeds need to be covered in order for them to die. The farmer was paid to help conduct the research and a publication is scheduled for release in 2024.

Promoting natural resources and environmental literacy

Master Gardeners are a volunteer group trained by Virginia Cooperative Extension service to help protect natural resources and improve environmental literacy. The Master Gardeners volunteer in the community to distribute information, teach classes and help at the Virginia Western Community College Arboretum, school and community gardens. The Master Gardeners also conduct horticulture therapy classes and host continuing education opportunities at their monthly meetings. Virginia Cooperative Extension conducts a yearly training for new Master Gardener recruits and manages continuing education and volunteer activities.

Private pesticide applicators are required to continue their education biannually to maintain private applicator certification. The ANR agent assists each year with these rotating biannual trainings in a four-county region for producers. The training covers pesticide application techniques to protect the environment and well as regulatory updates.

Issue 4: Promoting Well-Being and Healthy Lifestyles

The Roanoke Valley provides an abundance of healthcare services and recreational opportunities, yet maintaining a healthy lifestyle is a challenge for many residents. In Roanoke City, in particular, there are various socioeconomic factors that contribute to health disparities between individuals living in the city versus those living in the surrounding county. High rates of poverty, food insecurity, obesity, and physical inactivity are cited in the unit profile section of this report and are all contributing factors to health disparity in Roanoke City. Furthermore, the community survey distributed by the Roanoke VCE unit revealed a significant concern with food insecurity, obesity and mental health across the Roanoke Valley. More than 50% of respondents felt that the Roanoke VCE unit should focus a high amount of effort on the following health and well-being topics: improving access to healthy, locally available food (86%); teaching safe food handling practices (75%); helping consumers focus on healthy food choices (72%); addressing community mental health (65%), and reducing obesity (63%).

Food and Nutrition

Improving access to healthy food and focusing on healthy food choices were ranked as the highest priority health and well-being issues by VCE survey respondents. One respondent stated, “Folks need to learn how to shop for/select and/or grow their own veggies, herbs, fruits and learn to cook them/preserve them/enjoy them on a daily basis.” Another respondent stated, “Many [people] are never taught proper nutrition and the fact that diet can prevent heart disease, diabetes, and high blood pressure.”

The Roanoke VCE unit has a history of offering FCS programs that provide nutrition and gardening education with the aim to teach people how to grow their own food and how to make healthy choices. The VCE Family

Nutrition Program (FNP) offers food demonstrations at food pantries, farmers markets, and local grocery stores in low-income areas to teach people how to use and cook fresh produce at home. FNP programming also focuses on building partnerships with community gardens to teach people how to grow their own food, including Garden-to-Go programs where people are provided with their own vegetable plant to take home.

Gardening and nutrition programs are especially vital in areas of the city with high food insecurity rates. VCE FNP and FCS programs are constantly striving to provide useful resources to facilitate access to healthy, locally available foods through partnerships with local food access organizations like Feeding Southwest Virginia, Carilion Clinic, United Way, and Goodwill Industries. FCS agents participate in local coalitions like the Healthy Community Action Team and Healthy Roanoke Valley to foster collaboration. The Roanoke unit will continue its partnerships with food access organizations to ensure collaborative efforts towards improving access to healthy, local foods in high need areas.

There is also room to strengthen FCS programming on food safety and food preservation. Teaching safe food handling practices was revealed as a critical issue on the Roanoke community survey. HepA and Salmonella are primary food-borne illnesses impacting the Roanoke Valley. Both of these viruses are found on contaminated feces and, without proper food handling practices, can be spread via food or water. In 2021, the incidence rate of Hepatitis A was 34.9 per 100,000 people and the incidence rate of Salmonella was 13.8 per 100,000 people in Roanoke County. Understanding these diseases and how to prevent the spread is vital for food safety in the Roanoke Valley. The Roanoke unit continues to provide ServSafe training to individuals and managers who work in food service to increase their knowledge of proper food handling. Community members also look to VCE to provide food preservation courses to help extend the length of the harvest and increase food security during the winter months. The VCE Roanoke unit plans to strengthen these programs over the coming years.

Reducing Obesity and Chronic Disease Prevention

Approximately 60% of VCE survey respondents stated the Roanoke unit should place high priority on reducing obesity in the Roanoke Valley. Obesity has been linked to chronic diseases like diabetes, heart disease, and high blood pressure and is a condition that significantly predicts overall health. According to the Virginia Department of Health (VDH), overweight or obese individuals have a body mass index greater than 25.0. In 2021, the obesity rate in Roanoke City was 38% compared to 34% in the state of Virginia while the rate of individuals identified as overweight was 71% in Roanoke City compared to 68% in Virginia. Healthy lifestyles through diet and physical activity can help decrease obesity rates.

The Roanoke unit office offers FCS programs focused on nutrition and physical activity to teach people how to maintain healthy lifestyles. FCS programs include the CDC Diabetes Prevention Program and Balanced Living with Diabetes to help individuals reverse pre-diabetes or live healthfully with Type 2 diabetes. As part of these programs, participants track their diet, exercise, and weight over time. Obesity and Type 2 diabetes are often co-occurring diseases, so diabetes programs offered by VCE can help combat obesity in the Roanoke Valley.

The Family Nutrition Program (FNP) within VCE also offers several resources and programs to promote healthy lifestyle management among low-income youth and families. For example, FNP partners with Title I schools and HeadStart classes to train teachers on nutrition education and physical activity breaks that they can implement in the classroom. Currently, FNP programs are occurring in Roanoke City public schools and Total Action for Progress (TAP) HeadStart locations within Roanoke city. These programs are also occurring at after-school sites in partnership with Boys & Girls Club of Southwest Virginia. Data collected from youth enrolled in FNP in-school and after-school programs demonstrate that the programs successfully promote healthy behavior change via diet and exercise.

Addressing Community Mental Health

Mental health is influenced by individual experiences, relationships with family and friends, and feeling a sense of belonging and self-actualization. Approximately 60% of VCE survey respondents believe that the Roanoke Unit should prioritize addressing community mental health and preventing suicide. Nutrition, physical activity, healthy relationship skills, and parenting skills are all linked to mental health outcomes. According to the *Physical*

Activity Guidelines for Americans, physical activity can help reduce the risk of anxiety and depression by releasing endorphins that reduce stress and relieve pain. Researchers have also found connections between food and mood whereby nutritious foods provide the brain and body with the vitamins and minerals needed to reduce the risk of mood disorders. Furthermore, relationship skills and parenting skills provide individuals with the tools needed to sustain positive relationships and social support, a key indicator of mental health.

Ever since mental health issues were amplified during the COVID-19 pandemic, VCE has become aware of the need to develop FCS programs for stress reduction and community mental health awareness. FCS programs are working to strengthen resources and curricula aimed at stress reduction which may be associated with topics like finance, relationships, children, and aging. There are also opportunities to increase community mental health awareness by offering mental health first aid classes. The Roanoke unit does not contain licensed medical professionals, but we can offer programs that address some risk factors for suicide like depression and anxiety. Developing partnerships with medical professionals and healthcare systems may help promote FCS programs to community members who are in need of stress reduction and healthy lifestyle resources. The Roanoke unit will seek opportunities to build partnerships with major healthcare systems like Carilion Clinic and Lewis Gale in the coming years.

Future Programming to Address Community Issues

Issue 1: Strengthening an Accessible, Local Food System

The Roanoke unit will continue to work with One Valley Inc., Salem Giving Garden, Lick Run CDC, Roanoke Housing Authority and other interested organizations to design and build low maintenance community gardens. Program efforts will also focus on the development of school gardens and educational programs in the gardens supporting student learning objectives. Use of the William Fleming High School greenhouse will increase transplant production for school and community gardens and facilitate appropriate timing for seeding and transplanting. Work will continue, if possible, to educate farmers and consumers on the economic principles governing farm profitability and the negative impact of competition and market hours on profitability. Promotion of local farm CSAs will increase farm sales and profitability. Farm tours and socials will continue to provide opportunities for farmers to learn from each other and from experts, as well as connect consumers with farms to increase awareness of local farms and how food is produced.

Issue 2: Fostering Youth Life Skills Development

Program goals for 4-H Youth development in the Roanoke Valley will follow the PYD (Positive Youth Development) program's three components: positive and sustained relationships between youth and adults; providing activities that build important life skills; and creating opportunities for youth to apply what they are learning to improve their community both as participants and leaders. Clubs for youth ages 9-18 are offered throughout the valley and are led by volunteer leaders who complete extensive training in PYD. In-school enrichment programs are offered to all three school systems: Roanoke City, Roanoke County and Salem. Programs focus on STEM activities as well as Communication skills and Workforce development. Camping programs address the need to develop leadership citizenship and other life skills, as well as promoting for youth to have a safe space to learn new skills.

Issue 3: Preserving Natural Resources

The Roanoke unit will continue the Master Gardener training and management program and incorporate 20-25 new volunteers annually. Master Gardener volunteer efforts will focus on environmental literacy and food production in low-income areas. A fact sheet will be created on techniques to control problem perennial weeds in home gardens and farms and the planting plan fact sheet previously created will be updated. Workshops will continue on designing and building drip irrigation systems and programs on

water wise landscapes and rain gardens will be added. Consulting will continue with farmers to design farms and implement practices to improve efficiencies, manage animal wastes and apply nutrients according to best management practices.

Issue 4: Promoting Well-Being and Healthy Lifestyles

The FCS Roanoke unit will concentrate future programming efforts on strengthening partnerships with food access organizations and healthcare systems, in addition to continuing high quality community health education on topics like nutrition, food safety, food preservation, and diabetes prevention. Special attention will be directed toward building new partnerships with healthcare systems to promote mental health awareness and stress reduction programs. Physical activity programs may also be a positive contribution towards stress reduction and mental health challenges. All future programming efforts will contribute towards food and nutrition, reducing obesity, preventing chronic disease, and addressing community mental health in order to promote well-being for all Roanoke and Salem residents.

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